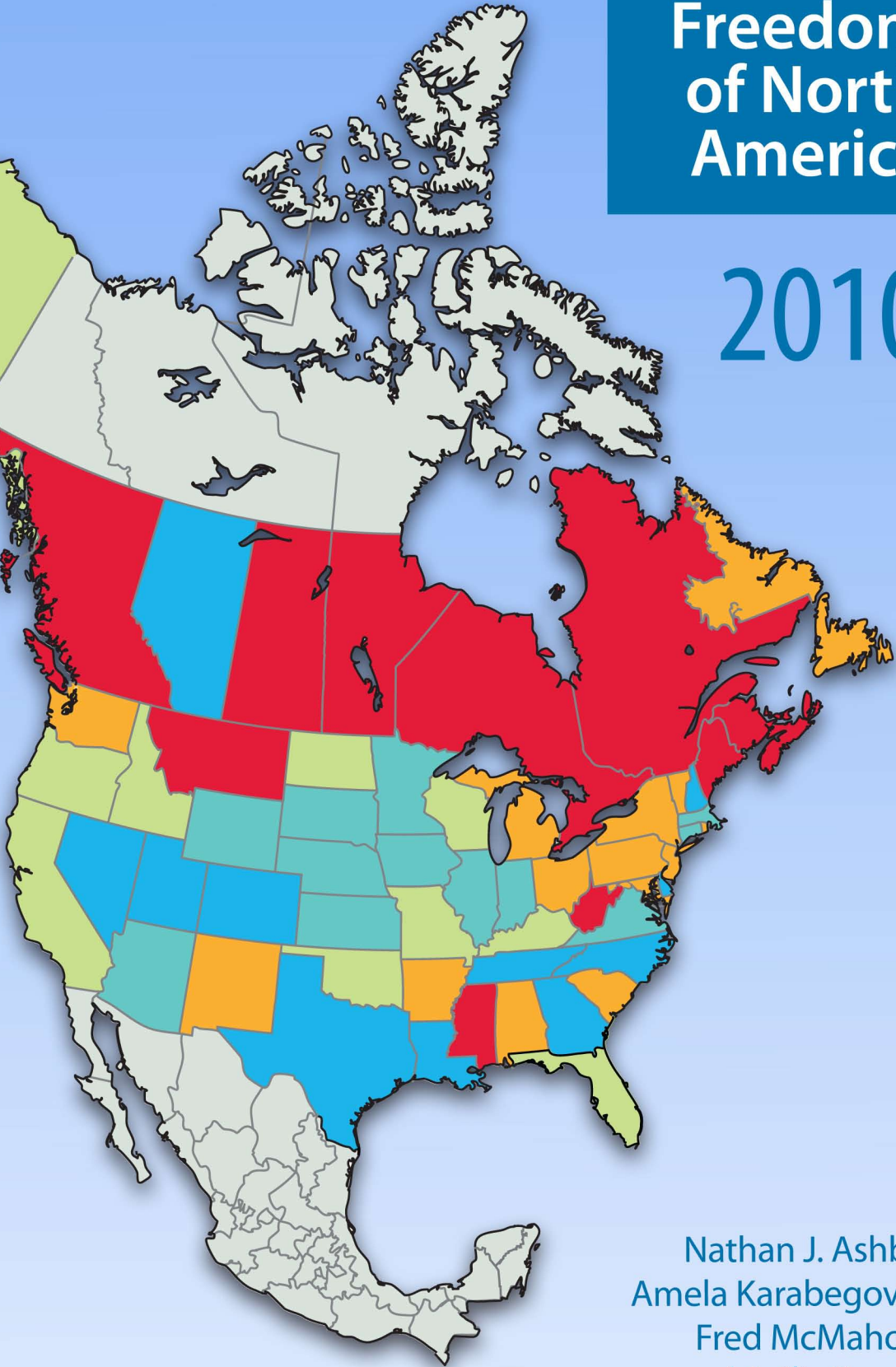
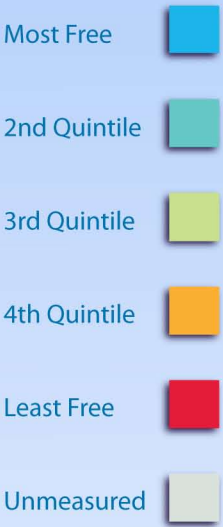


Economic Freedom of North America

2010



Nathan J. Ashby,
Amela Karabegović,
Fred McMahon,
and Avilia Bueno

with Noel D. Campbell, Joab Corey, Alex Fayman,
Deborah Martinez, and Tammy Rogers

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Fraser Institute

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Executive Summary

This is the sixth edition of the *Economic Freedom of North America*. The statistical results of this year's study persuasively confirm those published in the previous four 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 all-government 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 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

Econometric testing shows that a one-point improvement in economic freedom at the all-government level increases per-capita GDP by US\$5,335 for US states and by US\$4,186 (CA\$4,688 using a conversion rate of 1.12)¹ for Canadian provinces. At the subnational level, a one-point improvement in economic freedom increases per-capita GDP by US\$4,848 for US states and by US\$3,706 (CA\$4,150) 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 1.02%

[1] The most recent data available are from 2007. Note that an exchange rate of \$1.12 was used throughout the study. Source: Baldwin, John, and Ryan Macdonald (2010). PPPs: Purchasing Power or Producing Power Parities? (Economic Analysis Research Paper Series, Cat. 11F0027M, No. 058, Statistics Canada).

in the growth rate of per-capita GDP for US states and an increase of 0.60% 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 0.73% in the growth rate of per-capita GDP for US states and 0.56% 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, despite the additional data included in the analysis. The similarity of results regardless of the structure of the index or year of the tests is quite remarkable.

Differences between Canada and the United States

The results show that, while economic freedom has a powerful impact in Canada, its impact on US states is far greater. This is likely because of Canada's fiscal federalism, which transfers money from rich to poor provinces. Since economic freedom spurs prosperity and growth, fiscal federalism in effect transfers money from relatively free provinces to relatively unfree provinces, muting the impact of economic freedom and perversely creating incentives for provincial politicians to limit economic freedom and, thus, economic growth, since this increases the flow of federal transfers, which are directly controlled by these politicians. This enhances their power and their ability to reward friends and penalize enemies.

All provinces, except Alberta, are clustered at the bottom of the rankings for economic freedom at both the all-government and the subnational levels. Alberta is 7th at the subnational level and 3rd at the all-government level.

The Evolution of Economic Freedom

The evolution of economic freedom in Canada and the United States follows an expected pattern. In the United States, at the all-government level, economic freedom increases through the 1980s, coinciding with the Reagan era. It then falls in the early 1990s, following tax increases under the first President Bush and the early administration of President Clinton, and then begins to rise again, particularly in the new century. At the subnational level, the pattern is similar but less pronounced, again as one might expect. Many states embarked upon Reagan-like government restructuring, but not all, and often not at the same level of intensity, or in the same time frame.

In Canada through the 1980s, economic freedom remained fairly constant at the subnational level, save for a significant decline at the beginning of the decade, while it increased somewhat at the all-government level, perhaps as a result of a change of federal government, and a resulting change in policy, in 1984. At both the all-government level and the subnational level, economic freedom falls in Canada in the early 1990s and then begins to rise. In early 1990s, federal, provincial, and municipal governments began to address their debts and deficits but more often through increased taxation than through lower spending. However, as debts and deficits were brought under control, governments began to reduce some tax rates through the mid-, and particularly the late, 1990s. Also in this period, fiscally conservative

governments were elected in Canada's two richest provinces, Alberta and Ontario. In the early years of the new century, economic freedom rose in Canada at the all-government level while it remained fairly stable at the subnational level.

Overall patterns in Canada and the United States are similar. Both nations fought debts and deficits in the early 1990s with tax increases. However, Canada raised taxes more aggressively, as can be seen from changes in economic freedom during this period. From 1981 to 2007, the gap between economic freedom in Canada and that in the United States at both the subnational and the all-government levels first widened and then narrowed, a trend that has continued.

The most recently available data for this report is from 2007. The economic freedom of both the US states and the Canadian provinces is likely to decline due to governments' reaction to the financial crises, recession, and, in the United States, new federal initiatives, especially the increased spending (see chapter 4).

Chapter 3: The Relative Impact of Economic Freedom on Selected US States

This study, by Joab Corey, uses comparisons of three pairs of states to isolate the effect of economic freedom on income, unemployment, entrepreneurship, business climate, population density, skilled migration, and income equality to illustrate the broad-based statistical evidence found in previous studies. The states in each pair are situated close to one another in the same region of the country and have similar cultures but differ in their reliance on economic freedom. The three pairs (with their average 1986–2007 level of all-government economic freedom and rank in brackets) are:

- 1 Virginia (7.00; 13th) and West Virginia (5.35; 50th);
- 2 Georgia (7.40; 4th) and Mississippi (5.90; 47th);
- 3 Indiana (7.05; 9th) with Michigan (6.52; 32nd).

Consistent with results from other studies, in the first two comparisons, Virginia with West Virginia and Georgia with Mississippi, those states with considerably higher levels of economic freedom had higher measures in every category analyzed by this study. This included comparisons of the standard of living as measured by variables such as Gross State Product (GSP), median income, and percentage of individuals below the poverty level as well as measurements of overall business conditions with such variables as unemployment, business climate as measured by *Forbes Magazine's* study on the best states for doing business, and four different variables used to analyze attempts by individuals to innovate and engage in industrial pursuits.

Those states in the first two comparisons with higher levels of economic freedom also had a higher population density that has been increasing by a larger amount over the years, along with a greater net migration of college-educated individuals into the state, indicating a greater willingness of people to live and work within these states. These states also experienced greater economic growth and

income growth among their poorest individuals than states with less economic freedom. These comparisons highlight the importance of economic freedom as a crucial economic ingredient in the recipe for growth.

The picture painted by the results of the third comparison, Indiana with Michigan, is less clear. The difference in economic freedom between these two states is smaller than that of the other two comparisons and, interestingly, the gap between the two states in the variables analyzed is often smaller than the gap exhibited in the first two comparisons, with Indiana leading in some categories and Michigan leading in others.

Chapter 4: Economic Freedom and New Federal Policy Initiatives

In chapter 4 of this report, Noel D. Campbell, Alex Fayman, and Tammy Rogers examine economic freedom and new policy initiatives of the US federal government. They look at the impact of three new policies on the level of economic freedom in the United States:

- 1 reducing carbon emissions with cap-and-trade schemes;
- 2 certifying unions under the card-check bill;
- 3 providing medical insurance with the health-care bill.

While the bills, aside from the newly minted health-care law, are still in flux and their futures uncertain, the authors use the best available information to estimate the impact of these policies on economic freedom. They find that together they would reduce the average economic freedom in the United States from 6.8 to 6.0 on a scale of 10. This, in turn, would reduce GDP per capita in the United States by approximately US\$4,000 according to econometric testing (see *Economic Freedom and Economic Well-Being* in chapter 1), which shows that economic freedom is a powerful driver of prosperity.

These losses are in addition to the direct burden of these programs: the authors have estimated the additional income loss—in inflation-adjusted dollars—from the proposed changes in fiscal policy accruing to the loss of economic freedom, rather than the direct burden of these proposed programs. In short, their estimates add to the projected cost of these policies. These estimates almost certainly underestimate the loss of economic freedom and, accordingly, of income. For tractability, the authors did not include all of the proposed changes in the various bills, including the direct responses to the financial crisis, in their recalculated index of economic freedom. For example, the authors did not consider in their analysis the income-tax surcharge included in the health-care bill.

Chapter 5: Economic Freedom in Mexico 2010

Nathan Ashby in the 2008 edition of *Economic Freedom of North America* 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. The long-term goal is to construct an integrated index for the United States, Canada, and Mexico but this is not yet feasible because not all the data required are available for Mexico. At this point, therefore, we provide two indexes, one with uniform measures for the US states and Canadian provinces, the other (found in chapter 5) a separate index for the Mexican states.

The most significant concern about data is how to measure heterogeneity within the three countries with respect to property rights and legal structure. The United States and Canada currently do not have a measure for this area at the state or provincial level. This does not appear to be a significant problem for constructing the index for these countries since there is very little heterogeneity when it comes to property rights and legal structure across US states and Canadian provinces. Mexico, on the other hand, has significant heterogeneity across states.

A lesser problem is that the data for Mexico do not extend as far back as they do for the US and Canada, at least at the state level. Much of the data available are not trustworthy in that they demonstrate inconsistencies throughout the years. 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.

Many of these problems have been overcome by Nathan J. Ashby, Deborah Martinez, and Avilia Bueno, who prepared this chapter and the index of Economic Freedom in the Mexican States found there. They have been able to find data for nine of the 10 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 of Economic Freedom in the Mexican States have been improved using more complete data. This index is now available for multiple years and can be used for analyzing the Mexican economy through time.

One of the challenges involves rule of law. While a stable rule of law has been established across Canada and the United States, the quality of the rule of law varies across Mexican states. This requires an additional area for the Mexican index, Area 4: Legal System and Property Rights, to measure the rule of law and property rights as they vary across the Mexican states. Area 4 has these components:

- 4A** Impartiality of Judges
- 4B** Institutional quality of judicial system
- 4C** Trustworthiness and agility of public property registry.

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 (2007 pesos) is \$194 in the Mexican states in the top quintile, compared to \$182 in the second quintile; \$172 in the third quintile; \$173 in the fourth quintile, and \$168 in the bottom quintile.

Chapter 1

Economic Freedom of Canada and the United States

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.¹

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.² The results are highly significant and remarkably stable through a number of different sensitivity tests.

The Canadian provinces, with the exception of Alberta, are all clustered at the bottom of the economic freedom ratings, along with Montana, Maine, Mississippi, and West Virginia. Figures 1.1 and 1.2 (pages 4 & 5) show scores for economic freedom and the large differences between the US states and the Canadian provinces.

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- [1] *Economic Freedom of North America* examines only US states and Canadian provinces due to the limitations of the data available for the Mexican states. Our ultimate goal, however, is to include all three North American nations. Chapter 5, by Nathan J. Ashby, Deborah Martinez, and Avilia Bueno, is a step towards this goal 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 <<http://www.freetheworld.com>>. For the latest summary of literature on economic freedom at an international level, see Doucouliagos and Ulubasoglu, 2006.

Figure 1.1: Summary of 2007 Ratings at the All-Government Level

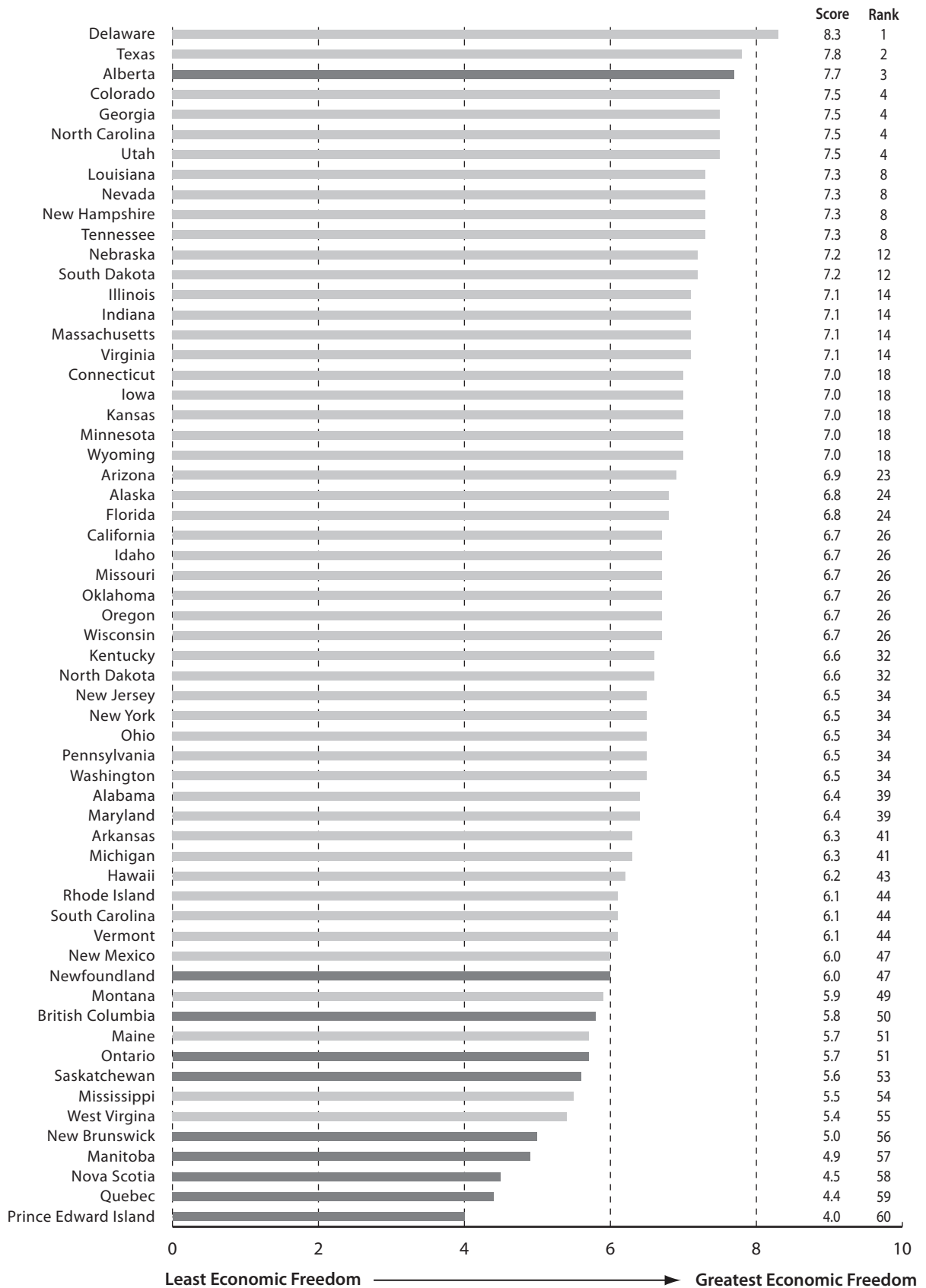
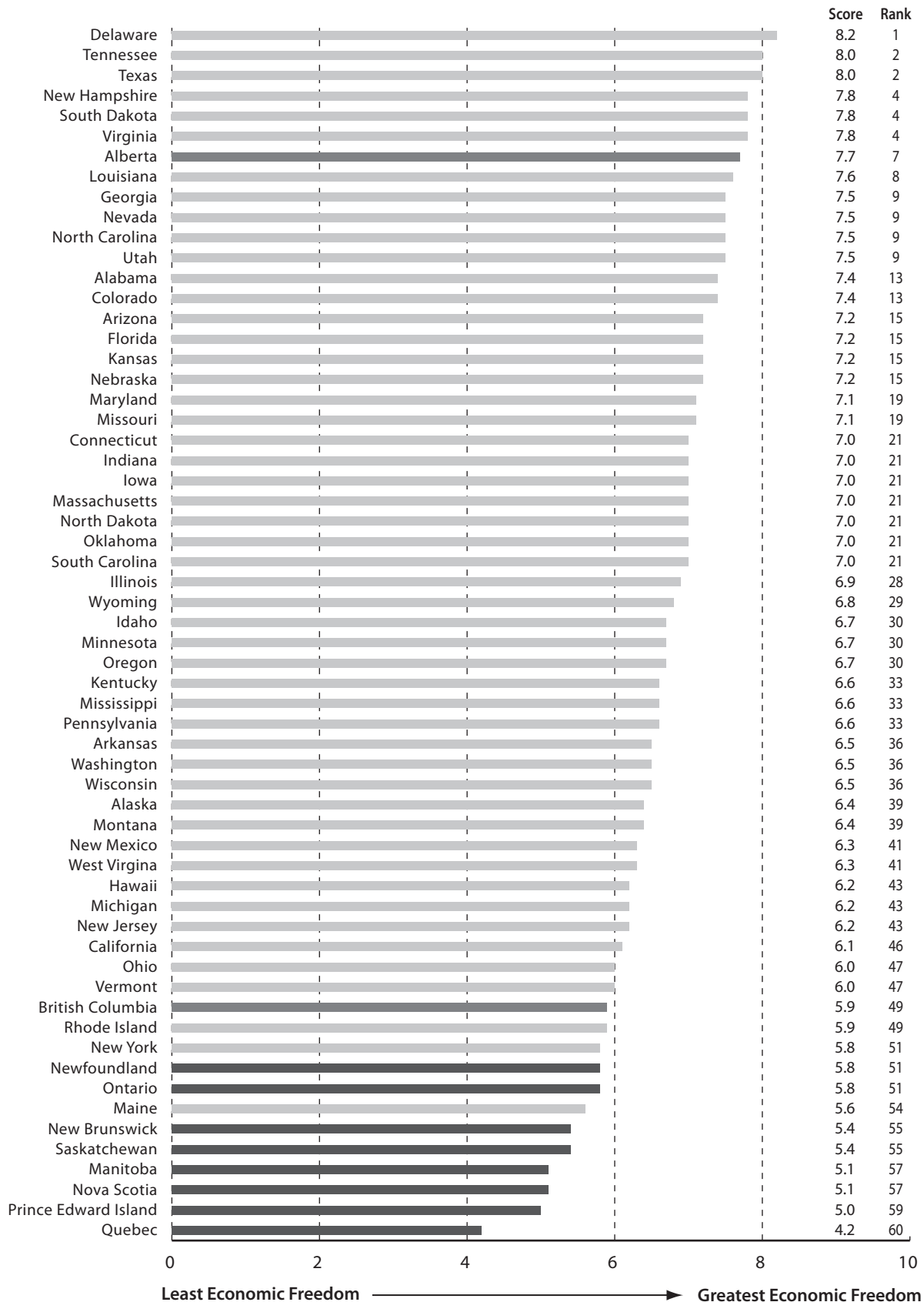


Figure 1.2: Summary of 2007 Ratings at the Subnational Level



What Is Economic Freedom?

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

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 the 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*,³ a project the Fraser Institute initiated a quarter century ago, shows that economic freedom is important to the well-being 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. This study looks at 10 Canadian provinces—excluding Yukon, the Northwest Territories, and Nunavut—and the 50 US states from 1981 to 2007. 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.

In extending the work on economic freedom, it would seem obvious to include the tried and tested measures used in *Economic Freedom of the World*. This is not as easy as it sounds. Some categories of the world index have too little variance from one jurisdiction to another in Canada and the United States to be measured

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

accurately. For example, the stability of the legal system (one of the areas used in *Economic Freedom of the World*) does not differ much among states and provinces. Components such as the private ownership of banks, avoidance of negative interest rates, monetary policy, freedom to own foreign currency, the right to international exchange, structure of capital markets, and black-market exchange rates are ineffective for an inquiry into the state of economic freedom within Canada and the United States, particularly at a subnational level.

However, economic freedom varies throughout Canada and the United States in three important aspects, which we attempt to capture in this index: size of government; takings and discriminatory taxation; and labor-market freedom. A fourth, potentially important, area of difference, restriction on the movement of goods within North America, had to be left out because there is a lack of data. This may be particularly important in the Canadian context, since Canada retains a number of internal trade barriers (Knox, 2002).

Data limitations also 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 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 measurement 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.

The theory of economic freedom⁴ is no different at the subnational and all-government 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 all-government measures. The 10 components chosen 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.

[4] See Gwartney and Lawson, 2007. The website, <<http://www.freetheworld.com>>, has references to a number of important papers and books that explore the theory of economic freedom.

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.⁵ 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. 97, for more details).

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.

[5] Due to the way scores for economic freedom are calculated, a mini-max procedure discussed in Appendix A: Methodology (p. 97), a score of 10 is not indicative of perfect economic freedom.

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 Rate⁶ 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 income-tax 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.⁷ The break between

[6] See Appendix A: Methodology (p. 97) for further discussion of how the rating for the top marginal tax rate and its threshold was derived.

[7] 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.

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 Newfoundland and West Virginia than they raise through taxation in these jurisdictions while the opposite pattern occurs for Alberta and Connecticut.

As discussed above, both taxation and spending 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: Labor Market Freedom

3A: 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. Put another way, a minimum wage requirement of \$2 an hour for New York will have little impact but, for a third-world 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.

3B: 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 potential employers have to bid against their own tax dollars in attempting 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.

3C: 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. 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).

Most of the components above exist for both the subnational and the all-government 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.

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. 18). Figure 1.3 breaks economic freedom into quintiles at the 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. Eight of these are Canadian provinces—all except Alberta and Newfoundland, which is 13th from the bottom. The jurisdictions in this least free quintile have an average per-capita GDP of just US\$32,916 (CA\$36,866).⁸ This compares to an average per-capita GDP of US\$46,120 (CA\$51,654) 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\$37,189 (CA\$41,652) compared to the most free quintile, which has an average per-capita GDP of US\$45,844 (CA\$51,345).

Another useful way to review economic freedom is through deviation from the mean. This examines the impact on economic activity of a jurisdiction’s being above or below the average ranking of other national jurisdictions, comparing Canadian provinces with the Canadian average and US states with the US average. Here scatter charts help illustrate the point, though a quick visual inspection will show these diagrams could easily be translated into column graphs like figures 1.3 and 1.4. Figure 1.5 and figure 1.6 relate prosperity to economic freedom, with economic freedom plotted along the horizontal axis and per-capita GDP plotted along the vertical axis. Once again these charts illustrate the connection between economic freedom and prosperity. As one might expect, the subnational relationship is weaker than the all-government one because only at the all-government level are all government restrictions on economic freedom captured.

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 1.7 and figure 1.8, 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.

Comparing the All-Government Level and the Subnational Level

In general, rankings at an all-government level are not drastically different from rankings at a subnational level when US states, as a group, are compared with Canadian provinces as a group. This is partly due to the way the subnational component is

[8] The most recent data available are from 2007 and are converted into 2005 US constant dollars. Note that an exchange rate of \$1.12 was used throughout the study. Source: Baldwin and Macdonald, 2010.

Figure 1.3: Economic Freedom at the All-Government Level and GDP per Capita, 2007

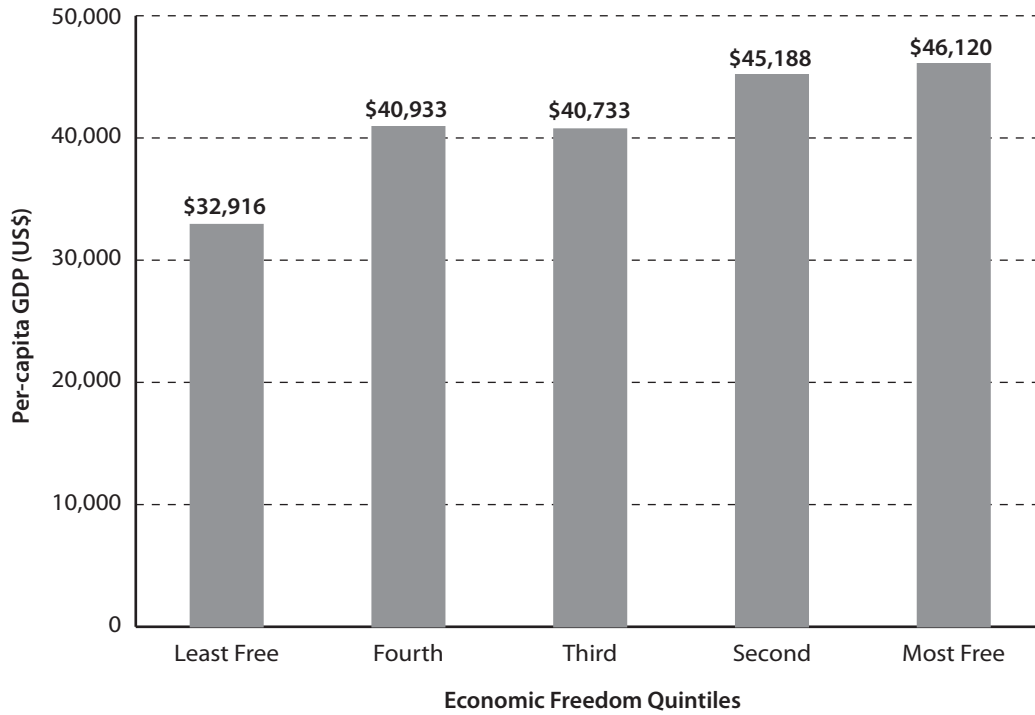


Figure 1.4: Economic Freedom at the Subnational Level and GDP per Capita, 2007

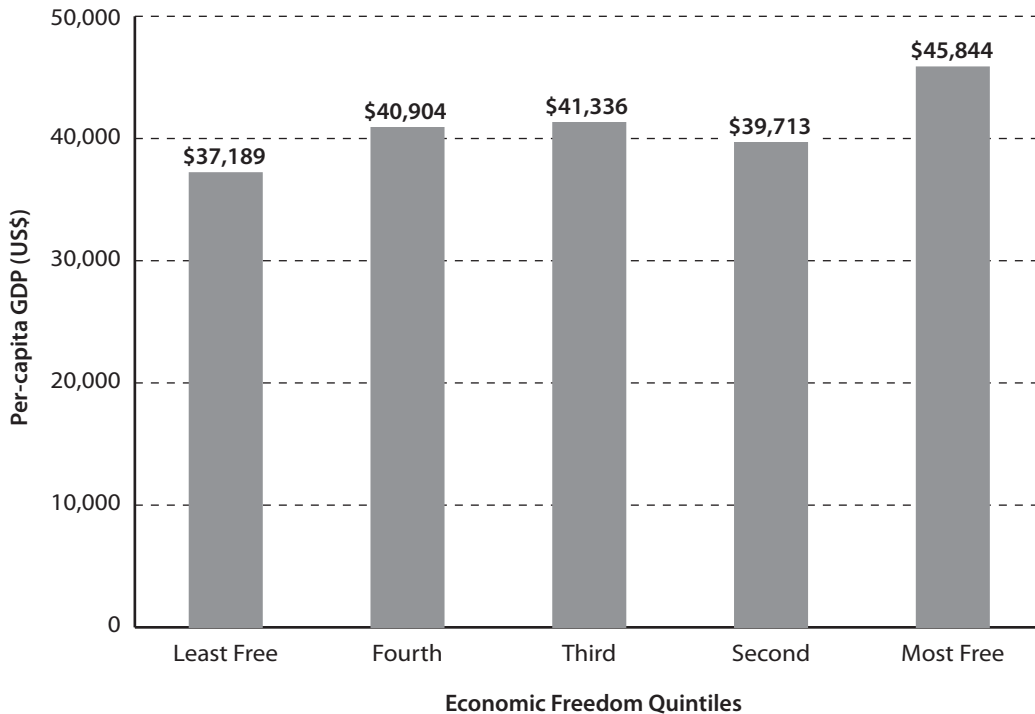


Figure 1.5: Average GDP per Capita and Average Economic Freedom at the All-Government Level, 1981–2007

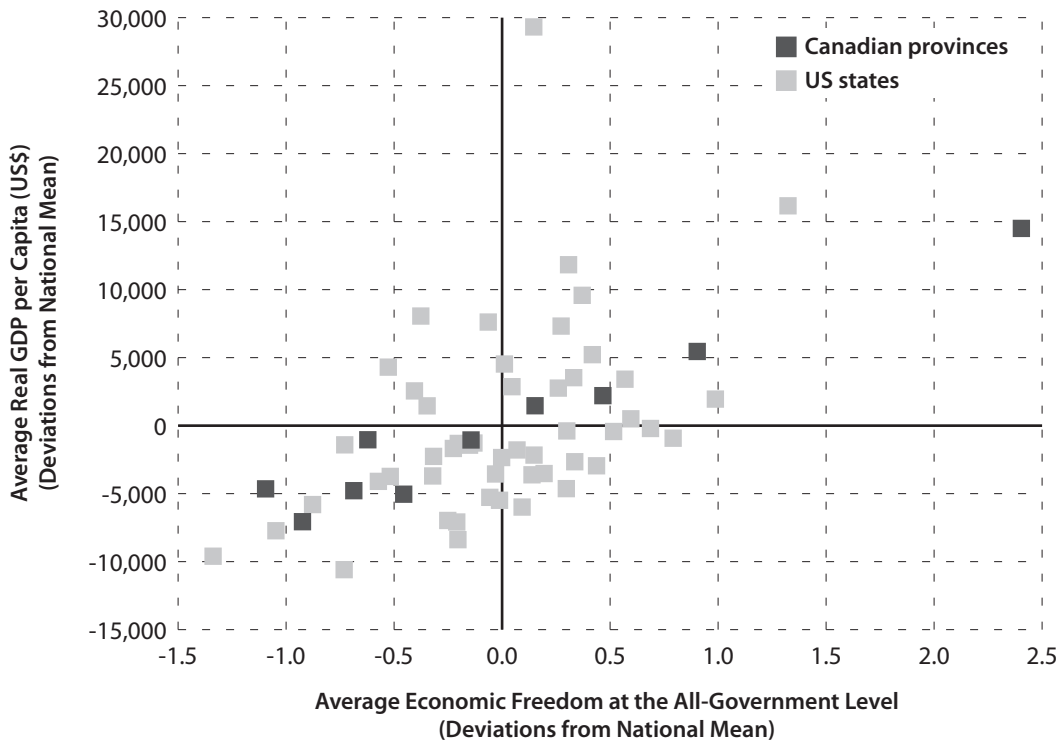


Figure 1.6: Average GDP per Capita and Average Economic Freedom at the Subnational Level, 1981–2007

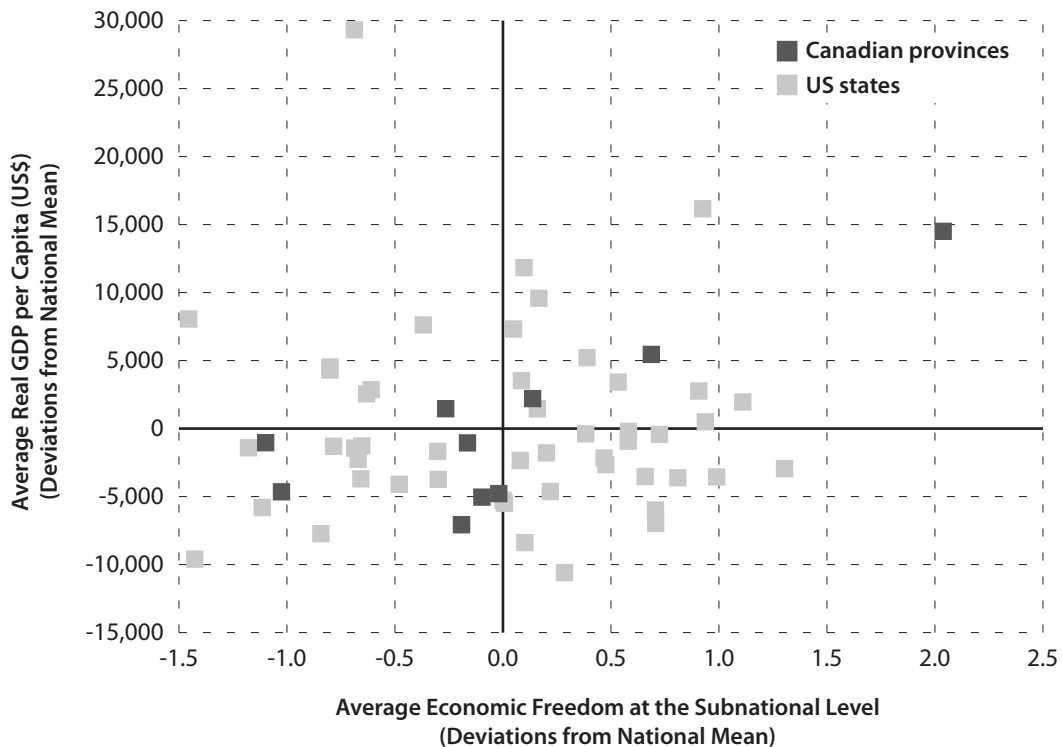


Figure 1.7: Average Growth in GDP per Capita and Average Growth in Economic Freedom at the All-Government Level, 1982–2007

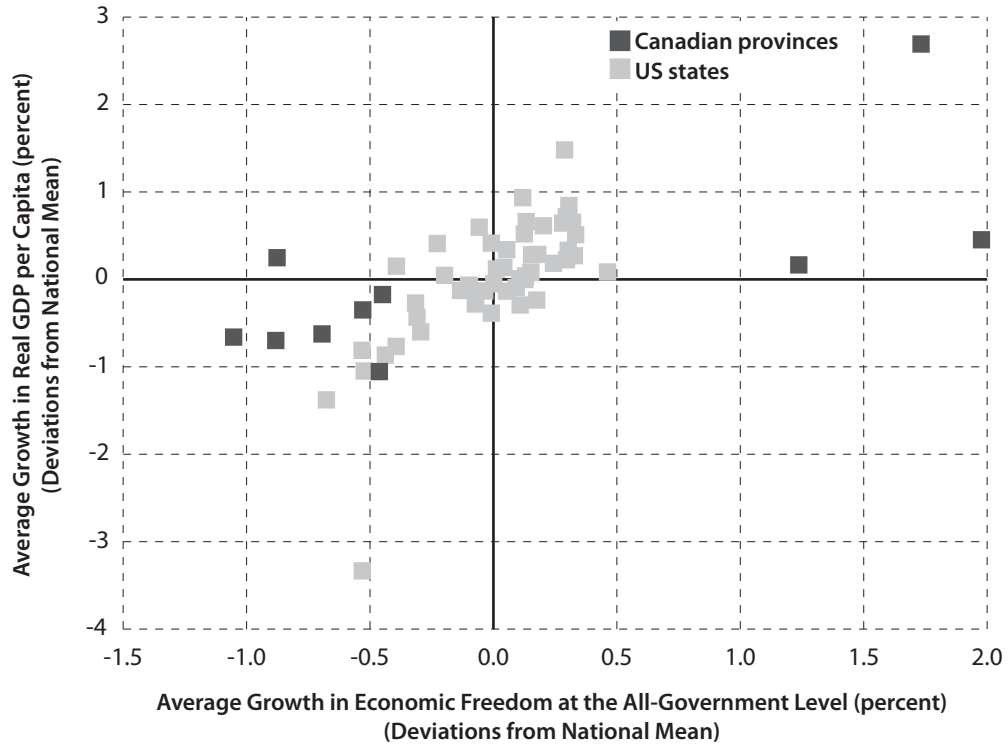
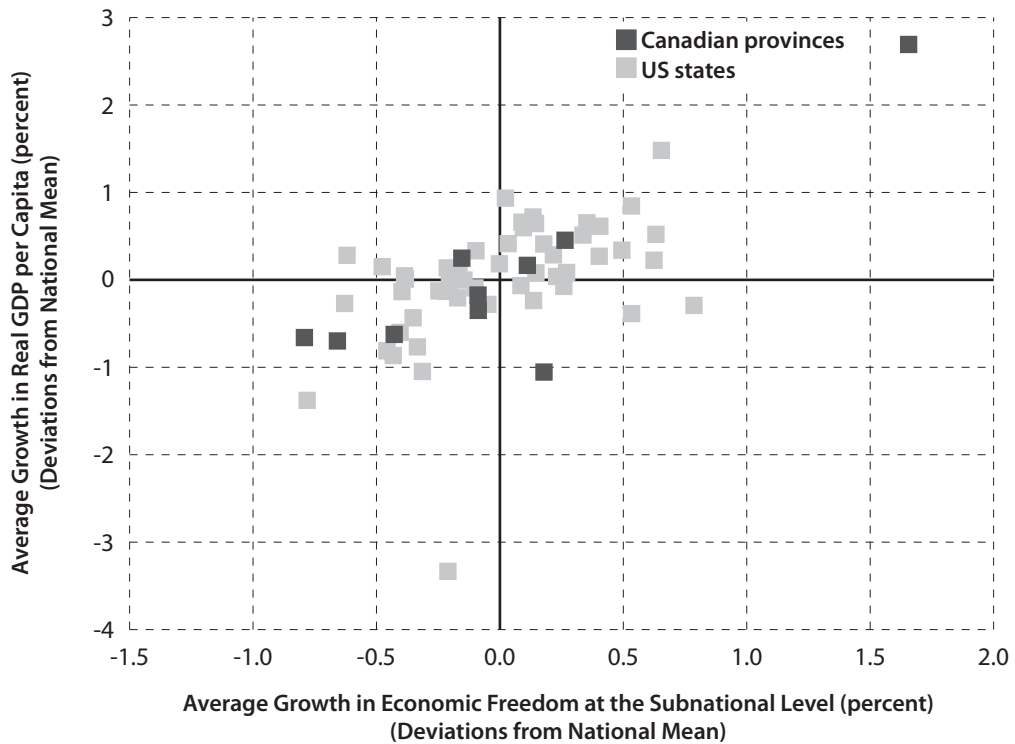


Figure 1.8: Average Growth in GDP per Capita and Average Growth in Economic Freedom at the Subnational Level, 1982–2007



constructed. 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. 97).

The Evolution of Economic Freedom in Canada and the United States

As can be seen from table 1.1 and table 1.2, the evolution of economic freedom in Canada and the United States follows an expected pattern. In the United States, at the all-government level, economic freedom increases through the 1980s, coinciding with the Reagan era. It then falls in the early 1990s, following tax increases under the first President Bush and the early administration of President Clinton, and then begins to rise again, particularly in the new century. At the subnational level, the pattern is similar but less pronounced, again as one might expect. Many states embarked upon Reagan-like government restructuring, but not all, and often not at the same level of intensity, or in the same time frame.⁹

In Canada through the 1980s, economic freedom remained fairly constant at the subnational level, save for a significant decline at the beginning of the decade, while it increased somewhat at the all-government level, perhaps as a result of a change of federal government, and a resulting change in policy, in 1984. At both the all-government level and the subnational level, economic freedom falls in Canada in the early 1990s and then begins to rise. In early 1990s, federal, provincial, and municipal governments began to address their debts and deficits but more often through increased taxation than through lower spending. However, as debts and deficits were brought under control, governments began to reduce some tax rates through the mid-, and particularly the late, 1990s. Also in this period, fiscally conservative governments were elected in Canada’s two richest provinces, Alberta and Ontario. In the early years of the new century, economic freedom rose in Canada at the all-government level while it remained fairly stable at the subnational level.

Overall patterns in Canada and the United States are similar. Both nations fought debts and deficits in the early 1990s with tax increases. However, Canada raised taxes more aggressively, as can be seen from changes in economic freedom during this period. From 1981 to 2007, the gap between economic freedom in Canada and that in the United States at both the subnational and the all-government levels first widened and then narrowed again until 2000, and has been roughly stable since. However, anti-recessionary measures adopted in both Canada and the United States and bail-outs in response to the financial crisis are likely to have a negative impact on economic freedom.

Overview of the Results for the United States

Most US states have maintained a high degree of economic freedom and only a handful have consistently not done so. There were 11 states (due to a tie in 10th spot)

[9] Gwartney and Lawson (2007) show rising scores for Canada and the United States from 1980 to 2000. This is because of components such as price levels that can only be examined at the national level. Obviously, states and provinces do not have an independent monetary policy of their own.

Table 1.1: Average Economic Freedom Scores at the All-Government Level

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
US	5.8	6.0	6.1	6.3	6.3	6.3	6.6	7.0	7.0	7.0	6.7	6.6	6.5	6.5	6.5	6.6	6.6	6.6	6.6	6.5	6.5	6.6	6.7	6.8	6.8	6.8	6.8
Canada	4.5	4.6	4.6	4.7	4.6	4.6	4.6	4.9	4.9	4.6	4.2	4.0	4.1	4.2	4.4	4.5	4.5	4.6	4.8	5.0	5.0	5.0	5.1	5.2	5.3	5.4	5.4
Diff.	1.3	1.4	1.5	1.7	1.7	1.7	2.0	2.1	2.2	2.4	2.5	2.6	2.4	2.2	2.1	2.1	2.1	1.9	1.8	1.5	1.6	1.6	1.7	1.6	1.5	1.4	1.4

Table 1.2: Average Economic Freedom Scores at the Subnational Level

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
US	7.0	6.9	6.9	7.1	7.1	7.0	7.1	7.1	7.2	7.1	6.9	6.7	6.7	6.8	6.8	6.9	7.0	7.0	7.0	7.0	6.9	6.8	6.9	6.9	6.9	6.9	6.9
Canada	5.2	5.0	4.8	4.9	4.9	4.9	4.9	5.0	5.0	4.8	4.6	4.3	4.4	4.6	4.7	4.8	4.9	5.0	5.2	5.4	5.3	5.3	5.2	5.3	5.4	5.5	5.5
Diff.	1.9	2.0	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.3	2.3	2.4	2.4	2.2	2.1	2.1	2.1	2.0	1.8	1.6	1.6	1.6	1.6	1.6	1.5	1.4	1.4

at the bottom of the all-government index: Arkansas, Michigan, Hawaii, Rhode Island, South Carolina, Vermont, New Mexico, Montana, Maine, and Mississippi; West Virginia came last. Their average per-capita GDP in 2007 was \$32,419 (in constant 2002 dollars) compared to an average of \$40,187 for the other 39 states. The top 10 states are Delaware, Texas, Colorado, Georgia, North Carolina, Utah, Louisiana, Nevada, New Hampshire, and Tennessee. Their average per-capita GDP in 2007 was \$41,133 compared to \$37,814 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

Canadian provinces consistently have lower scores than US states and thus are clustered near the bottom of the ranking. Alberta is the only province that has consistently done better than at least some states. It ranked 3rd at the all-government level and 7th at the subnational level in 2007. Although Alberta's economic freedom declined through the 1980s and early 1990s before recovering after the mid-1990s, in all years it has remained ahead of at least one state, usually West Virginia, in the rankings at both the all-government and the subnational levels.

Ontario placed ahead of several states at the all-government level in 1981. However, in the late 1980s and early 1990s, Ontario's economic freedom declined sharply. Economic freedom recovered through the mid- and late 1990s but only the scores in 2000 show Ontario regaining the degree of economic freedom it had in 1981. Over the same period, average scores in the United States also rose, leaving

Ontario further behind the US average than it was two decades ago. Ontario is now behind most of the states at both the all-government level and the subnational levels.

There is an interesting contrast between Ontario and British Columbia. Between 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 economic growth was just 11%, compared to Ontario's 23%. British Columbia suffered from relatively weak economic freedom growth while Ontario benefited from relatively strong growth.

In the most recent seven-year period, 2000 to 2007, economic freedom in British Columbia has increased while Ontario, which had escaped from the bottom 10, has now slipped back. As economic freedom grew in British Columbia, so did its economy, by 17%; in Ontario, economic freedom declined during this period and the economy grew at just 7%, the lowest rate of growth of all Canadian provinces. Although Ontario is only slightly ahead of British Columbia in economic freedom, in considering economic growth, the rate of change is the key factor. If economic freedom in Ontario continues to show weak growth, the econometric testing here suggests the province will continue to lag in prosperity growth.

From 2000 to 2007, the province of Newfoundland & Labrador had the greatest increase in economic freedom at both the all-government and subnational levels, albeit from a low base. Newfoundland & Labrador has also had by far the fastest growth in Canada, 97%, during this period. However, the province has benefited from oil and gas development and it would be hazardous to draw any connection to economic freedom. In any event, as noted above, these comparisons are simply snapshots in time.

Canadian Fiscal Federalism

The Government of Canada may well be unique in the amount of money it transfers among provinces and regions.¹⁰ For example, in Canada's Atlantic Provinces, the nation's most economically depressed region, net federal spending—the difference between federal revenues raised in the region and the amount of federal spending—typically equaled between 20% and 40% of regional GDP during the period under consideration. Although transfers between levels of government occur within the United States, the magnitude of these transfers is much smaller than in Canada.

Inter-regional transfers in Canada create a fiscal drain on “have” regions. This is obvious at the federal level where tax revenues are, in effect, transferred from “have” to “have-not” provinces, but transfers also occur at the provincial level. The burden of federal taxation reduces room for provincial taxation in all provinces. This is a significant problem for “have” provinces but not for “have-not” provinces since a considerable portion of federal transfers to “have-not” regions go directly to provincial governments, which are thus more than compensated for the loss of taxation room.

[10] A discussion of fiscal federalism can be found in McMahon, 2000b: chapter 3. The US fiscal structure is discussed in McMahon, 2000a: chapter 4.

Nonetheless, one would expect—and, indeed, the data confirm—that most of the negative impact of fiscal federalism would be found at the all-government level, which directly includes the impact of federal taxation and transfers. This is unfortunate because it is at the all-government level, where the impact of all governments on economic freedom is calculated, that the effects of economic freedom are strongest.

Explaining a Puzzle

Canadian fiscal federalism may help explain a puzzle found in the following discussion of the econometric results. The beneficial effect of economic freedom upon Canadian provinces is considerably weaker than it is upon US states at both the all-government and subnational levels. This may be because of the interaction between Canada's fiscal structure, economic freedom, and economic growth.

To understand the impact of Canada's fiscal federalism, consider a province that reduces economic freedom by, for example, increasing taxes. This will likely have a negative effect on the provincial economy, as both the following results and international testing show. However, the weaker provincial economy means the province will receive an increase in federal payouts (or a reduction in the fiscal outflow if the province in question is a "have" province). The greater the reduction in economic freedom, the greater the negative impact on the economy and the greater the amount of money the province will receive from the federal government. This inflow of funds will, at least in the short term, partly offset the negative impact on GDP and mute the effect of economic freedom, or its loss, on the economy. (In the longer term, the inflow of funds will also weaken the economy but this effect is likely beyond the time horizon of the tests conducted here.)

On the other hand, if a province increases economic freedom, for example by reducing taxes, and its economy grows, the result is an increased outflow of government revenues to other jurisdictions and a heavier tax burden, given the progressivity of Canadian taxes, which in turn suppresses increases in economic freedom and economic growth. In other words, fiscal federalism mutes the effect of economic freedom in Canada. However, despite the problems created by Canada's fiscal structure, overall, economic freedom still proves to be a powerful stimulant for increasing prosperity in Canada.

Impact of Fiscal Federalism

Unfortunately, Canada's fiscal federalism seems to harm both rich and poor provinces. The discussion above shows how fiscal federalism frustrates the ability of some provinces to improve their economic freedom and, thus, their prosperity. However, the effects are at least as unfortunate in the poorer provinces, where a rich menu of government spending pushes out other economic activity and politicizes the economy. As a result, the rate of convergence of Canada's poorer regions is about a third to a half of the rate of convergence of poor regions in the United States, Europe, and Japan (McMahon, 2000a).

The incentives created by fiscal federalism are also damaging. Because fiscal federalism hinders movement towards economic freedom in the provinces and thus

weakens the positive impact of economic freedom, the incentive for provinces to increase the freedom of their economies weakens.

Even worse, the elites in “have-not” provinces have incentives to limit economic freedom. Low levels of economic freedom reduce economic activity and increase the flow of federal transfers. These transfers are predominately captured by the political and business elites, meaning they have incentives to keep economic growth low. As well, Canada’s system of Employment Insurance (EI) alters the incentives facing many voters, since they can benefit from the structure of the EI system, which also weakens economic growth by removing large segments of the population from the year-round workforce so long as economic activity remains weak.

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 per-capita 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.¹¹

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.¹² To test whether or not there is a positive relationship between economic growth and economic freedom, we use annual observations on each of the components from 1981 to 2006. Although economic freedom is calculated up to the year 2007, we do not include this year because

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- [11] 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 <http://www.freetheworld.com>. For the latest summary of literature on the impact of economic freedom at an international level, see Doucouliagos and Ulubasoglu, 2006.
- [12] 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. 109).

the percentage of high-school graduates, one of our control variables, was only available up to the year 2006 in the United States. We run separate regressions for Canada and the United States to determine if economic freedom has different effects in the two nations. 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 1.3 and table 1.4 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.¹³ The proxy component for human 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 national context 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.¹⁴

The results from the regression analysis in table 1.3 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. 21). On the whole, the US results are more statistically significant than the Canadian results, though even the Canadian results typically have a p-value well below 1%, meaning that the results, roughly speaking, are statistically significant more than 99 times out of 100. Somewhat lower statistical significance on the Canadian tests may reflect both the nature of Canada's fiscal federalism, which mutes the effects of economic freedom, and the fact there are obviously more data points for 50 states than 10 provinces.

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

[14] Autoregressive (AR) techniques were used in estimating the regressions. To determine which AR process was most appropriate, we ran regressions until the lagged variables were no longer statistically significant and chose the previous regression as the best fit. For instance, if the AR(3) process yielded insignificant results for at least one of the lagged variables, we considered the AR(2) regression with two lags to be the best fit. For simplicity in reporting the results, we only report the results for the independent variables of interest. The complete results are available upon request.

Table 1.3: Level of Economic Freedom and GDP per Capita

Regressions at All-Government Level (ALLG)					Regressions at Subnational Level (SUBN)				
Dependent Variable: Real GDP per Capita (1981–2006)					Dependent Variable: Real GDP per Capita (1981–2006)				
Method: Pooled Least Squares					Method: Pooled Least Squares				
Canada					Canada				
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.
HG	-29.20	70.31	-0.42	0.68	HG	-17.25	73.29	-0.24	0.81
ALLG	4,185.72	578.12	7.24	0.00	SUBN	3,705.98	644.07	5.82	0.00
Adjusted R ² : 0.98					Adjusted R ² : 0.98				
United States					United States				
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.
HG	2.93	32.99	0.09	0.93	HG	-12.10	30.66	-0.39	0.69
ALLG	5,334.54	819.64	6.51	0.00	SUBN	4,847.55	881.51	5.50	0.00
Adjusted R ² : 0.98					Adjusted R ² : 0.98				

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 2006; ALLG is an economic freedom index at an all government level from 1981 to 2006; SUBN is an economic freedom index at a subnational level from 1981 to 2006.

Table 1.4: Growth in Economic Freedom and Growth in GDP per Capita

Regressions at All-Government Level (ALLG)					Regressions at Subnational Level (SUBN)				
Dependent Variable: Growth in Real GDP per Capita (1982–2006)					Dependent Variable: Growth in Real GDP per Capita (1982–2006)				
Method: Pooled Least Squares					Method: Pooled Least Squares				
Canada					Canada				
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.
HGG	0.06	0.11	0.53	0.60	HGG	0.19	0.12	1.60	0.11
POPG	0.37	0.37	1.00	0.35	POPG	0.46	0.39	1.18	0.24
ALLGG	0.60	0.07	9.18	0.00	SUBNG	0.56	0.08	9.24	0.00
Adjusted R ² : 0.46					Adjusted R ² : 0.37				
United States					United States				
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.
HGG	0.00	0.04	0.05	0.96	HGG	0.02	0.04	0.45	0.65
POPG	-0.77	0.26	-2.93	0.00	POPG	-0.07	0.26	-0.28	0.78
ALLGG	1.02	0.08	11.97	0.00	SUBNG	0.73	0.08	9.24	0.00
Adjusted R ² : 0.42					Adjusted R ² : 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 1982 to 2006; POPG is growth in population from 1982 to 2006; ALLGG is growth in economic freedom at an all government level from 1982 to 2006; SUBNG is growth in economic freedom at a subnational level from 1982 to 2006.

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\$5,335. An increase of one point in economic freedom in a Canadian province will increase its per-capita GDP by US\$4,186 (CA\$4,688).¹⁵ At a subnational level, an increase of one point in economic freedom in a US state will increase its per-capita GDP by US\$4,848, whereas an increase of one point in economic freedom in a Canadian province will increase its per-capita GDP by US\$3,706 (CA\$4,151). Canada's fiscal federalism—and the negative impact this has on the effects of economic freedom—is a key reason that the effects are stronger in the United States.

For both Canada and the United States, the impact of economic freedom on per-capita GDP is higher at an all-government level than it is at a subnational level. This is the expected result, since the all-government component captures the impact of restrictions on economic freedom imposed at both the subnational and all-government levels.

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 state over the full period is only 3.80 points at the all-government level. Thus, a US state would have to improve its score by roughly one third within this range in order to achieve the one-point increase required to realize the US\$5,335 per-capita gain in income. In Canada, at the all-government level, the range is 5.5. At the subnational level, the range in Canada is 4.9; in the United States, it is 4.0.

Table 1.4 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 1.02% in the growth rate of per-capita GDP for US states and an increase of 0.60% 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 0.73% in the growth rate of per-capita GDP for US states and 0.56% increase in the growth rate for Canadian provinces.

Sensitivity Analysis

In order to determine the stability of the regression results in the table 1.3 and table 1.4, 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 1.5 and table 1.6) is important. Annual data in regression analysis may lead to 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 1.5 and

[15] The exchange rate used is \$1.12 (see footnote 8).

table 1.6 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 1.5 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.

Table 1.5: Level of Economic Freedom and GDP per Capita (Moving Averages)

		Dependent Variable: Real GDP per Capita (1981–2006) Method: Pooled Least Squares									
		2-period backward moving average		3-period backward moving average		4-period backward moving average		5-period backward moving average		6-period backward moving average	
Canada at the All-Government Level											
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	
HG	−54.63	−0.77	55.11	1.01	−64.53	−0.85	163.78	2.71	115.6	2.02	
ALLG	4,141.09	8.75	3,480.12	8.80	3,566.61	7.27	3,868.40	8.33	3,623.26	8.38	
Canada at the Subnational Level											
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	
HG	83.64	1.10	33.34	0.56	38.03	0.42	27.96	0.31	9.47	0.10	
SUBN	4,532.47	8.10	3,814.73	8.17	4,159.14	8.21	4,030.13	8.04	3,951.29	7.79	
United States at the All-Government Level											
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	
HG	2.48	0.12	36.15	0.74	−15.46	−0.34	53.47	1.39	−43.12	−0.87	
ALLG	5,002.36	9.60	5,484.48	7.91	6,321.69	8.69	4,995.04	12.49	5,212.00	6.91	
United States at the Subnational Level											
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	
HG	−6.59	−0.31	35.46	0.82	−48.54	−1.07	48.59	1.30	−54.11	−1.12	
SUBN	4,659.04	8.64	5,109.21	6.51	5,817.64	6.93	4,061.47	9.90	4,555.74	6.88	

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 2006; ALLG is an economic freedom index at an all government level from 1981 to 2006; SUBN is an economic freedom index at a subnational level from 1981 to 2006.

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

Finally, the pattern differentiating all-government testing from subnational testing remains consistent regardless of period. For both Canada and the United States, the impact of economic freedom at the all-government level is greater than the impact at the subnational level throughout the period under consideration. The regression results in table 1.6 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 1.6: Growth in Economic Freedom and Growth in GDP per Capita (Moving Averages)

Dependent Variable: Growth in GDP per Capita GDP (1982–2006) Method: Pooled Least Squares											
		2-period backward moving average		3-period backward moving average		4-period backward moving average		5-period backward moving average		6-period backward moving average	
Canada at the All-Government Level											
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	
HGG	−0.01	−0.04	0.04	0.43	−0.06	−0.42	0.23	2.05	0.08	0.73	
POPG	1.21	1.98	−0.32	−0.64	0.83	1.62	0.60	1.42	0.24	0.42	
ALLGG	0.61	8.43	0.49	9.56	0.54	8.27	0.60	8.73	0.53	8.21	
Canada at the Subnational Level											
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	
HGG	−0.06	−0.49	0.13	1.08	−0.13	−1.09	0.25	2.23	0.20	1.89	
POPG	1.14	2.37	−0.09	−0.19	1.29	2.62	0.73	2.30	0.54	1.31	
SUBNG	0.55	7.70	0.48	9.07	0.51	7.69	0.48	9.02	0.46	7.84	
United States at the All-Government Level											
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	
HGG	0.03	0.84	0.02	0.34	−0.04	−0.65	0.08	1.61	−0.05	−0.97	
POPG	−0.91	−2.41	−0.17	−0.65	−0.51	−1.97	−0.30	−1.13	−0.44	−1.57	
ALLGG	0.73	10.55	0.97	13.87	1.03	13.38	0.94	15.92	0.93	12.55	
United States at the Subnational Level											
Variable	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	Coefficient	t-Statistic	
HGG	0.03	0.66	0.05	1.06	−0.07	−1.16	0.08	1.76	−0.05	−1.10	
POPG	−0.39	−1.23	0.22	0.90	−0.15	−0.64	−0.26	−0.86	0.06	0.27	
SUBNG	0.53	9.05	0.71	10.79	0.72	10.08	0.61	10.61	0.64	10.31	

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 1982 to 2006; POPG is growth in population from 1982 to 2006; ALLGG is growth in economic freedom at an all government level from 1982 to 2006; SUBNG is growth in economic freedom at a subnational level from 1982 to 2006.

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.

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. However, during the twentieth century there was continuous debate about whether planned or free economies produce the best outcomes. 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. So, taking for example two peripheral European nations, the relatively free Ireland does much better than the relatively unfree Greece. 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 has been decreasing in recent years. In contrast, during the latter half of the 1990s, economic freedom in Ontario 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.

Conclusion

The worldwide evidence on economic freedom suggests that the Canadian provinces are poorly positioned to take advantage of economic opportunity. The provinces are clustered near the bottom of the rankings in all three areas, indicating that their governments have consumed and transferred more resources, imposed higher tax rates, and created more rigid labor markets than the governments of US states.

The regression analyses indicate that growth in economic freedom and the degree of economic freedom have a significant impact on the growth in per-capita GDP and the level of per-capita GDP. Since Canadian provinces have relatively low levels of economic freedom, Canadians are likely to continue to experience lower standards of living relative to American states. Only one province, Alberta, has a high degree of economic freedom compared to other Canadian provinces, and its residents have seen the benefits of this.

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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 2.1 and table 2.2 provide a detailed summary of the scores for 2007. 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 (see p. 28 for a list of the Areas and their Components). All the data included in this report are available on our website, <<http://www.freetheworld.com>>.

Areas and Components Used in *Economic Freedom of North America 2010*

Area 1 Size of Government

- 1A General Consumption Expenditures by Government as a Percentage of GDP*
- 1B Transfers and Subsidies as a Percentage of GDP*
- 1C Social Security Payments as a Percentage of GDP*

Area 2 Takings and Discriminatory Taxation

- 2A Total Tax Revenue as a Percentage of GDP*
- 2B Top Marginal Income Tax Rate 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*

Area 3 Labor Market Freedom

- 3A Minimum Wage Legislation*
- 3B Government Employment as a Percentage of Total State/Provincial Employment*
- 3C Union Density*

Table 2.1: Scores at the Federal, State/Provincial, and Local/Municipal Levels, 2007

	Overall Index	Area 1	Area 2	Area 3	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C
Alberta	7.7	9.1	7.3	6.7	9.2	8.5	9.6	6.7	5.5	9.6	7.5	9.2	8.0	3.0
British Columbia	5.8	7.8	4.6	5.1	7.4	7.6	8.3	3.6	4.5	6.7	3.6	6.5	7.4	1.2
Manitoba	4.9	6.7	4.1	4.0	5.9	6.0	8.1	3.5	3.5	5.6	3.7	6.0	3.4	2.6
New Brunswick	5.0	5.8	4.1	5.0	4.5	6.7	6.3	3.7	3.5	6.0	3.1	5.9	5.2	3.8
Newfoundland	6.0	6.6	6.7	4.7	4.9	7.9	7.0	8.1	3.5	10.0	5.0	8.4	2.7	2.9
Nova Scotia	4.5	5.4	3.6	4.5	3.1	6.9	6.3	2.9	2.5	6.0	2.8	5.5	3.7	4.4
Ontario	5.7	7.9	3.9	5.4	7.2	7.9	8.4	2.3	3.5	5.8	4.0	6.7	7.2	2.5
Prince Edward Island	4.0	4.7	3.0	4.3	3.0	6.3	4.8	1.7	3.5	5.6	1.3	5.0	3.9	4.1
Quebec	4.4	6.5	2.6	4.0	6.2	5.9	7.6	0.6	2.5	4.1	3.1	5.7	6.1	0.1
Saskatchewan	5.6	7.2	5.0	4.7	6.8	6.4	8.5	4.9	4.5	5.9	4.6	7.4	1.9	4.8
Alabama	6.4	5.6	6.5	7.2	5.0	8.2	3.5	6.6	7.0	5.4	7.0	7.4	6.8	7.3
Alaska	6.8	6.8	7.3	6.1	5.5	7.5	7.5	7.7	8.0	4.4	9.2	8.9	3.9	5.6
Arizona	6.9	7.3	6.2	7.2	7.5	8.8	5.7	6.3	6.0	6.4	6.1	6.7	8.6	6.4
Arkansas	6.3	6.1	5.5	7.3	6.8	7.8	3.7	5.4	5.0	5.8	5.8	6.3	7.6	7.9
California	6.7	7.8	5.6	6.7	7.6	9.0	6.7	4.7	4.0	6.4	7.2	7.4	8.4	4.3
Colorado	7.5	8.1	6.6	7.6	8.3	9.4	6.7	6.1	6.0	7.1	7.4	7.8	8.3	6.7
Connecticut	7.0	8.1	5.6	7.1	7.9	9.3	7.0	3.8	6.0	5.0	7.8	8.3	8.5	4.6
Delaware	8.3	8.9	8.1	7.8	9.6	9.6	7.5	8.4	6.0	8.2	9.9	9.4	8.4	5.7
Florida	6.8	7.1	5.6	7.6	7.0	9.2	5.1	4.2	8.0	3.8	6.5	7.0	9.3	6.5
Georgia	7.5	7.6	6.8	8.0	7.6	9.0	6.4	6.5	6.0	7.4	7.1	8.1	8.1	7.8
Hawaii	6.2	6.8	5.7	5.9	5.9	8.8	5.8	6.2	5.0	6.1	5.5	7.5	6.0	4.2
Idaho	6.7	6.8	5.6	7.6	6.8	8.5	5.1	5.7	5.0	4.5	7.4	7.3	7.6	7.8
Illinois	7.1	7.9	6.3	7.1	8.4	9.1	6.3	5.4	7.0	4.8	8.0	7.6	9.0	4.6
Indiana	7.1	7.2	6.7	7.3	7.2	8.8	5.7	6.0	7.0	5.9	7.8	7.9	8.7	5.5
Iowa	7.0	7.4	6.4	7.3	7.8	8.6	5.9	7.1	6.0	5.1	7.5	7.9	7.9	6.0
Kansas	7.0	7.3	6.1	7.6	7.2	8.7	5.9	5.9	6.0	5.5	6.9	8.2	6.5	8.0
Kentucky	6.6	6.3	6.2	7.2	6.6	8.2	4.0	5.9	6.0	5.2	7.7	7.4	7.5	6.7
Louisiana	7.3	7.0	6.9	8.0	7.7	7.2	6.2	8.9	7.0	6.1	5.8	8.6	6.7	8.5
Maine	5.7	5.7	4.7	6.6	5.5	7.7	3.9	4.1	5.0	2.6	7.1	6.3	7.9	5.7
Maryland	6.4	6.5	5.6	7.1	5.0	8.9	5.7	3.9	6.0	4.0	8.3	8.1	7.1	6.1
Massachusetts	7.1	7.6	6.4	7.3	7.4	8.7	6.6	4.5	6.0	6.7	8.4	7.9	9.1	4.9
Michigan	6.3	6.8	6.0	6.1	7.0	8.7	4.7	5.3	6.0	5.7	7.2	6.3	8.7	3.4
Minnesota	7.0	7.7	5.9	7.3	7.7	8.9	6.6	5.4	5.0	5.4	7.7	8.7	8.5	4.5
Mississippi	5.5	4.3	5.4	6.9	3.5	6.3	3.2	5.8	6.0	4.0	5.9	6.4	5.6	8.6
Missouri	6.7	6.6	6.6	7.0	6.3	8.5	5.0	5.9	7.0	6.0	7.3	6.9	7.9	6.2
Montana	5.9	5.9	5.3	6.5	6.6	7.1	4.0	4.8	6.0	0.9	9.7	6.8	6.9	5.9
Nebraska	7.2	7.6	6.3	7.7	7.8	8.5	6.5	6.4	6.0	5.6	7.4	8.5	7.4	7.1
Nevada	7.3	8.6	6.2	7.2	9.2	9.6	7.0	5.6	8.0	4.3	6.8	8.4	9.5	3.6
New Hampshire	7.3	7.8	6.6	7.7	8.1	9.2	6.0	4.9	8.0	3.7	9.6	8.2	9.3	5.5
New Jersey	6.5	7.8	5.1	6.7	7.8	9.3	6.3	3.9	5.0	3.4	8.0	8.0	8.3	3.7
New Mexico	6.0	5.5	5.4	7.0	4.3	7.4	4.7	6.3	6.0	3.4	6.1	7.7	5.1	8.3
New York	6.5	7.5	5.8	6.2	7.6	8.5	6.5	4.6	6.0	5.1	7.5	8.3	7.7	2.5
North Carolina	7.5	7.6	6.8	8.0	8.2	8.8	5.9	7.0	5.0	7.1	8.0	7.7	7.6	8.6
North Dakota	6.6	6.5	5.6	7.7	6.8	6.7	6.0	5.8	6.0	3.2	7.5	8.4	5.9	8.7
Ohio	6.5	6.4	6.2	6.7	5.8	8.6	4.7	6.4	6.0	4.9	7.6	6.8	8.5	4.9
Oklahoma	6.7	6.6	6.0	7.4	7.1	8.3	4.5	6.3	6.0	5.0	6.8	7.7	6.1	8.4
Oregon	6.7	7.2	6.4	6.5	8.1	8.8	4.9	5.8	6.0	4.2	9.7	6.4	8.1	5.1
Pennsylvania	6.5	6.6	6.1	6.9	6.3	8.7	4.8	5.1	7.0	4.4	7.8	7.3	9.3	4.1
Rhode Island	6.1	6.6	4.9	6.9	6.9	8.1	4.9	4.6	5.0	2.6	7.4	6.9	9.4	4.2
South Carolina	6.1	6.0	4.8	7.6	5.9	8.3	4.0	1.5	5.0	5.2	7.5	7.2	7.3	8.3
South Dakota	7.2	6.9	6.9	7.8	7.3	7.4	6.0	6.6	8.0	6.0	7.0	8.4	7.3	7.8
Tennessee	7.3	7.1	6.9	7.9	7.4	8.4	5.4	6.8	8.0	6.4	6.4	7.9	8.3	7.5
Texas	7.8	8.3	6.9	8.2	8.4	9.3	7.2	7.0	8.0	5.4	7.2	8.7	7.9	7.9
Utah	7.5	7.9	7.0	7.8	7.6	9.1	7.0	7.1	7.0	7.0	6.8	7.9	7.8	7.7
Vermont	6.1	6.3	5.1	6.8	5.8	7.6	5.5	4.4	5.0	2.6	8.4	6.2	8.0	6.1
Virginia	7.1	6.7	6.5	8.2	4.7	9.4	6.0	5.9	6.0	5.6	8.5	8.8	6.9	8.9
Washington	6.5	7.6	5.7	6.1	7.8	9.1	6.0	4.3	8.0	5.3	5.3	7.0	7.5	4.0
West Virginia	5.4	5.1	4.8	6.3	5.6	7.5	2.3	4.8	6.0	0.9	7.4	6.0	6.4	6.5
Wisconsin	6.7	7.3	5.8	6.9	7.4	9.0	5.4	5.3	6.0	4.6	7.4	7.3	8.7	4.8
Wyoming	7.0	7.5	5.9	7.7	7.7	7.7	6.9	5.2	8.0	3.9	6.6	9.5	4.3	9.3

Table 2.2: Scores at the State/Provincial and Local/Municipal Levels, 2007

	Overall Index	Area 1	Area 2	Area 3	1A	1B	1C	2A	2B	2C	2D	3A	3B	3C
Alberta	7.7	8.4	8.7	5.9	7.9	8.0	9.4	8.8	7.0	9.6	9.5	7.4	7.3	3.0
British Columbia	5.9	7.1	6.1	4.4	5.7	7.8	7.7	5.3	5.5	8.3	5.4	5.2	6.8	1.2
Manitoba	5.1	6.8	5.2	3.3	4.1	7.6	8.6	3.9	4.5	7.7	4.8	4.8	2.4	2.6
New Brunswick	5.4	6.2	5.4	4.5	3.1	7.5	8.1	4.7	4.5	8.3	4.2	4.8	4.8	3.8
Newfoundland	5.8	6.8	6.9	3.8	2.4	9.0	9.0	8.0	4.0	10.0	5.7	6.8	1.7	2.9
Nova Scotia	5.1	6.1	5.1	4.1	3.2	8.1	7.1	3.9	4.5	8.1	4.1	4.4	3.5	4.4
Ontario	5.8	7.1	5.2	4.9	5.9	7.8	7.6	3.7	4.5	7.5	5.3	5.4	7.0	2.5
Prince Edward Island	5.0	6.1	4.7	4.2	1.8	7.8	8.7	4.0	4.5	8.4	2.1	4.0	4.5	4.1
Quebec	4.2	5.6	3.6	3.3	4.9	5.1	6.8	0.0	4.0	6.3	4.2	4.6	5.3	0.1
Saskatchewan	5.4	7.0	5.7	3.6	4.7	8.4	8.0	4.7	5.5	7.0	5.5	5.9	0.0	4.8
Alabama	7.4	6.8	7.6	8.0	4.8	8.9	6.6	7.4	8.0	9.0	6.0	10.0	6.6	7.3
Alaska	6.4	5.8	7.7	5.7	3.9	7.9	5.5	6.4	10.0	5.6	9.0	7.1	4.4	5.6
Arizona	7.2	7.8	7.1	6.7	6.8	9.2	7.3	6.9	8.0	8.7	5.0	5.4	8.4	6.4
Arkansas	6.5	6.9	6.1	6.7	4.7	8.9	7.1	5.6	6.0	9.1	3.6	5.1	7.0	7.9
California	6.1	6.2	6.0	6.1	5.9	7.5	5.2	5.1	5.0	7.6	6.3	6.0	7.9	4.3
Colorado	7.4	7.8	7.4	7.1	7.4	9.5	6.5	7.4	7.0	8.5	6.6	6.3	8.2	6.7
Connecticut	7.0	7.7	6.9	6.4	7.2	9.3	6.6	5.8	7.0	7.2	7.5	6.7	7.9	4.6
Delaware	8.2	8.5	8.9	7.0	7.8	9.3	8.4	9.4	7.5	8.9	9.8	7.5	7.8	5.7
Florida	7.2	7.5	6.9	7.1	5.9	8.8	7.7	6.2	10.0	6.4	5.1	5.7	9.2	6.5
Georgia	7.5	7.8	7.1	7.5	6.9	9.1	7.5	7.3	6.0	9.1	6.0	6.7	8.0	7.8
Hawaii	6.2	7.2	5.7	5.8	5.6	9.4	6.8	5.2	5.0	8.9	3.6	6.0	7.2	4.2
Idaho	6.7	7.1	6.1	7.0	5.3	9.0	7.1	5.5	5.0	7.4	6.4	5.8	7.2	7.8
Illinois	6.9	7.3	7.1	6.5	6.9	9.3	5.6	6.3	8.0	6.6	7.4	6.1	8.7	4.6
Indiana	7.0	7.5	7.0	6.6	5.7	8.7	8.0	6.1	8.0	7.6	6.4	6.3	8.2	5.5
Iowa	7.0	7.1	7.3	6.5	5.7	8.2	7.4	6.9	7.5	7.9	7.0	6.4	7.1	6.0
Kansas	7.2	7.7	6.4	7.4	6.1	9.5	7.7	6.0	6.0	7.9	5.8	8.3	5.8	8.0
Kentucky	6.6	6.3	6.9	6.6	5.6	7.6	5.6	6.1	6.5	8.2	6.9	6.0	7.1	6.7
Louisiana	7.6	7.3	7.3	8.1	6.5	8.8	6.7	7.4	8.0	9.2	4.8	10.0	5.8	8.5
Maine	5.6	5.7	5.0	6.2	3.0	7.3	6.8	3.3	5.0	5.7	6.0	5.0	7.8	5.7
Maryland	7.1	7.0	7.3	7.2	6.2	7.9	7.0	5.5	8.0	7.8	7.8	6.5	8.8	6.1
Massachusetts	7.0	7.3	7.1	6.7	6.3	9.2	6.2	5.9	7.0	7.6	8.0	6.3	8.9	4.9
Michigan	6.2	6.3	6.7	5.5	5.0	8.5	5.3	5.6	8.0	7.1	6.2	5.0	8.1	3.4
Minnesota	6.7	7.0	6.5	6.5	6.3	8.2	6.4	5.9	5.5	7.9	6.9	7.1	8.0	4.5
Mississippi	6.6	5.9	6.1	7.8	2.5	9.1	5.9	5.4	7.0	7.6	4.3	10.0	4.7	8.6
Missouri	7.1	7.4	7.4	6.5	6.3	9.2	6.7	6.9	8.0	8.3	6.5	5.6	7.7	6.2
Montana	6.4	6.4	6.9	6.1	4.6	8.6	5.9	5.1	8.0	5.0	9.5	5.4	6.9	5.9
Nebraska	7.2	8.0	6.7	6.9	6.3	9.1	8.6	6.4	6.0	7.8	6.5	6.8	6.8	7.1
Nevada	7.5	8.5	7.4	6.6	7.8	9.6	8.0	7.1	10.0	6.7	5.6	6.7	9.4	3.6
New Hampshire	7.8	8.3	8.2	7.0	6.9	9.6	8.3	7.4	10.0	5.6	9.6	6.6	8.9	5.5
New Jersey	6.2	6.7	6.1	6.0	5.9	8.8	5.3	4.8	6.0	6.0	7.4	6.4	7.8	3.7
New Mexico	6.3	6.2	6.3	6.5	3.8	8.5	6.1	5.6	7.0	7.9	4.6	6.4	4.9	8.3
New York	5.8	6.1	5.8	5.4	4.8	8.5	5.1	3.6	6.0	6.9	6.6	6.7	7.1	2.5
North Carolina	7.5	7.9	7.4	7.3	6.7	9.3	7.7	7.5	6.0	9.0	7.1	6.2	7.0	8.6
North Dakota	7.0	7.3	6.7	7.0	5.5	9.1	7.3	5.9	8.0	6.2	6.8	6.8	5.5	8.7
Ohio	6.0	5.5	6.4	6.1	5.1	7.8	3.7	5.0	7.0	7.2	6.5	5.5	8.0	4.9
Oklahoma	7.0	7.3	6.9	6.8	6.0	9.1	6.9	6.5	7.0	8.2	5.9	6.2	5.8	8.4
Oregon	6.7	6.3	7.9	6.0	5.9	8.9	4.3	7.0	7.0	7.9	9.8	5.1	7.7	5.1
Pennsylvania	6.6	6.5	6.9	6.4	5.3	8.3	5.7	5.6	8.0	7.0	7.1	5.9	9.2	4.1
Rhode Island	5.9	5.8	5.6	6.4	4.8	8.8	3.9	4.6	5.0	5.9	6.7	5.6	9.5	4.2
South Carolina	7.0	6.0	6.7	8.3	4.5	7.0	6.5	6.6	6.0	7.7	6.4	10.0	6.6	8.3
South Dakota	7.8	8.1	8.0	7.2	6.9	9.3	8.1	8.2	10.0	8.3	5.3	6.7	7.2	7.8
Tennessee	8.0	7.5	8.0	8.5	6.7	7.6	8.2	8.3	10.0	9.2	4.5	10.0	8.0	7.5
Texas	8.0	8.4	8.0	7.5	7.9	9.5	8.0	8.2	10.0	7.3	6.6	7.0	7.5	7.9
Utah	7.5	7.6	7.5	7.3	6.5	8.3	7.9	7.0	8.0	9.0	6.1	6.3	8.0	7.7
Vermont	6.0	6.3	5.4	6.2	3.5	7.4	7.8	4.2	5.0	5.0	7.5	5.0	7.6	6.1
Virginia	7.8	7.9	7.6	7.9	7.2	8.4	8.2	7.3	7.0	8.1	8.1	7.1	7.9	8.9
Washington	6.5	7.2	6.7	5.6	6.8	8.5	6.4	6.2	10.0	7.2	3.4	5.6	7.2	4.0
West Virginia	6.3	7.0	6.0	5.9	3.8	8.7	8.5	4.4	6.5	6.4	6.6	4.9	6.3	6.5
Wisconsin	6.5	6.6	6.6	6.2	5.3	8.9	5.5	5.5	7.0	7.2	6.8	5.9	8.1	4.8
Wyoming	6.8	7.3	6.4	6.8	5.5	9.4	7.0	5.2	10.0	4.5	5.8	7.7	3.4	9.3

Table 2.3: Overall Scores at the Federal, State/Provincial, and Local/Municipal Levels, 1981–2007

	1981	1986	1991	1996	2001	2002	2003	2004	2005	2006	2007	Rank*
Alberta	7.0	6.4	6.1	6.8	7.3	7.2	7.5	7.7	7.8	7.7	7.7	3
British Columbia	5.2	5.1	4.9	4.6	5.1	5.2	5.3	5.5	5.7	5.8	5.8	50
Manitoba	5.1	4.4	4.1	4.5	4.8	4.8	4.6	4.7	4.7	4.9	4.9	57
New Brunswick	2.7	4.2	3.7	4.3	4.8	4.7	4.8	4.9	4.9	5.0	5.0	56
Newfoundland	3.5	3.3	2.8	2.9	4.2	4.7	4.9	5.2	5.6	5.9	6.0	47
Nova Scotia	2.8	4.0	3.9	4.0	4.6	4.6	4.7	4.7	4.7	4.6	4.5	58
Ontario	5.7	5.6	5.1	5.1	5.7	5.8	5.7	5.8	5.7	5.8	5.7	51
Prince Edward Island	4.1	4.0	3.4	3.9	3.8	4.0	3.9	3.9	3.9	4.1	4.0	60
Quebec	4.2	4.2	3.8	3.9	4.3	4.3	4.2	4.4	4.3	4.4	4.4	59
Saskatchewan	5.1	4.6	4.2	5.0	5.0	5.0	5.0	5.4	5.5	5.6	5.6	53
Alabama	5.5	6.1	6.5	6.4	6.2	6.2	6.4	6.5	6.5	6.5	6.4	39
Alaska	6.8	6.7	6.6	6.7	6.1	6.1	6.2	6.4	6.6	6.7	6.8	24
Arizona	5.9	6.4	6.5	6.7	7.0	7.0	7.0	7.0	7.1	7.1	6.9	23
Arkansas	5.7	6.1	6.6	6.5	6.2	6.2	6.4	6.5	6.5	6.4	6.3	41
California	5.9	6.4	6.8	6.5	6.5	6.6	6.7	6.8	6.7	6.8	6.7	26
Colorado	6.4	6.7	6.9	7.1	7.4	7.5	7.6	7.6	7.6	7.6	7.5	4
Connecticut	5.8	6.8	7.3	6.9	6.9	6.8	6.9	6.9	6.9	6.9	7.0	18
Delaware	6.6	7.2	8.0	7.8	8.1	8.3	8.4	8.4	8.5	8.3	8.3	1
Florida	5.6	6.4	6.6	6.3	6.6	6.7	6.9	6.9	6.9	6.8	6.8	24
Georgia	6.2	7.0	7.3	7.2	7.4	7.4	7.5	7.6	7.6	7.5	7.5	4
Hawaii	5.5	6.0	6.5	6.0	5.9	5.9	6.0	6.1	6.1	6.1	6.2	43
Idaho	5.9	5.9	6.3	6.5	6.3	6.3	6.4	6.6	6.7	6.7	6.7	26
Illinois	5.9	6.6	7.1	6.9	6.9	6.9	7.1	7.1	7.0	7.1	7.1	14
Indiana	5.9	6.5	6.9	7.1	7.0	7.0	7.3	7.3	7.1	7.1	7.1	14
Iowa	5.9	6.1	6.6	6.7	6.6	6.7	6.9	7.1	7.0	7.0	7.0	18
Kansas	6.1	6.4	6.6	6.6	6.6	6.6	6.8	6.9	6.9	6.9	7.0	18
Kentucky	5.9	6.3	6.6	6.6	6.3	6.5	6.5	6.6	6.6	6.5	6.6	32
Louisiana	7.1	7.1	7.3	7.0	6.6	6.4	6.9	7.1	7.2	6.7	7.3	8
Maine	5.0	5.7	5.9	5.7	5.7	5.7	5.7	5.8	5.7	5.7	5.7	51
Maryland	5.1	6.0	6.5	6.2	6.3	6.4	6.4	6.5	6.5	6.2	6.4	39
Massachusetts	5.7	6.7	7.0	6.8	6.9	7.0	7.1	7.1	7.1	7.1	7.1	14
Michigan	5.3	6.0	6.3	6.4	6.6	6.6	6.6	6.7	6.7	6.6	6.3	41
Minnesota	5.9	6.3	6.5	6.5	6.8	6.8	7.0	7.1	7.1	7.0	7.0	18
Mississippi	5.3	5.8	6.1	6.0	5.6	5.5	5.7	5.9	5.6	4.9	5.5	54
Missouri	5.7	6.5	7.0	6.7	6.7	6.7	6.9	7.0	6.9	6.9	6.7	26
Montana	5.7	5.3	5.6	5.3	5.3	5.4	5.6	5.8	6.0	6.0	5.9	49
Nebraska	6.2	6.5	6.9	7.1	6.8	6.8	7.1	7.2	7.2	7.2	7.2	12
Nevada	6.1	6.5	7.0	6.8	7.0	7.2	7.3	7.5	7.5	7.4	7.3	8
New Hampshire	5.9	7.0	7.3	7.3	7.2	7.3	7.4	7.5	7.4	7.4	7.3	8
New Jersey	5.5	6.4	6.8	6.4	6.6	6.7	6.7	6.7	6.6	6.5	6.5	34
New Mexico	5.9	5.8	6.0	6.1	5.8	5.5	5.7	6.0	6.0	6.0	6.0	47
New York	5.4	6.0	6.4	6.2	6.3	6.3	6.4	6.4	6.3	6.5	6.5	34
North Carolina	6.5	7.1	7.5	7.3	7.4	7.4	7.5	7.5	7.5	7.6	7.5	4
North Dakota	6.2	5.7	5.7	6.4	5.8	5.9	6.2	6.4	6.4	6.5	6.6	32
Ohio	5.6	6.2	6.5	6.4	6.5	6.5	6.6	6.6	6.6	6.7	6.5	34
Oklahoma	6.6	6.4	6.5	6.3	6.2	6.1	6.4	6.7	6.7	6.7	6.7	26
Oregon	5.4	5.8	6.1	6.6	6.5	6.5	6.6	6.7	6.7	6.8	6.7	26
Pennsylvania	5.2	6.1	6.6	6.4	6.5	6.6	6.7	6.7	6.7	6.7	6.5	34
Rhode Island	5.1	5.8	6.0	5.8	5.8	5.8	6.1	6.1	6.1	6.2	6.1	44
South Carolina	5.9	6.6	6.9	6.7	6.6	6.6	6.7	6.7	6.7	6.3	6.1	44
South Dakota	5.7	6.3	6.8	7.0	6.9	7.1	7.3	7.3	7.2	7.1	7.2	12
Tennessee	5.8	6.6	7.1	7.0	7.1	7.1	7.2	7.3	7.3	7.3	7.3	8
Texas	7.2	7.3	7.6	7.4	7.4	7.5	7.6	7.7	7.8	7.8	7.8	2
Utah	5.8	6.3	6.8	7.0	7.2	7.2	7.3	7.4	7.4	7.5	7.5	4
Vermont	5.6	6.1	6.6	6.2	6.0	6.1	6.3	6.3	6.2	6.1	6.1	44
Virginia	5.7	6.6	7.0	6.9	7.0	7.0	7.1	7.1	7.2	7.2	7.1	14
Washington	5.3	5.7	6.3	6.1	6.2	6.4	6.5	6.5	6.6	6.5	6.5	34
West Virginia	4.7	5.1	5.3	5.4	4.9	4.9	5.1	5.2	5.3	5.5	5.4	55
Wisconsin	5.6	5.9	6.5	6.5	6.5	6.6	6.7	6.8	6.8	6.7	6.7	26
Wyoming	7.2	6.7	7.2	7.0	6.5	6.7	6.8	6.9	7.0	7.0	7.0	18

* Rank out of 60 for 2007.

Table 2.4: Overall Scores at State/Provincial and Local/Municipal Levels, 1981–2007

	1981	1986	1991	1996	2001	2002	2003	2004	2005	2006	2007	Rank*
Alberta	7.2	6.1	6.1	7.0	7.2	7.1	7.4	7.6	7.8	7.7	7.7	7
British Columbia	5.2	5.0	5.1	4.6	5.2	5.2	5.3	5.4	5.7	5.9	5.9	49
Manitoba	5.7	4.9	4.5	4.8	5.1	4.9	4.7	4.8	4.8	5.1	5.1	57
New Brunswick	4.6	4.7	4.4	4.8	5.4	5.2	5.2	5.2	5.3	5.4	5.4	55
Newfoundland	3.8	3.7	3.4	3.2	4.7	5.1	5.2	5.2	5.7	5.9	5.8	51
Nova Scotia	4.6	5.0	4.9	4.9	5.4	5.3	5.3	5.1	5.1	5.1	5.1	57
Ontario	6.2	5.9	5.1	5.1	5.9	5.8	5.7	5.7	5.7	5.8	5.8	51
Prince Edward Island	4.8	5.0	4.5	4.9	4.8	5.0	4.8	4.8	4.8	5.0	5.0	59
Quebec	4.4	4.0	3.8	3.8	4.3	4.3	4.1	4.0	4.1	4.1	4.2	60
Saskatchewan	5.2	4.6	4.2	4.8	4.9	4.7	4.8	5.0	5.2	5.3	5.4	55
Alabama	7.9	8.0	7.8	7.7	7.2	7.1	7.2	7.2	7.2	7.2	7.4	13
Alaska	7.2	5.9	5.9	6.0	5.9	5.9	5.8	5.9	6.4	6.3	6.4	39
Arizona	8.1	8.0	7.3	7.7	7.9	7.9	7.8	7.7	7.8	7.8	7.2	15
Arkansas	7.3	7.2	7.2	7.1	6.8	6.7	6.8	6.8	6.8	6.6	6.5	36
California	6.0	6.4	6.1	6.0	6.2	5.9	5.9	5.9	6.1	6.2	6.1	46
Colorado	7.9	7.3	7.3	7.4	7.6	7.4	7.5	7.5	7.5	7.5	7.4	13
Connecticut	7.0	7.6	7.0	6.9	7.0	6.9	6.9	6.8	6.9	6.9	7.0	21
Delaware	7.0	7.6	7.9	7.8	8.2	8.2	8.2	8.2	8.3	8.2	8.2	1
Florida	8.5	8.4	7.7	7.7	7.9	7.9	7.8	7.7	7.3	7.1	7.2	15
Georgia	7.2	7.7	7.4	7.4	7.6	7.5	7.4	7.5	7.6	7.5	7.5	9
Hawaii	5.9	6.5	6.6	5.8	6.1	6.0	6.1	6.2	6.2	6.2	6.2	43
Idaho	7.1	6.9	6.7	6.5	6.6	6.4	6.5	6.5	6.8	6.7	6.7	30
Illinois	6.8	7.0	7.0	7.0	7.1	7.0	7.0	6.9	6.8	6.9	6.9	28
Indiana	7.4	7.6	7.3	7.6	7.4	7.4	7.4	7.4	7.1	7.1	7.0	21
Iowa	7.8	7.3	6.7	6.9	6.8	6.9	6.9	7.1	7.1	7.1	7.0	21
Kansas	7.3	7.3	7.2	7.0	7.1	7.0	7.0	7.0	7.2	7.1	7.2	15
Kentucky	7.1	7.2	6.9	6.9	6.7	6.7	6.6	6.6	6.7	6.6	6.6	33
Louisiana	8.6	7.7	7.7	7.7	7.2	7.0	7.2	7.3	7.5	7.5	7.6	8
Maine	5.7	6.2	5.7	5.8	5.8	5.7	5.7	5.8	5.8	5.7	5.6	54
Maryland	6.6	7.3	7.1	7.0	7.1	7.1	7.2	7.3	7.3	7.1	7.1	19
Massachusetts	6.2	7.2	6.7	7.0	7.2	7.1	7.0	7.0	7.0	7.0	7.0	21
Michigan	5.2	5.9	5.9	6.5	6.7	6.7	6.5	6.3	6.4	6.3	6.2	43
Minnesota	6.0	6.4	6.2	6.3	6.5	6.5	6.6	6.7	6.7	6.6	6.7	30
Mississippi	7.8	7.5	7.5	7.2	6.8	6.7	6.7	6.7	6.6	6.6	6.6	33
Missouri	7.3	7.7	7.6	7.4	7.2	7.1	7.1	7.1	7.1	7.2	7.1	19
Montana	7.2	6.0	5.9	5.7	6.1	6.2	6.2	6.4	6.6	6.6	6.4	39
Nebraska	7.6	7.5	7.3	7.4	7.2	7.1	7.2	7.2	7.2	7.2	7.2	15
Nevada	7.3	7.3	7.0	7.1	7.5	7.4	7.5	7.6	7.6	7.6	7.5	9
New Hampshire	7.6	8.3	7.6	7.9	7.9	7.8	7.8	7.8	7.7	7.8	7.8	4
New Jersey	6.2	7.0	6.5	6.4	6.8	6.7	6.5	6.5	6.3	6.3	6.2	43
New Mexico	7.2	6.7	6.5	6.4	6.1	6.0	6.0	6.2	6.3	6.2	6.3	41
New York	5.0	5.3	5.4	5.5	5.9	5.8	5.8	5.7	5.6	5.8	5.8	51
North Carolina	7.4	7.8	7.6	7.4	7.5	7.4	7.4	7.3	7.3	7.4	7.5	9
North Dakota	7.8	6.4	6.1	6.8	6.7	6.9	6.9	7.0	6.9	7.0	7.0	21
Ohio	6.5	6.4	6.1	6.1	6.2	6.1	6.1	6.1	6.3	6.2	6.0	47
Oklahoma	7.7	6.9	6.8	6.7	6.8	6.6	7.0	7.3	7.0	7.0	7.0	21
Oregon	5.8	6.2	6.0	6.6	6.4	6.3	6.3	6.3	6.6	6.8	6.7	30
Pennsylvania	6.0	6.7	6.7	6.7	6.9	6.9	6.8	6.7	6.7	6.7	6.6	33
Rhode Island	5.5	6.2	5.6	5.6	5.8	5.7	5.8	5.7	5.7	5.9	5.9	49
South Carolina	8.0	8.0	7.8	7.6	7.3	7.2	7.1	7.0	7.0	7.0	7.0	21
South Dakota	7.2	7.5	7.6	7.7	7.7	7.8	7.8	7.8	7.8	7.8	7.8	4
Tennessee	8.3	8.3	8.3	8.2	8.2	8.1	8.1	8.1	8.1	8.1	8.0	2
Texas	8.9	8.3	7.9	7.8	7.8	7.6	7.7	7.7	7.9	8.0	8.0	2
Utah	7.1	7.1	7.0	7.3	7.2	7.2	7.2	7.2	7.3	7.4	7.5	9
Vermont	5.8	6.4	6.3	6.4	6.3	6.3	6.2	6.1	6.0	6.0	6.0	47
Virginia	7.6	8.1	7.8	7.7	7.8	7.8	7.8	7.8	7.8	7.8	7.8	4
Washington	6.6	6.4	6.1	6.0	6.3	6.2	6.2	6.3	6.5	6.4	6.5	36
West Virginia	5.7	5.3	5.5	5.7	5.2	5.0	5.3	5.5	5.8	6.2	6.3	41
Wisconsin	6.2	5.9	6.2	6.3	6.4	6.4	6.4	6.4	6.5	6.5	6.5	36
Wyoming	8.5	6.5	7.3	7.4	6.9	6.7	6.7	6.7	6.8	6.8	6.8	29

* Rank out of 60 for 2007.

Table 2.5: Scores for Size of Government at the Federal, State/Provincial, and Local/Municipal Levels, 1981–2007

	1981	1986	1991	1996	2001	2002	2003	2004	2005	2006	2007	Rank*
Alberta	9.1	7.5	7.4	8.5	8.5	8.6	8.8	9.0	9.2	9.1	9.1	1
British Columbia	7.8	7.0	6.8	7.2	7.2	7.2	7.3	7.5	7.7	7.8	7.8	10
Manitoba	7.4	6.3	5.8	6.4	6.6	6.6	6.4	6.5	6.4	6.7	6.7	37
New Brunswick	3.2	5.3	4.5	5.5	5.8	5.7	5.8	5.9	5.8	5.8	5.8	53
Newfoundland	4.7	4.0	3.2	3.6	5.1	5.8	6.1	6.3	6.8	6.6	6.6	39
Nova Scotia	2.8	4.8	4.5	4.8	5.6	5.6	5.8	5.7	5.7	5.4	5.4	57
Ontario	8.1	8.1	7.2	7.6	8.0	8.0	7.9	7.9	7.9	7.9	7.9	7
Prince Edward Island	4.2	3.6	3.3	4.5	4.2	4.6	4.5	4.8	4.7	4.7	4.7	59
Quebec	6.5	6.6	6.1	6.4	6.7	6.7	6.6	6.7	6.6	6.5	6.5	44
Saskatchewan	7.6	5.3	5.4	7.0	6.6	6.4	6.5	6.9	7.2	7.2	7.2	26
Alabama	6.6	6.8	6.5	6.4	5.8	5.6	5.7	5.7	5.8	5.7	5.6	55
Alaska	9.3	8.0	7.4	7.2	5.8	5.5	5.7	5.9	6.4	6.7	6.8	33
Arizona	7.2	7.5	6.9	7.4	7.4	7.3	7.2	7.0	7.2	7.4	7.3	23
Arkansas	6.5	6.6	6.7	6.7	6.2	5.9	6.0	6.2	6.2	6.1	6.1	50
California	7.4	7.8	7.8	7.6	7.8	7.6	7.6	7.6	7.7	7.8	7.8	10
Colorado	7.9	7.8	7.4	7.9	8.3	8.1	8.1	8.0	8.2	8.1	8.1	5
Connecticut	7.6	8.1	7.9	8.1	8.2	8.0	7.9	7.9	8.0	8.1	8.1	5
Delaware	8.3	8.6	8.8	8.7	9.0	8.9	8.9	8.9	9.0	8.9	8.9	2
Florida	6.9	7.3	6.9	6.8	7.1	7.1	7.1	7.1	7.0	7.1	7.1	29
Georgia	7.6	8.1	7.9	8.0	8.1	7.8	7.8	7.8	7.9	7.8	7.6	15
Hawaii	7.1	7.6	7.9	6.9	6.6	6.4	6.5	6.5	6.8	6.8	6.8	33
Idaho	7.1	6.8	6.8	7.2	6.7	6.4	6.5	6.7	6.9	6.8	6.8	33
Illinois	7.8	8.3	8.2	8.2	8.1	7.9	7.9	7.9	7.9	8.0	7.9	7
Indiana	7.7	7.9	7.7	7.9	7.8	7.6	7.6	7.7	7.4	7.3	7.2	26
Iowa	7.2	7.1	7.3	7.4	7.2	6.9	7.1	7.4	7.3	7.3	7.4	22
Kansas	7.4	7.4	7.3	7.4	7.3	7.1	7.1	7.2	7.2	7.2	7.3	23
Kentucky	7.1	7.0	6.9	7.0	6.5	6.3	6.3	6.2	6.2	6.1	6.3	48
Louisiana	8.4	7.9	7.6	7.2	6.7	6.5	6.7	7.0	6.9	5.4	7.0	31
Maine	6.4	6.9	6.2	6.1	6.1	5.9	5.9	5.8	5.7	5.8	5.7	54
Maryland	6.3	7.0	6.7	6.7	6.8	6.8	6.6	6.4	6.5	6.1	6.5	44
Massachusetts	7.1	7.7	7.2	7.7	7.9	7.7	7.6	7.5	7.5	7.6	7.6	15
Michigan	7.3	7.7	7.2	7.6	7.6	7.4	7.2	7.1	7.1	7.0	6.8	33
Minnesota	7.6	7.8	7.6	7.9	7.9	7.8	7.9	8.0	8.0	8.0	7.7	14
Mississippi	5.8	6.1	5.9	5.8	5.0	4.7	4.9	5.0	4.5	2.2	4.3	60
Missouri	6.6	7.2	7.1	7.1	7.1	6.8	6.9	6.9	6.8	6.7	6.6	39
Montana	6.8	5.8	5.5	5.3	5.1	4.9	5.2	5.4	5.7	5.8	5.9	52
Nebraska	7.4	7.4	7.7	8.0	7.4	7.2	7.4	7.6	7.5	7.5	7.6	15
Nevada	7.9	7.8	8.0	8.4	8.5	8.3	8.4	8.5	8.6	8.6	8.6	3
New Hampshire	7.4	8.4	7.9	8.2	8.2	8.0	8.0	7.9	7.9	7.9	7.8	10
New Jersey	7.9	8.3	8.1	8.0	8.1	8.0	8.0	7.9	7.9	7.9	7.8	10
New Mexico	6.8	6.1	5.9	6.2	5.3	4.9	5.1	5.3	5.4	5.5	5.5	56
New York	7.5	7.8	7.5	7.4	7.4	7.2	7.2	7.1	7.3	7.4	7.5	20
North Carolina	7.9	8.3	7.9	7.8	7.8	7.6	7.6	7.5	7.6	7.7	7.6	15
North Dakota	7.1	5.7	5.7	6.7	5.1	5.0	5.5	6.0	5.9	6.3	6.5	44
Ohio	7.3	7.5	7.2	7.4	7.3	7.0	7.0	6.9	7.0	6.8	6.4	47
Oklahoma	7.9	7.3	6.8	6.7	6.3	6.0	6.4	6.7	6.6	6.7	6.6	39
Oregon	6.8	7.2	7.1	7.3	7.1	6.8	6.9	7.0	7.1	7.3	7.2	26
Pennsylvania	6.7	7.2	7.2	7.0	6.9	6.8	6.7	6.7	6.7	6.8	6.6	39
Rhode Island	6.3	7.1	6.4	6.4	6.6	6.5	6.5	6.6	6.6	6.7	6.6	39
South Carolina	6.9	7.4	6.9	6.9	6.7	6.4	6.3	6.2	6.1	6.2	6.0	51
South Dakota	6.7	6.7	6.9	7.3	6.8	6.7	6.9	7.0	6.8	6.6	6.9	32
Tennessee	7.2	7.5	7.4	7.4	7.3	7.1	7.1	7.1	7.0	7.1	7.1	29
Texas	8.8	8.4	8.2	8.1	8.2	8.0	8.1	8.1	8.2	8.2	8.3	4
Utah	7.4	7.3	7.4	7.9	7.8	7.6	7.6	7.6	7.8	7.9	7.9	7
Vermont	6.7	7.4	7.2	7.1	6.7	6.6	6.6	6.5	6.6	6.4	6.3	48
Virginia	6.5	7.2	7.0	7.0	7.1	6.9	6.9	6.8	6.9	6.8	6.7	37
Washington	7.1	7.3	7.5	7.3	7.6	7.3	7.3	7.3	7.5	7.6	7.6	15
West Virginia	5.9	6.0	5.4	5.2	4.5	4.2	4.3	4.5	4.8	5.1	5.1	58
Wisconsin	7.3	7.6	7.5	7.7	7.5	7.3	7.3	7.3	7.4	7.4	7.3	23
Wyoming	8.8	8.0	7.9	7.6	7.0	7.0	7.0	7.0	7.2	7.4	7.5	20

* Rank out of 60 for 2007.

Table 2.6: Scores for Size of Government at the State/Provincial, and Local/Municipal Levels, 1981–2007

	1981	1986	1991	1996	2001	2002	2003	2004	2005	2006	2007	Rank*
Alberta	7.5	5.2	6.0	7.6	7.3	7.4	7.9	8.3	8.5	8.4	8.4	3
British Columbia	6.3	5.8	5.8	5.5	6.0	6.1	6.2	6.5	6.8	7.1	7.1	28
Manitoba	7.2	6.2	5.4	5.9	6.4	6.5	6.3	6.3	6.4	6.8	6.8	37
New Brunswick	5.3	5.5	4.9	5.6	6.1	6.0	6.1	6.0	6.1	6.2	6.2	48
Newfoundland	4.6	4.6	3.7	3.2	5.7	6.4	6.5	6.7	7.2	6.8	6.8	37
Nova Scotia	4.7	6.0	5.4	5.7	6.5	6.6	6.7	6.5	6.3	6.1	6.1	51
Ontario	7.3	7.2	5.7	5.8	7.0	7.1	6.8	6.9	6.9	7.1	7.1	28
Prince Edward Island	4.9	5.3	4.6	5.3	5.4	5.9	5.7	6.0	6.0	6.1	6.1	51
Quebec	5.5	5.1	4.8	4.4	5.7	5.8	5.4	5.4	5.6	5.6	5.6	59
Saskatchewan	5.8	4.7	4.5	6.1	6.1	5.7	5.9	6.3	6.8	7.0	7.0	32
Alabama	7.8	8.0	7.7	7.3	6.0	5.8	5.9	6.0	6.0	5.9	6.8	37
Alaska	8.9	6.5	5.8	5.0	4.3	4.3	4.1	3.9	5.4	5.5	5.8	56
Arizona	8.5	8.5	7.5	7.7	7.9	7.9	7.8	7.7	7.8	7.9	7.8	10
Arkansas	8.1	8.1	8.0	7.6	7.2	6.9	6.9	7.0	7.1	6.9	6.9	36
California	6.6	6.7	6.1	5.8	6.4	6.0	6.0	6.0	6.1	6.2	6.2	48
Colorado	8.3	7.9	7.7	7.6	8.1	7.7	7.7	7.7	7.9	7.8	7.8	10
Connecticut	7.7	8.3	7.2	7.3	7.6	7.4	7.4	7.4	7.5	7.6	7.7	13
Delaware	7.7	8.6	8.6	8.3	8.8	8.6	8.6	8.6	8.7	8.5	8.5	1
Florida	8.8	8.7	7.9	7.7	8.0	7.8	7.7	7.6	7.2	7.3	7.5	16
Georgia	8.4	8.7	8.1	7.9	8.1	7.8	7.8	7.7	7.9	7.9	7.8	10
Hawaii	7.0	7.8	8.0	6.2	6.5	6.4	6.7	6.9	7.1	7.2	7.2	26
Idaho	8.0	7.7	7.7	7.0	7.0	6.7	6.8	6.9	7.2	7.1	7.1	28
Illinois	6.9	7.5	7.5	7.4	7.4	7.2	7.1	7.0	7.2	7.3	7.3	20
Indiana	8.1	8.4	8.1	8.2	8.1	7.9	7.9	7.9	7.7	7.7	7.5	16
Iowa	7.8	7.4	7.5	7.6	7.3	7.1	7.3	7.4	7.5	7.4	7.1	28
Kansas	8.1	8.2	7.9	7.7	7.6	7.3	7.5	7.6	7.7	7.7	7.7	13
Kentucky	7.5	8.0	7.5	7.4	7.0	6.7	6.5	6.4	6.5	6.4	6.3	44
Louisiana	8.9	7.6	7.8	7.4	6.7	6.3	6.6	6.9	7.2	7.1	7.3	20
Maine	6.5	6.8	5.8	5.9	6.0	6.0	5.9	5.9	5.8	5.8	5.7	58
Maryland	7.1	7.8	7.2	7.2	7.3	7.3	7.3	7.3	7.3	7.3	7.0	32
Massachusetts	6.5	7.6	6.4	7.2	7.7	7.3	7.2	7.1	7.2	7.3	7.3	20
Michigan	5.3	6.0	5.6	6.7	7.2	6.9	6.6	6.3	6.6	6.4	6.3	44
Minnesota	7.2	6.9	6.6	6.6	6.7	6.5	6.6	6.8	6.8	6.8	7.0	32
Mississippi	7.6	7.5	7.4	7.1	6.2	5.9	5.9	5.9	5.9	5.8	5.9	55
Missouri	8.2	8.7	8.3	8.1	7.7	7.4	7.3	7.3	7.2	7.4	7.4	19
Montana	7.7	6.2	6.0	5.4	6.0	5.9	6.0	6.1	6.4	6.4	6.4	43
Nebraska	8.9	8.5	8.6	8.5	8.2	8.1	8.1	8.1	8.1	8.0	8.0	7
Nevada	8.2	8.0	7.3	8.2	8.5	8.2	8.4	8.5	8.6	8.5	8.5	1
New Hampshire	8.3	9.2	8.1	8.3	8.4	8.2	8.1	8.1	8.1	8.2	8.3	5
New Jersey	6.8	7.8	7.5	6.9	7.4	7.2	7.1	6.9	6.9	6.8	6.7	40
New Mexico	8.5	7.7	7.2	6.8	6.0	5.6	5.7	5.9	5.9	5.8	6.2	48
New York	6.0	6.3	5.7	5.3	6.0	5.8	5.7	5.6	5.8	6.0	6.1	51
North Carolina	8.1	8.6	7.9	7.7	7.6	7.4	7.3	7.1	7.2	7.4	7.9	8
North Dakota	8.5	7.1	7.0	7.3	6.9	7.2	7.2	7.2	7.2	7.5	7.3	20
Ohio	6.5	6.7	6.0	6.2	6.0	5.6	5.5	5.5	5.8	5.5	5.5	60
Oklahoma	8.7	7.8	7.4	7.2	7.2	6.8	7.6	8.4	7.3	7.4	7.3	20
Oregon	6.5	7.0	6.8	6.2	5.8	5.5	5.6	5.6	6.0	6.4	6.3	44
Pennsylvania	6.0	6.8	6.8	6.7	6.8	6.6	6.5	6.4	6.4	6.4	6.5	42
Rhode Island	5.8	6.7	5.3	5.3	5.6	5.3	5.4	5.4	5.4	5.7	5.8	56
South Carolina	7.9	8.3	7.6	7.2	6.8	6.4	6.2	5.9	5.8	6.0	6.0	54
South Dakota	7.9	8.3	8.5	8.3	8.2	8.2	8.2	8.3	8.2	8.2	8.1	6
Tennessee	8.3	8.7	8.3	8.1	7.9	7.7	7.8	7.8	7.7	7.8	7.5	16
Texas	9.7	8.8	8.5	8.1	8.2	8.0	8.0	8.1	8.3	8.4	8.4	3
Utah	7.9	8.1	7.7	7.9	7.3	7.1	7.1	7.1	7.3	7.5	7.6	15
Vermont	6.4	7.1	6.3	6.6	6.5	6.4	6.3	6.2	6.3	6.4	6.3	44
Virginia	8.3	8.8	8.2	7.8	8.2	8.2	8.1	7.9	8.0	7.9	7.9	8
Washington	7.1	7.0	6.6	6.3	6.6	6.3	6.4	6.4	6.9	7.0	7.2	26
West Virginia	6.8	6.1	5.7	5.5	4.7	3.8	4.5	5.1	6.2	6.8	7.0	32
Wisconsin	7.3	6.3	6.8	6.9	6.6	6.2	6.3	6.3	6.6	6.6	6.6	41
Wyoming	9.5	7.3	7.4	7.2	7.0	6.9	6.9	6.9	7.1	7.4	7.3	20

* Rank out of 60 for 2007.

Table 2.7: Scores for Takings and Discriminatory Taxation at the Federal, State/Provincial, and Local/Municipal Levels, 1981–2007

	1981	1986	1991	1996	2001	2002	2003	2004	2005	2006	2007	Rank*
Alberta	6.1	6.3	5.4	5.8	7.0	6.6	7.0	7.3	7.5	7.5	7.3	2
British Columbia	4.0	3.9	3.6	2.8	4.0	4.2	4.3	4.5	4.6	4.7	4.6	54
Manitoba	4.3	3.6	3.2	3.3	3.8	3.7	3.6	3.8	3.9	4.2	4.1	55
New Brunswick	2.2	3.5	2.8	3.1	4.0	3.7	3.7	4.0	4.1	4.2	4.1	55
Newfoundland	4.4	3.8	2.6	2.3	3.8	4.5	4.8	5.0	5.6	6.5	6.7	11
Nova Scotia	3.1	3.7	3.2	3.0	3.8	3.6	3.6	3.6	3.7	3.7	3.6	58
Ontario	3.7	3.5	3.1	3.0	3.7	3.9	3.8	3.9	3.9	4.0	3.9	57
Prince Edward Island	4.8	4.6	3.5	2.9	2.9	3.1	2.8	3.0	3.0	3.1	3.0	59
Quebec	3.1	2.6	2.2	2.3	2.6	2.6	2.5	2.6	2.6	2.7	2.6	60
Saskatchewan	4.1	4.7	3.4	3.6	4.1	4.3	4.4	5.0	5.0	5.1	5.0	49
Alabama	4.9	5.5	6.8	5.9	5.9	6.2	6.6	6.7	6.6	6.5	6.5	16
Alaska	5.4	6.4	6.4	6.8	6.7	7.1	7.4	7.5	7.5	7.3	7.3	2
Arizona	4.4	4.5	5.6	5.0	5.9	6.0	6.3	6.3	6.2	6.2	6.2	23
Arkansas	5.0	5.1	6.6	5.4	5.5	5.5	5.8	5.9	5.7	5.5	5.5	43
California	4.6	4.8	5.9	5.0	5.0	5.8	6.1	6.1	5.7	5.6	5.6	37
Colorado	4.8	5.2	6.1	5.8	6.2	6.5	6.8	6.9	6.8	6.6	6.6	13
Connecticut	3.8	4.9	6.7	5.0	5.2	5.5	5.8	5.9	5.7	5.6	5.6	37
Delaware	5.5	6.0	8.0	7.2	7.8	8.1	8.4	8.5	8.5	8.1	8.1	1
Florida	3.9	4.7	5.8	4.6	5.0	5.6	5.9	5.9	5.8	5.6	5.6	37
Georgia	5.1	5.6	6.7	6.0	6.3	6.7	7.0	7.1	7.0	6.8	6.8	9
Hawaii	4.5	4.9	6.1	5.3	5.3	5.5	5.8	5.9	5.7	5.7	5.7	35
Idaho	5.0	4.8	5.5	5.2	5.2	5.4	5.7	5.8	5.7	5.6	5.6	37
Illinois	4.3	5.2	6.6	5.6	5.8	6.2	6.5	6.6	6.4	6.3	6.3	21
Indiana	4.9	5.5	6.7	6.3	6.3	6.4	6.9	7.0	6.7	6.7	6.7	11
Iowa	4.6	4.8	6.2	5.8	6.0	6.1	6.4	6.5	6.4	6.4	6.4	18
Kansas	4.8	5.0	6.1	5.4	5.5	5.6	6.2	6.2	6.1	6.1	6.1	27
Kentucky	5.0	5.6	6.5	5.9	5.7	6.1	6.4	6.5	6.4	6.2	6.2	23
Louisiana	6.2	6.4	7.1	6.6	6.2	5.9	6.6	6.9	6.9	6.9	6.9	5
Maine	3.9	4.2	5.6	4.3	4.3	4.6	4.9	5.0	4.8	4.7	4.7	53
Maryland	4.0	4.8	6.2	5.3	5.3	5.5	5.8	5.9	5.7	5.6	5.6	37
Massachusetts	4.3	5.2	6.7	5.4	5.8	6.3	6.6	6.7	6.4	6.4	6.4	18
Michigan	4.0	4.5	6.0	5.3	5.8	6.0	6.2	6.5	6.3	6.3	6.0	29
Minnesota	4.5	4.8	5.7	4.8	5.5	5.7	6.1	6.2	6.0	5.9	5.9	31
Mississippi	4.7	5.2	6.2	5.4	5.1	5.2	5.5	5.7	5.5	5.4	5.4	44
Missouri	5.0	5.8	7.1	6.1	6.1	6.2	6.8	6.9	6.7	6.6	6.6	13
Montana	4.6	4.4	5.7	4.6	4.7	4.9	5.3	5.4	5.5	5.3	5.3	46
Nebraska	5.0	5.3	6.5	5.9	5.7	5.9	6.5	6.5	6.4	6.3	6.3	21
Nevada	4.2	4.9	6.4	5.2	5.5	6.0	6.3	6.4	6.3	6.2	6.2	23
New Hampshire	4.1	5.3	6.7	6.0	5.7	6.4	6.8	6.9	6.7	6.6	6.6	13
New Jersey	3.3	4.4	5.9	4.8	4.7	5.2	5.3	5.4	5.1	5.1	5.1	47
New Mexico	5.1	5.1	5.9	5.4	5.4	4.9	5.3	5.8	5.6	5.4	5.4	44
New York	4.0	4.3	5.9	5.0	5.2	5.4	5.7	5.7	5.6	5.8	5.8	33
North Carolina	5.3	5.5	7.1	6.1	6.5	6.7	7.0	7.0	6.9	6.8	6.8	9
North Dakota	5.1	4.9	5.0	5.4	5.2	5.5	5.9	5.9	5.8	5.6	5.6	37
Ohio	4.4	4.9	6.1	5.2	5.6	5.6	5.9	6.0	5.9	6.2	6.2	23
Oklahoma	5.2	5.4	6.1	5.4	5.4	5.5	5.8	6.1	6.1	6.0	6.0	29
Oregon	4.3	4.3	5.4	5.9	6.0	6.2	6.6	6.6	6.6	6.4	6.4	18
Pennsylvania	4.0	4.8	6.3	5.3	5.7	6.0	6.2	6.3	6.1	6.1	6.1	27
Rhode Island	3.4	3.8	5.3	4.3	4.2	4.4	5.0	5.1	4.9	4.9	4.9	50
South Carolina	4.8	5.1	6.5	5.7	5.7	5.9	6.1	6.2	6.0	4.8	4.8	51
South Dakota	4.6	5.6	6.8	6.5	6.4	6.9	7.2	7.3	7.1	6.9	6.9	5
Tennessee	4.9	5.8	7.1	6.2	6.5	6.8	7.1	7.2	7.0	6.9	6.9	5
Texas	5.6	6.0	7.0	6.3	6.3	6.7	7.0	7.1	7.1	6.9	6.9	5
Utah	4.7	5.3	6.6	6.0	6.3	6.5	6.8	6.9	6.8	6.7	7.0	4
Vermont	4.1	4.0	5.8	4.6	4.5	4.8	5.4	5.5	5.2	5.1	5.1	47
Virginia	4.7	5.5	6.8	6.0	6.1	6.4	6.7	6.8	6.6	6.5	6.5	16
Washington	3.9	4.5	5.4	4.6	5.0	5.7	6.1	6.1	6.0	5.7	5.7	35
West Virginia	3.9	4.3	5.3	5.0	4.1	4.2	4.8	4.9	4.8	4.8	4.8	51
Wisconsin	4.1	4.2	5.8	5.0	5.3	5.4	6.0	6.0	5.9	5.8	5.8	33
Wyoming	5.4	5.3	7.1	6.3	5.2	5.8	6.2	6.3	6.2	5.9	5.9	31

* Rank out of 60 for 2007.

Table 2.8: Scores for Takings and Discriminatory Taxation at the State/Provincial, and Local/Municipal Levels, 1981–2007

	1981	1986	1991	1996	2001	2002	2003	2004	2005	2006	2007	Rank*
Alberta	9.0	8.4	7.5	7.9	8.7	8.3	8.5	8.5	8.7	8.7	8.7	2
British Columbia	5.9	5.4	5.7	5.0	6.0	5.9	5.8	5.8	5.9	6.1	6.1	42
Manitoba	6.2	5.1	5.1	5.3	5.5	5.0	4.9	4.8	4.9	5.2	5.2	55
New Brunswick	5.8	5.0	4.9	5.0	5.9	5.3	5.2	5.1	5.3	5.4	5.4	53
Newfoundland	5.3	4.5	4.2	4.0	5.5	5.8	5.8	5.6	6.1	7.0	6.9	24
Nova Scotia	6.2	5.5	5.3	5.2	5.5	5.2	5.0	4.7	4.8	5.1	5.1	57
Ontario	6.4	5.6	5.1	4.9	5.6	5.3	5.2	5.1	5.1	5.2	5.2	55
Prince Edward Island	6.2	5.9	5.4	5.1	4.9	4.8	4.5	4.5	4.6	4.7	4.7	59
Quebec	5.1	4.1	4.0	4.3	4.2	4.1	3.9	3.4	3.5	3.6	3.6	60
Saskatchewan	6.7	5.9	5.0	5.0	5.5	5.3	5.3	5.4	5.5	5.7	5.7	50
Alabama	8.0	7.9	7.8	7.6	7.6	7.6	7.7	7.8	7.7	7.6	7.6	9
Alaska	7.0	5.5	6.1	7.3	8.0	8.3	8.2	8.2	8.1	7.7	7.7	8
Arizona	7.3	6.8	5.8	6.8	7.2	7.2	7.1	7.0	7.1	7.1	7.1	19
Arkansas	7.6	7.1	7.3	6.7	6.6	6.5	6.6	6.7	6.3	6.1	6.1	42
California	6.0	6.1	6.0	5.9	6.1	6.0	5.9	5.8	6.0	6.0	6.0	47
Colorado	8.1	7.2	6.8	7.1	7.5	7.4	7.4	7.4	7.5	7.4	7.4	12
Connecticut	7.7	7.8	7.2	6.6	6.9	7.0	6.9	6.8	6.7	6.9	6.9	24
Delaware	6.9	7.4	8.3	8.1	8.9	9.0	9.0	9.0	9.1	8.9	8.9	1
Florida	8.0	7.6	6.9	6.7	7.2	7.4	7.2	7.1	7.1	6.9	6.9	24
Georgia	7.4	7.6	7.1	7.2	7.3	7.3	7.4	7.4	7.4	7.1	7.1	19
Hawaii	5.6	6.0	5.9	5.2	5.9	5.9	6.0	6.0	5.8	5.7	5.7	50
Idaho	7.1	6.5	6.2	6.0	6.2	6.2	6.1	6.1	6.1	6.1	6.1	42
Illinois	7.3	7.5	7.2	7.2	7.3	7.3	7.3	7.2	7.1	7.1	7.1	19
Indiana	8.1	7.6	7.5	7.8	7.7	7.7	7.7	7.6	7.1	7.0	7.0	23
Iowa	7.9	6.6	6.7	6.8	7.1	7.2	7.3	7.4	7.3	7.3	7.3	16
Kansas	7.0	6.4	7.0	6.3	6.7	6.7	6.5	6.4	6.5	6.4	6.4	38
Kentucky	7.4	7.2	6.8	6.8	6.8	6.9	6.9	7.0	7.0	6.9	6.9	24
Louisiana	9.1	7.5	7.2	7.7	7.1	6.9	7.2	7.3	7.4	7.3	7.3	16
Maine	5.7	5.8	5.6	5.3	5.2	5.2	5.3	5.3	5.2	5.0	5.0	58
Maryland	7.1	7.2	7.2	7.0	7.1	7.2	7.2	7.2	7.2	7.0	7.3	16
Massachusetts	6.8	7.4	7.2	7.1	7.4	7.4	7.3	7.2	7.1	7.1	7.1	19
Michigan	5.9	6.6	6.5	6.8	7.2	7.3	7.1	6.9	6.8	6.7	6.7	31
Minnesota	5.4	6.3	6.2	6.0	6.5	6.6	6.7	6.8	6.7	6.5	6.5	37
Mississippi	7.4	6.7	6.9	6.3	6.1	6.1	6.2	6.3	6.3	6.1	6.1	42
Missouri	8.4	8.0	7.9	7.5	7.6	7.6	7.6	7.6	7.5	7.4	7.4	12
Montana	7.5	6.2	6.3	6.1	6.5	6.7	6.7	6.8	7.0	6.9	6.9	24
Nebraska	6.9	6.8	6.9	6.9	6.8	6.8	6.7	6.6	6.5	6.7	6.7	31
Nevada	7.7	7.2	7.2	6.9	7.4	7.4	7.4	7.4	7.3	7.4	7.4	12
New Hampshire	8.6	8.8	7.9	8.4	8.4	8.3	8.3	8.2	8.1	8.2	8.2	3
New Jersey	6.9	7.1	6.2	6.2	6.6	6.6	6.4	6.3	6.1	6.1	6.1	42
New Mexico	7.1	6.3	6.0	6.0	6.0	6.0	6.1	6.5	6.6	6.3	6.3	41
New York	4.7	4.6	5.4	5.8	6.2	6.3	6.1	5.9	5.8	5.8	5.8	49
North Carolina	7.6	7.6	7.4	7.2	7.6	7.6	7.5	7.4	7.4	7.4	7.4	12
North Dakota	8.4	5.9	5.1	6.6	6.6	6.9	6.9	7.0	6.9	6.7	6.7	31
Ohio	7.3	6.3	6.4	6.0	6.4	6.4	6.3	6.3	6.5	6.4	6.4	38
Oklahoma	7.8	6.6	6.6	6.4	6.6	6.6	6.6	6.7	6.7	6.6	6.9	24
Oregon	6.0	6.0	6.0	7.6	7.4	7.5	7.4	7.4	7.9	7.9	7.9	7
Pennsylvania	7.3	7.4	7.2	7.2	7.5	7.6	7.4	7.0	6.9	6.9	6.9	24
Rhode Island	5.2	5.7	5.7	5.2	5.7	5.7	5.9	5.6	5.5	5.6	5.6	52
South Carolina	7.2	7.0	7.0	7.0	6.9	7.0	6.8	6.7	6.7	6.7	6.7	31
South Dakota	7.8	7.6	7.9	7.8	8.0	8.1	8.1	8.1	8.1	8.0	8.0	4
Tennessee	8.2	8.1	8.2	8.1	8.2	8.3	8.2	8.1	8.1	8.0	8.0	4
Texas	9.0	8.0	7.7	7.8	7.9	7.8	7.8	7.9	8.1	8.0	8.0	4
Utah	7.6	6.9	7.0	7.3	7.4	7.6	7.3	7.3	7.3	7.3	7.5	11
Vermont	5.3	5.7	6.2	5.9	6.1	6.2	6.0	5.9	5.6	5.4	5.4	53
Virginia	7.7	7.8	7.6	7.6	7.8	7.8	7.8	7.8	7.7	7.6	7.6	9
Washington	7.3	6.4	6.3	6.0	6.8	6.9	6.8	6.8	6.9	6.7	6.7	31
West Virginia	5.4	5.1	5.6	5.9	5.3	5.4	5.4	5.5	5.2	6.0	6.0	47
Wisconsin	6.3	5.7	6.1	6.0	6.6	6.7	6.7	6.6	6.6	6.6	6.6	36
Wyoming	8.6	5.4	7.7	7.8	7.0	6.9	6.8	6.8	6.6	6.4	6.4	38

* Rank out of 60 for 2007.

Table 2.9: Scores for Labor Market Freedom at the Federal, State/Provincial, and Local/Municipal Levels, 1981–2007

	1981	1986	1991	1996	2001	2002	2003	2004	2005	2006	2007	Rank*
Alberta	6.0	5.5	5.5	6.2	6.5	6.4	6.6	6.7	6.8	6.7	6.7	39
British Columbia	3.8	4.3	4.3	3.9	4.2	4.2	4.3	4.5	4.8	5.0	5.1	53
Manitoba	3.7	3.5	3.4	3.8	4.0	4.0	3.7	3.8	3.8	4.0	4.0	59
New Brunswick	2.6	3.8	3.8	4.3	4.7	4.7	4.8	4.8	5.0	5.0	5.0	54
Newfoundland	1.5	2.0	2.6	2.8	3.7	3.9	3.9	4.1	4.5	4.6	4.7	55
Nova Scotia	2.6	3.5	3.9	4.1	4.6	4.7	4.7	4.7	4.7	4.6	4.5	57
Ontario	5.1	5.4	4.9	4.8	5.5	5.5	5.5	5.5	5.4	5.4	5.4	52
Prince Edward Island	3.1	3.7	3.6	4.3	4.3	4.3	4.3	4.0	4.1	4.4	4.3	58
Quebec	2.9	3.5	3.1	3.1	3.7	3.7	3.6	3.8	3.8	3.9	4.0	59
Saskatchewan	3.6	3.7	3.8	4.3	4.2	4.2	4.1	4.3	4.4	4.4	4.7	55
Alabama	4.9	6.0	6.2	6.8	6.8	6.9	7.0	6.9	7.1	7.3	7.2	25
Alaska	5.7	5.7	5.9	6.1	5.8	5.6	5.5	5.9	6.0	6.1	6.1	48
Arizona	6.1	7.2	7.0	7.5	7.6	7.6	7.7	7.6	7.7	7.7	7.2	25
Arkansas	5.7	6.5	6.5	7.2	7.1	7.2	7.3	7.4	7.5	7.5	7.3	20
California	5.8	6.6	6.7	6.9	6.6	6.4	6.5	6.6	6.8	6.9	6.7	39
Colorado	6.5	7.0	7.1	7.6	7.7	7.8	7.8	7.8	7.9	8.0	7.6	14
Connecticut	6.1	7.2	7.1	7.5	7.2	6.9	7.0	7.0	7.0	7.1	7.1	29
Delaware	6.0	7.1	7.3	7.7	7.7	7.8	7.8	7.8	7.9	8.0	7.8	7
Florida	6.2	7.3	7.0	7.4	7.5	7.6	7.6	7.8	7.9	7.7	7.6	14
Georgia	5.8	7.2	7.3	7.6	7.7	7.8	7.7	7.8	8.0	8.0	8.0	3
Hawaii	4.7	5.4	5.6	5.8	5.9	5.7	5.6	5.7	5.7	5.8	5.9	51
Idaho	5.6	6.2	6.6	7.1	7.1	7.0	7.0	7.3	7.6	7.5	7.6	14
Illinois	5.7	6.4	6.5	6.8	6.9	6.8	7.0	7.0	6.8	7.0	7.1	29
Indiana	5.2	6.3	6.3	7.0	7.0	7.1	7.3	7.4	7.3	7.4	7.3	20
Iowa	5.9	6.4	6.4	6.8	6.8	7.1	7.0	7.3	7.3	7.3	7.3	20
Kansas	6.2	6.8	6.6	7.0	7.0	7.2	7.2	7.2	7.4	7.5	7.6	14
Kentucky	5.5	6.4	6.5	6.9	6.9	7.0	6.9	7.1	7.2	7.3	7.2	25
Louisiana	6.8	6.9	7.1	7.2	7.0	6.9	7.2	7.3	7.7	7.9	8.0	3
Maine	4.6	6.0	5.9	6.6	6.8	6.5	6.4	6.6	6.6	6.7	6.6	43
Maryland	5.0	6.4	6.7	6.8	6.9	6.8	6.9	7.3	7.2	7.1	7.1	29
Massachusetts	5.6	7.1	7.0	7.2	7.0	7.0	7.1	7.2	7.3	7.3	7.3	20
Michigan	4.7	5.7	5.8	6.2	6.4	6.5	6.4	6.4	6.6	6.5	6.1	48
Minnesota	5.6	6.4	6.3	6.7	7.0	7.0	7.0	7.1	7.3	7.3	7.3	20
Mississippi	5.3	6.2	6.2	6.9	6.5	6.6	6.8	6.9	6.7	7.0	6.9	34
Missouri	5.5	6.5	6.8	6.9	7.0	7.0	7.0	7.1	7.3	7.4	7.0	32
Montana	5.6	5.6	5.5	6.1	6.2	6.2	6.4	6.7	6.9	6.9	6.5	44
Nebraska	6.2	6.8	6.7	7.3	7.3	7.3	7.4	7.5	7.6	7.7	7.7	10
Nevada	6.1	6.8	6.8	6.7	7.1	7.2	7.3	7.5	7.6	7.4	7.2	25
New Hampshire	6.2	7.5	7.3	7.6	7.6	7.6	7.6	7.7	7.7	7.8	7.7	10
New Jersey	5.2	6.5	6.4	6.5	6.9	6.9	6.8	6.8	6.8	6.7	6.7	39
New Mexico	5.8	6.3	6.3	6.8	6.7	6.7	6.8	7.0	6.9	7.0	7.0	32
New York	4.8	5.8	5.7	6.2	6.2	6.2	6.3	6.3	6.1	6.3	6.2	47
North Carolina	6.4	7.6	7.6	7.9	8.0	8.0	8.0	8.1	8.1	8.2	8.0	3
North Dakota	6.5	6.4	6.5	7.1	7.1	7.0	7.2	7.3	7.4	7.5	7.7	10
Ohio	5.3	6.2	6.2	6.6	6.7	6.8	6.8	7.0	7.0	7.2	6.7	39
Oklahoma	6.7	6.6	6.5	6.7	7.0	6.8	7.1	7.3	7.5	7.5	7.4	19
Oregon	5.1	6.0	5.7	6.6	6.3	6.3	6.3	6.4	6.4	6.6	6.5	44
Pennsylvania	4.9	6.2	6.4	6.8	6.8	7.0	7.1	7.1	7.3	7.2	6.9	34
Rhode Island	5.4	6.5	6.2	6.6	6.6	6.6	6.7	6.7	6.7	6.9	6.9	34
South Carolina	5.9	7.2	7.2	7.6	7.4	7.4	7.5	7.7	7.8	7.8	7.6	14
South Dakota	5.8	6.6	6.7	7.3	7.4	7.6	7.7	7.7	7.7	7.8	7.8	7
Tennessee	5.5	6.6	6.9	7.4	7.5	7.4	7.5	7.7	7.9	7.9	7.9	6
Texas	7.4	7.5	7.5	7.7	7.8	7.8	7.8	7.9	8.0	8.1	8.2	1
Utah	5.2	6.3	6.5	7.1	7.4	7.4	7.5	7.6	7.8	7.9	7.8	7
Vermont	5.9	6.8	6.8	7.1	6.7	6.9	6.8	6.8	6.7	6.7	6.8	38
Virginia	5.9	7.2	7.1	7.6	7.8	7.7	7.7	7.9	8.0	8.2	8.2	1
Washington	4.8	5.5	5.9	6.3	6.2	6.1	6.0	6.1	6.2	6.1	6.1	48
West Virginia	4.4	5.2	5.3	6.0	6.1	6.3	6.3	6.3	6.4	6.4	6.3	46
Wisconsin	5.4	6.1	6.2	6.7	6.9	7.0	6.9	7.0	7.0	6.9	6.9	34
Wyoming	7.6	6.9	6.7	7.1	7.1	7.2	7.3	7.3	7.5	7.7	7.7	10

* Rank out of 60 for 2007.

Table 2.10: Scores for Labor Market Freedom at the State/Provincial, and Local/Municipal Levels, 1981–2007

	1981	1986	1991	1996	2001	2002	2003	2004	2005	2006	2007	Rank*
Alberta	5.2	4.7	4.7	5.4	5.7	5.7	5.8	5.9	6.0	5.8	5.9	45
British Columbia	3.3	3.8	3.8	3.4	3.7	3.7	3.8	4.0	4.2	4.4	4.4	54
Manitoba	3.6	3.2	3.1	3.2	3.3	3.3	3.1	3.1	3.1	3.2	3.3	59
New Brunswick	2.8	3.7	3.5	3.9	4.1	4.2	4.2	4.3	4.4	4.5	4.5	53
Newfoundland	1.7	2.0	2.4	2.4	3.0	3.2	3.2	3.3	3.7	3.8	3.8	57
Nova Scotia	2.9	3.6	3.8	3.9	4.1	4.2	4.2	4.2	4.2	4.2	4.1	56
Ontario	4.9	5.0	4.5	4.5	5.1	5.1	5.0	5.1	4.9	5.0	4.9	52
Prince Edward Island	3.3	3.9	3.6	4.2	4.2	4.2	4.2	3.9	4.0	4.3	4.2	55
Quebec	2.5	3.0	2.5	2.5	3.0	3.1	3.0	3.2	3.2	3.2	3.3	59
Saskatchewan	3.0	3.1	3.1	3.5	3.2	3.2	3.2	3.3	3.4	3.4	3.6	58
Alabama	7.9	8.0	8.0	8.1	8.1	8.0	8.0	7.9	7.9	8.0	8.0	4
Alaska	5.8	5.6	5.8	5.8	5.5	5.3	5.3	5.7	5.7	5.7	5.7	48
Arizona	8.4	8.6	8.6	8.6	8.6	8.5	8.5	8.4	8.4	8.3	8.3	23
Arkansas	6.2	6.4	6.5	6.8	6.6	6.7	6.7	6.8	6.9	6.9	6.7	23
California	5.5	6.3	6.2	6.4	6.0	5.8	5.9	6.0	6.1	6.3	6.1	40
Colorado	7.3	6.9	7.3	7.5	7.1	7.2	7.2	7.2	7.3	7.4	7.1	14
Connecticut	5.7	6.7	6.6	6.8	6.5	6.2	6.3	6.3	6.3	6.4	6.4	34
Delaware	6.4	6.7	6.7	7.0	6.9	7.0	7.0	7.0	7.1	7.2	7.0	16
Florida	8.6	8.8	8.4	8.5	8.5	8.6	8.5	8.5	7.6	7.2	7.1	14
Georgia	5.7	7.0	7.0	7.2	7.2	7.3	7.2	7.2	7.4	7.5	7.5	7
Hawaii	5.2	5.7	5.8	5.9	5.8	5.6	5.6	5.7	5.6	5.7	5.8	47
Idaho	6.3	6.7	6.2	6.6	6.5	6.5	6.5	6.7	6.9	6.9	7.0	16
Illinois	6.0	6.0	6.3	6.5	6.7	6.5	6.7	6.3	6.2	6.3	6.5	29
Indiana	6.0	6.7	6.2	6.8	6.4	6.5	6.6	6.7	6.6	6.7	6.6	26
Iowa	7.7	7.8	5.8	6.2	6.1	6.3	6.3	6.5	6.5	6.5	6.5	29
Kansas	6.9	7.2	6.6	6.9	7.0	7.1	7.1	7.1	7.3	7.3	7.4	9
Kentucky	6.4	6.4	6.3	6.5	6.3	6.5	6.3	6.5	6.6	6.6	6.6	26
Louisiana	7.8	8.1	8.2	7.9	7.8	7.7	7.9	7.8	8.0	8.1	8.1	3
Maine	4.7	5.9	5.7	6.2	6.3	6.1	6.0	6.2	6.2	6.2	6.2	37
Maryland	5.7	6.8	7.0	7.0	7.0	6.9	7.0	7.4	7.2	7.1	7.2	12
Massachusetts	5.3	6.7	6.6	6.7	6.5	6.5	6.5	6.7	6.7	6.7	6.7	23
Michigan	4.3	5.2	5.6	5.9	5.7	5.8	5.7	5.7	5.9	5.9	5.5	50
Minnesota	5.4	5.9	5.8	6.2	6.3	6.3	6.4	6.4	6.6	6.5	6.5	29
Mississippi	8.3	8.4	8.2	8.2	7.9	7.9	8.0	8.0	7.7	7.9	7.8	6
Missouri	5.4	6.3	6.5	6.5	6.5	6.5	6.5	6.5	6.7	6.8	6.5	29
Montana	6.3	5.5	5.3	5.7	5.9	5.9	6.0	6.3	6.4	6.4	6.1	40
Nebraska	6.9	7.2	6.2	6.7	6.7	6.6	6.7	6.8	6.9	6.9	6.9	20
Nevada	6.1	6.7	6.4	6.2	6.5	6.6	6.8	7.0	7.0	6.8	6.6	26
New Hampshire	6.0	7.1	6.8	7.0	7.0	7.0	6.9	7.0	7.0	7.1	7.0	16
New Jersey	4.9	6.0	5.9	6.0	6.3	6.2	6.1	6.1	6.1	6.0	6.0	43
New Mexico	6.0	6.2	6.4	6.4	6.5	6.5	6.3	6.3	6.3	6.4	6.5	29
New York	4.3	5.1	5.0	5.5	5.4	5.4	5.5	5.5	5.4	5.5	5.4	51
North Carolina	6.5	7.2	7.4	7.3	7.3	7.3	7.3	7.3	7.4	7.4	7.3	10
North Dakota	6.4	6.3	6.3	6.6	6.6	6.5	6.6	6.7	6.8	6.9	7.0	16
Ohio	5.8	6.3	5.8	6.1	6.3	6.4	6.3	6.5	6.5	6.7	6.1	40
Oklahoma	6.6	6.4	6.3	6.3	6.5	6.4	6.7	6.8	6.9	6.9	6.8	21
Oregon	5.1	5.6	5.4	6.1	5.8	5.8	5.8	5.8	5.9	6.0	6.0	43
Pennsylvania	4.9	6.0	6.1	6.4	6.4	6.5	6.6	6.6	6.8	6.7	6.4	34
Rhode Island	5.5	6.2	5.9	6.2	6.2	6.2	6.3	6.2	6.3	6.5	6.4	34
South Carolina	8.8	8.9	8.7	8.6	8.3	8.2	8.3	8.4	8.5	8.4	8.3	2
South Dakota	5.8	6.4	6.4	6.8	7.0	7.1	7.2	7.1	7.1	7.2	7.2	12
Tennessee	8.3	8.3	8.4	8.4	8.4	8.2	8.3	8.4	8.5	8.4	8.5	1
Texas	8.1	8.1	7.4	7.5	7.5	7.1	7.1	7.2	7.3	7.4	7.5	7
Utah	5.6	6.5	6.5	6.8	7.0	7.0	7.1	7.1	7.3	7.4	7.3	10
Vermont	5.7	6.5	6.4	6.6	6.3	6.4	6.4	6.3	6.2	6.2	6.2	37
Virginia	6.8	7.8	7.5	7.6	7.6	7.4	7.5	7.7	7.8	7.9	7.9	5
Washington	5.4	5.7	5.5	5.8	5.6	5.5	5.5	5.6	5.6	5.6	5.6	49
West Virginia	4.9	4.8	5.2	5.6	5.7	5.8	5.8	5.8	6.0	6.0	5.9	45
Wisconsin	5.0	5.6	5.8	6.1	6.2	6.2	6.2	6.3	6.3	6.2	6.2	37
Wyoming	7.6	6.9	6.7	7.2	6.6	6.4	6.4	6.5	6.7	6.8	6.8	21

* Rank out of 60 for 2007.

Chapter 3

The Relative Impact of Economic Freedom on Selected US States

by Joab Corey¹

Introduction

A vast amount of research has explored the relationship between economic freedom and prosperity, both across countries and, more recently, across the United States. The common finding throughout much of this literature is that economic freedom is positively related to economic growth because it promotes an environment conducive to innovation and creative advances because people are encouraged to pursue prosperous activities without being burdened by excessive government interference. This study will examine selected US states with different levels of economic freedom for the period 1986 to 2007, as measured by the index published in chapters one and two of this publication, to see how they compare across several measures of economic prosperity, business climate, and potential development. The study will look at pairs of US states selected because they are located close together within the country and share, to some extent, a similar culture. It is important to compare states that are otherwise similar in order to see how different levels of economic freedom over the years may have influenced the characteristics that most relate to the economic well-being of the state. This will illustrate the critical importance of economic freedom as the key ingredient for economic prosperity. This study also adds to the growing literature examining the importance of economic freedom at a subnational level.

Because this paper focuses on a few select case studies, it should not be interpreted as providing proof that economic freedom leads to prosperity, as such empirical evidence is better demonstrated by the econometric tests that were performed

[1] The author would like to thank Fred McMahon, Nathan Ashby, Russell Sobel, and the anonymous referees at the Fraser Institute for helpful comments and suggestions.

and published in previous studies cited by this paper.² Economic freedom has been empirically associated with higher levels of economic development in both international and subnational studies. Economic Freedom measures among US states refers to living under government institutions that promote the ideas of capitalism by a relative lack of interference with market systems, low tax rates, and a free labor market that is not dominated by government regulations and powerful unions.

States compared

There are three comparisons. The first is between the states Virginia and West Virginia. Both of these states are located in the eastern part of the United States and they share a common border. They were selected for comparison for their similarities in location and culture and for how they differ in reliance on economic freedom. Virginia continually exhibits a high level of economic freedom while West Virginia is consistently the least economically free among all states. The next two states to be compared are Georgia and Mississippi, both located in the southern region of the United States and fairly close in location as they are separated only by the state of Alabama.³ Both Georgia and Mississippi are considered southern in location and culture but differ significantly in reliance on economic freedom: Georgia is the more economically free of the two. The final comparison is of two Midwestern states, Indiana and Michigan. These states exhibit a much smaller variance in economic freedom and are examined to see if even small differences in economic freedom among otherwise similar states will result in differences in the measures of economic prosperity used in this study.⁴

The next section of this paper will discuss the importance of economic freedom for development and growth at both the international and subnational level. Section 3 will examine the construction of the EFNA index used in this study and make comparisons of the selected states. This section will also explore the relationship between freedom and traditional measures of economic prosperity such as per-capita Gross State Product (GSP) and median income across the states analyzed

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- [2] Broad based empirical evidence on the connection between economic freedom and prosperity can be found in the empirical literature that has used the indexes published in *Economic Freedom of North America* and *Economic Freedom of the World*. To explore such literature, please visit www.freetheworld.com.
- [3] Alabama's level of economic freedom is between that of Georgia and Mississippi, making it less desirable for comparison purposes as the purpose of this study is to compare states with wide differences in economic freedom.
- [4] Due to the purpose and nature of this study, only a few states comparisons were used as case studies and, therefore, it does not provide explicit empirical proof of the benefits of economic freedom. This proof has already been established in previous research. However, policy makers and the general public may find these comparisons useful for illustrative purposes. These states were selected because they come from similar geographical areas and have similarly structured economies but, because of the limited nature of comparisons in this paper, statistical selection bias remains a danger. We invite readers to examine other pairs such as Mississippi and Alabama or North Carolina, or Georgia and Louisiana.

by this study. As expected, those states with more economic freedom tend to be wealthier. The fourth section will compare the business climates of these states by examining unemployment levels, measures of entrepreneurship, and the results of the popular report, *Forbes Magazine's Best States for Business* (Badenhausen, 2009, September 23). Section 4 emphasizes the importance of economic freedom in creating an environment that encourages development and innovation. Section 5 analyzes the desirability of living and working in these states by looking at changes in population density and the migration patterns of the general population as well as of young and mobile skilled labor (those between ages 25 and 39, single, and having a college degree). Section 6 compares the economic growth patterns of people across different income quintiles to illustrate that states with higher levels of economic freedom tend to exhibit more even income growth than states with lower levels of economic freedom, where income growth is more concentrated among the richest groups of people.

The final section offers a brief conclusion. The paper concludes that, among the states used for comparison, those states with more economic freedom generally tend to exhibit higher levels of income, less unemployment, and are perceived to have a much better business climate that is ripe for further economic development. Those states with significantly more economic freedom also tend to enjoy higher levels of entrepreneurial activity, which is necessary for the innovation and technological advances that spurs growth. Further, the net migration rate of skilled labor tends to be higher in those states with more economic freedom as is the income growth of those who are economically worst off. These results are most pronounced in the states that are most different with regard to their levels of economic freedom and become less pronounced as the difference in economic freedom between the states diminishes. This study further illustrates the results of the vast amount of research which supports the fact that economic freedom is a vital component of economic prosperity and developing an economic climate which supports perpetual growth.

The Importance of Economic Freedom

There has been an extensive amount of scholarship centered around what makes some economies grow faster than others, and rightfully so, as people naturally want to obtain the wealth, stability, health, and various luxuries that accompany economic development. While there are many variables that can influence economic progress, the one key ingredient that an economy needs to prosper is economic freedom. Economic freedom means living and working under a governing institution that is consistent with fundamental capitalist policies such as free trade, secure private-property rights, a stable monetary system consistent with low and steady inflation, and a sound legal environment free of corruption, where contracts and laws are understandable and evenly enforced. Conversely, those economies that rely on socialist policies, where the government is large and intrusive, trade is limited, the means of production are owned and operated by the government, the monetary

system is unstable and characterized by high and volatile inflation rates, and laws are constantly changing or being enforced by corrupt officials, tend to experience lower levels of economic growth and are tragically undesirable places to live.

Institutional quality has been a critical component of economic development throughout the history of the world. Acemoglu, Johnson, and Robinson (2001) were able to examine the colonization experiences of European settlers to show that in countries where the environment was more hospitable, such as Canada, the United States, and New Zealand, the settlers set up high-quality, growth-oriented institutions designed to maximize long-run future growth and development. As a result, these countries all grew to become relatively wealthy. Conversely, in colonies that provided an environment riddled with malaria and other harsh living conditions, such as the Congo and other African countries, the settlers set up low-quality institutions designed to expropriate wealth quickly from the area. As a result, these countries experienced lower levels of economic growth and, for many, economic prosperity still remains elusive.

The evident importance of economic freedom has spurred attempts to measure this crucial economic ingredient at both the international and subnational level. Measuring economic freedom worldwide is accomplished with an index published in the *Economic Freedom of the World* (EFW) annual reports (see, for example, Gwartney et al., 2009). This index consists of data used to make up a composite of five different areas of government: [1] Size of Government, which includes government expenditures, taxes, and government enterprises; [2] Legal Structure and Security of Property Rights; [3] A Sound Monetary System; [4] Free International Trade; and [5] Credit, Labor, and Business Regulation (Gwartney and Lawson, 2002, 2009). This index has repeatedly been used to affirm the positive relationship between economic freedom and development. Easton and Walker (1997) used the EFW index to show that communist-era countries could experience a much higher standard of living by adopting more economically free policies. Additionally, a generally positive relationship between economic freedom and growth throughout the world has been established across various models using several different specifications (Cole 2003, 2005; Gwartney and Lawson, 2002).

In addition to this accumulation of evidence across countries, economic freedom has also been shown to be a critical component of growth at the subnational level. The index published in *Economic Freedom of North America* (EFNA) is used to measure economic freedom across US states and the Canadian provinces. This index is measured a little differently from the EFW index as there is little to no variation among US states and Canadian provinces in many of the categories used in the world index. However, there are still enough institutional differences across US states in areas such as the size and role of government, taxation, and labor-market freedom that differences in economic freedom can be determined and analyzed at this level.

To date, there have been many studies that have used the EFNA index to confirm what has been found at the international level. For example, Karabegović et al. (2003, 2008) use the EFNA index to find a positive relationship between economic freedom and economic growth. The authors show that both the levels and growth

of economic freedom are directly correlated with higher per-capita GDP, the traditional economic measure for standard of living. There seems to be no way to get around the fact that economic freedom is necessary for prosperity but the question remains, why is economic freedom so important? What is it about an economically free environment that so consistently leads to prosperity?

Productive and unproductive entrepreneurship

As it turns out, economic freedom leads to higher levels of what William Baumol (1990) called productive entrepreneurship. As Baumol describes, there are two kinds of entrepreneurship that people can use to obtain wealth: productive and unproductive. Productive entrepreneurship involves using resources to create something that people value more than the resources you used to create it. When a cook takes dough, cheese, and various types of meat and vegetables to create a pizza that is good enough for me and others to buy with our hard-earned money, then that cook has created value. Those who buy the pizza value the pizza more than their money and the cook values the money more than the pizza so both sides are made better off by this transaction. So when the cook makes a pizza, or the mechanic fixes a car, or a clothing designer creates a new dress or shirt, then they are expanding the economic pie so that the rest of us can have a bigger piece. The level of success of the cook, mechanic, or designer is indicative of how much they are expanding the economic pie. Conversely, entrepreneurs who fail to turn a profit are likely go out of business, a short-term (and, admittedly, sometimes personally disastrous) setback for the entrepreneur, but a good thing for the rest of the economy. Now those resources can be freed up for use by some other entrepreneur, who will use them in some way to make a profit and, consequently, make life better for the rest of those in the economy, or also risk going out of business. Naturally, only the most productive and wealth-enhancing enterprises will continue to exist and, in doing so, make everyone else better off. Those who do lose their place as entrepreneurs in one area of production can eventually redirect their energies toward another wealth-producing endeavor.

Unproductive entrepreneurship involves a less noble way of obtaining wealth. Rather than creating something of value that makes everyone else in the economy better off, the unproductive entrepreneur uses the government or legal system to take the wealth of others. If the cook cannot make a pizza that people want, but can lobby the government to redirect money from taxpayers to his failing pizza shack, then he has increased his piece of the economic pie by taking slivers from the pieces of the pie of those around him. No wealth is created and the economy fails to grow. Further, the fact that the cook's entrepreneurial endeavor was failing indicated that it was doing more harm than good to the economy by using resources to create something that people value less. In granting the entrepreneur taxpayers' money to stay in business, the government has propped up and held in place this destructive enterprise that only shrinks the size of the economic pie.

The importance of economic freedom lies in the fact that economically free environments encourage productive entrepreneurship where people are free to attempt to create wealth through enterprise, free to fail, and then free to try again. In

environments that lack economic freedom, people have the incentive to use unproductive means of entrepreneurship to take the wealth of others because the poor institutions responsible for the lack of economic freedom either discourage productive enterprise (for example, make it more difficult for people to engage in productive business enterprises through excessive regulations and licensing requirements) or encourage unproductive enterprise (for example, have redistribution policies that make it easy for people to obtain government transfers), or both.

Kreft and Sobel (2005) show empirically that private-sector entrepreneurship is the link between economic freedom and growth. The authors use the EFNA index to show that states with policies supporting a free market have higher levels of private-sector entrepreneurship. In a recent study, Sobel (2008a) found that institutional quality, as measured by the EFNA index, was positively correlated to several measures of productive entrepreneurship such as patents per capita, venture capital investment per capita, birth rate of sole proprietorships, and birth rate of total firm establishments. The author also concluded that measures of unproductive entrepreneurship, such as lobbying organizations per capita, are negatively related to economic freedom.

While these previous studies have provided a considerable amount of evidence of the importance of economic freedom and its connection to prosperity, this study will add to the literature by isolating and highlighting the effects of economic freedom on specific states that are otherwise similar.

Comparing Economic Freedom and Prosperity

In comparing economic freedom among these selected states, it is first necessary to discuss how economic freedom is determined and how its determinants relate to creating a prosperous economic environment. The EFNA index published in chapters one and two of this publication will serve as the measure of economic freedom for this study. This index has been used repeatedly as the measure of economic freedom in past research published in the area, including the publications that were referred to in the previous section. This index covers three areas—size of government, takings and discriminatory taxation, and labor market freedom—that affect economic freedom and, subsequently, the economic environment.

Area 1: Size of government

Area 1 is the size of government. Calculation of this area includes general consumption expenditures by the government, subsidies, and transfers, and social security payments as a percentage of GSP. While a minimal level of government spending to protect our property rights and to enforce understandable laws in an even-handed manner is necessary, excessive government spending can damage an economy's growth potential. An economic environment where the government has a higher level of consumption expenditures would be considered less economically free. This means that the government has control over a greater share of the economy, squeezing out the space open to free economic exchange. This type of economic

environment is less consistent with growth and prosperity because the government does not face the profit motive that directs the activities of private entrepreneurs. The government does not have the incentive to consume or produce efficiently because government officials do not get to keep the excess of revenues over expenditures, but are rather spending taxpayers' money in an effort to satisfy the interests of specific individuals and groups. On the other hand, private entrepreneurs have a personal stake in the operations of their enterprises. They are risking their own money in an attempt to generate profits that they will get to keep and reinvest if they can satisfy the preferences of consumers. Therefore, private producers have the incentive to operate more efficiently since they personally reap the rewards of success and bear the full brunt of their failure.

The subsidies and transfers that are also calculated in Area 1 can be considered unproductive forms of entrepreneurship as well: the higher the level of government subsidies and transfers as a share of GSP, the less economically free a state tends to be. Subsidies and transfers are usually gained by well-organized groups that spend time and effort lobbying the government for special favors, causing the government to transfer taxpayers' money to these special-interest groups. Every hour and every dollar spent by these groups lobbying the government for a piece of each taxpayer's wealth is time and money not spent engaging in the productive entrepreneurship that involves the creation of goods and services that increases everyone's wealth.

Area 2: Takings and discriminatory taxation

Area 2 consists of total government revenue as a percentage of GSP as well as the top marginal income-tax rate, the income level at which the top marginal tax rate applies, sales taxes collected as a percentage of GSP, and indirect taxes as a percentage of GSP. High levels of taxation can cripple economic growth because it reduces the incentive for people to work and produce. Therefore, higher levels of taxation tend to be associated with less economic freedom. A high top marginal tax rate will encourage those private enterprises that are earning the most profits (or in economic terms, those that are the most productive) to produce less, which could lead to less innovation, goods of lower quality, and fewer jobs for everyone else. In economics, it is common knowledge that people make decisions on the margin: it is not uncommon for a person or company to think about whether or not they should work that one additional day or open up that one additional factory. If a state has a particularly high top marginal tax rate then these companies and their employees are more likely to decide to take that day off or open up that factory elsewhere, resulting in less wealth-creating production within that state. High sales taxes and other forms of taxation tend to reduce the occurrence of voluntary transactions because these taxes make such transactions more expensive. Since voluntary transactions necessarily create wealth for all parties involved (or else, presumably, they would not be voluntary), then fewer of these transactions means less wealth will be created. Therefore, low taxes are a critical component for creating an economically free environment that encourages productive activity.

Both high taxes and high government spending reduce economic freedom. For a state, these will typically equal each other over the long term except in cases of default or large foreign-aid transfers. However, intergovernmental transfers break the link for subnational governments, requiring measurement of both expenditure and taxes.

Area 3: Labor market freedom

The third area of measurement included in the EFNA index is labor market freedom. This consists of government employment as a percentage of total state employment, minimum wage legislation, and union density. A high level of government employment as a share of total state employment means that a larger portion of production is accomplished through government activity, which is subject to the problems arising from the lack of profit motive that were highlighted earlier. A lower level of government employment indicates that more production is being accomplished by the private sector and this results in a more economically free environment. The annual income of minimum-wage workers divided by per-capita GSP is also included in the measurement of Area 3. A higher minimum wage relative to productivity will reduce the ability of business owners and employees to formulate contracts and thus reduces economic freedom. Unions can also make it more difficult for employers and employees to reach agreements that facilitate production and trade. Further, in an effort to protect their own employment, unions often try to limit competition through lobbying and other forms of unproductive entrepreneurship. Therefore, a higher prevalence of powerful organized unions results in less economic freedom (Karabegović et al., 2008).

Constructing the index: Bringing it all together

These three areas of the EFNA index are each measured on a scale of 0 to 10, with 0 being the least free and 10 being the most free. These three scores are then equally weighted and averaged together to get the total economic freedom score for each state, which is also measured on a scale of 0 to 10 where a higher number on the scale represents a greater level of economic freedom (Karabegović et al., 2003; Karabegović et al., 2008). Since these economic freedom scores change from year to year and the effects of economic freedom (or the lack thereof) on the economy tend to be felt through time, this study will focus on economic freedom between the years 1986 and 2007. This index is calculated both with the inclusion of federal government activity for each US state and then again without it. Since the level of federal government involvement within each state may be a direct result of the states local politics, both scores will be examined in the next section of this study.

Making the comparison: The states selected for this study

There were three groups of states selected for this study: each group consists of two states that are similar in location and, to a certain extent, local culture, but have contrasting economic freedom scores. This is an effective way to illustrate the influence of economic freedom on the economic and demographic variables analyzed in this study because it attempts to isolate economic freedom as the biggest difference among these groups of states.

Virginia and West Virginia

The first comparison includes Virginia and West Virginia (table 3.1a), two states located in the eastern part of the United States that share a common border. In fact, West Virginia used to be a part of Virginia until it became the only state in the union to secede from a confederate state in 1861 during the American Civil War. West Virginia was officially admitted into the union in 1863. West Virginia and Virginia also have a similar climate and both states are mountainous regions rich with wild-life and natural resources, although West Virginia is often considered much more so endowed. This comparison contains the greatest disparity in economic freedom. The average state-government economic freedom score for Virginia from the years from 1986 to 2007 is 7.85, which ranks it 5th among 50 states. Conversely, the state-government economic freedom score for West Virginia over the same time period is 5.59, ranking it dead last among the 50 US states.

The average economic freedom score for Virginia when including the federal government is 7.00, which drops its ranking to 13th. Averaging both economic freedom scores for the state of Virginia yields the combined average EFNA score of 7.44, which ranks Virginia 7th out of 50 states. West Virginia's level of economic freedom remains the lowest of the 50 states across all three specifications. The gap in economic freedom between Virginia and West Virginia across all three measurements is the greatest of all three comparisons.

Georgia and Mississippi

The next comparison made in this study is between Georgia and Mississippi (table 3.1b), two states that are considered southern in their location in the United States and their cultures. Georgia and Mississippi are located in what is often considered the “deep south,” which tends to be the poorest region of the United States. These two states are separated by the state of Alabama and, therefore, share no common border. Despite sharing some cultural similarities that are prevalent throughout the surrounding region, these states have different levels of economic freedom.

Georgia's economic freedom score is only slightly higher than that of Mississippi when federal spending is excluded from the calculation. However, this difference widens considerably when federal spending is included, resulting in a gap between the combined average EFNA scores that is significant, although not as considerable as the gap provided by the first comparison. It should also be noted that, of all the states examined in this study, Mississippi's EFNA score has seen the most drastic and consistent decline over the years (especially with regard to its score when federal government transfers are excluded). Therefore, Mississippi's average score is far above its current score, indicating that Mississippi is currently experiencing an economic environment with less economic freedom than it has had in the recent past.

Indiana and Michigan

The final comparison is between two Midwestern states, Indiana and Michigan (table 3.1c), which share a common border in what is known as the “rust belt” of the United States. The economy of both states is based on manufacturing. It is well

Table 3.1a: Economic freedom in Virginia and West Virginia, 1986–2007

State	Avg. EFNA State Gov. Score	Avg. EFNA State Gov. Rank	Avg. EFNA All Gov. Score	Avg. EFNA All Gov. Rank	Combined Avg. EFNA Score	Combined Avg. EFNA Rank
Virginia	7.85	5	7.00	13	7.43	7
West Virginia	5.59	50	5.35	50	5.47	50

Note: A list of the variables used as column headings in the tables in this chapter, along with their description, appears in appendix A.

Table 3.1b: Economic freedom in Georgia and Mississippi, 1986–2007

State	Avg. EFNA State Gov. Score	Avg. EFNA State Gov. Rank	Avg. EFNA All Gov. Score	Avg. EFNA All Gov. Rank	Combined Avg. EFNA Score	Combined Avg. EFNA Rank
Georgia	7.56	10	7.40	4	7.48	6
Mississippi	7.12	21	5.90	47	6.51	34

Note: A list of the variables used as column headings in the tables in this chapter, along with their description, appears in appendix A.

Table 3.1c: Economic freedom in Indiana and Michigan, 1986–2007

State	Avg. EFNA State Gov. Score	Avg. EFNA State Gov. Rank	Avg. EFNA All Gov. Score	Avg. EFNA All Gov. Rank	Combined Avg. EFNA Score	Combined Avg. EFNA Rank
Indiana	7.43	14	7.05	9	7.24	12
Michigan	6.35	38	6.52	32	6.43	36

Note: A list of the variables used as column headings in the tables in this chapter, along with their description, appears in appendix A.

Table 3.2: Economic freedom and prosperity, 1986–2007

	Average GSP per capita	GSP per capita 2008	Average current median income	Average % of individuals below poverty level	Percent of Individuals below poverty level, 2007
Comparison 1: Virginia versus West Virginia					
Virginia	\$33,165	\$51,104	\$54,515	9.91	9.9
West Virginia	\$21,701	\$33,987	\$33,617	18.11	16.9
Comparison 2: Georgia versus Mississippi					
Georgia	\$30,298	\$41,065	\$45,470	14.19	14.3
Mississippi	\$20,991	\$31,229	\$33,571	21.4	20.6
Comparison 3: Indiana versus Michigan					
Indiana	\$28,100	\$39,966	\$44,219	10.94	12.3
Michigan	\$28,686	\$38,243	\$46,097	12.39	14

Note: A list of the variables used as column headings in the tables in this chapter, along with their description, appears in appendix A.

known that a large number of the country's automobiles are produced in Michigan, and Indiana is home to the largest steel-producing area in the United States. Indiana is also a large producer of pharmaceuticals and medical devices. These states are the least different in terms of economic freedom among the three groups analyzed. While Indiana is more economically free across all three measures, the gap is only slightly greater than 1 full point when looking at the state-government economic freedom measure (col. Avg. EFNA State Gov. Score, table 3.1c). The gap between the other two measures is reduced to less than 1 full point and is smaller across these two measures than in the other two comparisons. One purpose behind making this comparison is to illustrate the difference in economic environments between similar states where a difference in economic freedom is present but relatively small. The results to be discussed in subsequent sections show that Indiana leads in some of the categories studied while Michigan leads in others. These results may indicate that, while economic freedom is crucial for development, it is not the only significant variable in the growth equation.⁵

Economic Freedom = Prosperity

Now that the states for comparison have been introduced and the measurement of economic freedom along with its importance has been explained, it is time to analyze the economic environments of the states with different levels of economic freedom. This study will start with traditional measures of economic prominence: per-capita Gross State Product (GSP) and median income.

Per-capita GSP (or GDP if analyzed across countries) has been traditionally used as a measure of the standard of living and so it is most appropriate to discuss that variable first. In examining table 3.2, one can see that those states with considerably higher levels of economic freedom tend to have high levels of per-capita GSP. Average GSP per capita is calculated by averaging GSP per capita over the years from 1986 to 2008, roughly the same time period in which economic freedom is being analyzed. The results given by this table show that Virginia and Georgia have much higher GSP per capita over this time period than their less economically free counterparts. The largest gap in this measure of prosperity occurs between Virginia and West Virginia where the difference in economic freedom is also the widest among the three comparisons. In the third comparison, where the economic freedom gap is the smallest, there is little difference between the two states, although Michigan holds a slight edge. However, it may be best to look at the cumulative effects of economic freedom over all of these years by analyzing the current economic picture of these states. GSP per capita in 2008 shows that the current standard of living is highest among all three states that boast a more economically free environment, again with the highest difference in GSP per capita occurring in the first comparison where the difference in

[5] Again, it is important to note that the nature of this study only allows for a small number of comparisons, which invites the possibility of statistical selection bias. Readers are encouraged to examine the previous research cited in this study for more broad-based empirical evidence and to examine other possible comparisons.

economic freedom is the greatest and the smallest difference in GSP per capita occurring in the states where the difference in economic freedom is the smallest.⁶

A common complaint about using GSP per capita as a measurement for standard of living is that this figure can be skewed in a situation where a few people have most of the wealth and the rest of the population are left with very little. While income inequality will be addressed later in this study, for now, average current median income, which includes the average median income over the years from 2003 to 2008, is presented in table 3.2. This may provide a more accurate measure of the central tendency in data sets where the average is skewed by extremely large outliers. The evidence given by this figure is consistent with that in the previous two columns. More economic freedom tends to lead to more wealth and this difference is most prominent where the difference in economic freedom is greatest.

It may also be instructive to examine the percentage of people who live below the poverty level in each state, both over the time period examined (1986–2007) and currently. In all three comparisons, those states with higher levels of economic freedom tend to have a smaller percentage of people living below the poverty line, indicating that economic freedom is beneficial to people living at all income levels, a point that is to be readdressed later in this study.

This evidence is illustrative of the results found in previous research. When comparing similar states, those with a higher level of economic freedom over the years have experienced greater prosperity. The next section will look at how these states compare with respect to their business climate using measures of unemployment, entrepreneurship, and a popular index of business climate.

The Right Climate for Growth

The prosperity of an economy depends on having an economic climate that consistently encourages productive employment as well as innovation and entrepreneurship. Economic freedom is the key ingredient in providing such a climate as it encourages people to make choices consistent with wealth-producing activity and gives people the incentive to develop new products and better technologies to further enhance economic development. This section will compare the three groups of similar states across measures of unemployment, entrepreneurship and innovation, and overall business-climate perception to see how economic freedom influences these states' economic environments.

Unemployment

A healthy employment level over a long period of time is representative of a productive economy whereas those economies with high unemployment levels are less productive. Table 3.3 presents the average unemployment rates for the three groups

[6] Please refer to Karabegović et al. (2003, 2008) for broad based empirical evidence on the connection between economic freedom and per capita GSP across states.

Table 3.3: Economic freedom and the average unemployment rate, 1986–2007

Average Unemployment Rate	
Comparison 1: Virginia versus West Virginia	
Virginia	4.08
West Virginia	7.68
Comparison 2: Georgia versus Mississippi	
Georgia	4.99
Mississippi	7.03
Comparison 3: Indiana versus Michigan	
Indiana	4.89
Michigan	6.46

Note: A list of the variables used as column headings in the tables in this chapter, along with their description, appears in appendix A.

of states over the time period in which economic freedom is analyzed (1986–2007). Consistent with what is to be expected from our knowledge of economic freedom, the states with higher economic-freedom scores all have lower unemployment levels. What is most telling, however, is that this difference in unemployment rate is highest in the first comparison, which also exhibited the greatest difference in economic freedom. West Virginia, whose economic freedom score places it last among the 50 states, had the highest unemployment rate among the states analyzed here and it is 3.6 points higher than the unemployment rate in neighboring Virginia. The difference in unemployment rates between Georgia and Mississippi is also very sizable: Georgia's unemployment rate is 2.04 points lower than Mississippi's. Michigan, which has become known for having high rates of unemployment in recent years, has an unemployment rate that 1.57 points higher than Indiana's. While this is a considerable difference, it is the smallest of the three comparisons. The fact that the largest and smallest difference in unemployment rates shows up in the comparison of states with the largest and smallest difference in economic freedom helps to illustrate that differences in economic freedom do influence these differences in unemployment.

Entrepreneurship and innovation

Productive entrepreneurship, a term coined by Baumol (1990), is the driving force behind innovation and the technological changes that help the economy surge forward. Producing better goods and services and discovering less costly production methods are wealth-creating activities that greatly enhance economic growth. When a customer willingly pays for a better product or can get the same product at a lower price, then the company producing that product gains through having more customers and generating a greater profit and the customer also gains through obtaining a better product that makes their lives easier or through saving money

in buying the product more cheaply, which allows them to spend more elsewhere on additional goods and services. Both sides are made better off and the size of the economic pie has been expanded.

Productive entrepreneurship is encouraged within economies that exhibit high levels of economic freedom and can be discouraged in those with low levels of economic freedom, as things like high tax rates and excessive government regulation reduce the incentive to innovate and dampen the entrepreneurial spirit. In their study, Kreft and Sobel (2005) found that it was this productive entrepreneurship that provided the link between economic freedom and growth. Sobel later published a study (2008b) that identified measures of productive entrepreneurship and found these measures to be positively correlated to economic freedom across US states. To compare entrepreneurship and innovation across the states highlighted in this study, these measures of entrepreneurial activity, which include venture capital investment per capita, patents per capita, sole proprietorship growth rate, and total establishment birth rate, have been adopted. The results from comparing the three groups of states across all four measures of entrepreneurship where such data was available over the time period analyzed can be found in table 3.4.⁷

One can see that, according to these measures, the first comparison yields the expected result of Virginia out-performing West Virginia across all four specifications. This gives the impression that innovation and the creative production of new products and production methods is much more alive in Virginia than in West Virginia, and this may be a large reason that the two states have experienced such different paths in the course of their development. The second comparison also shows Georgia dominating out-performing in all four specifications. This highlights the result found by Sobel (2008b) that economic freedom is instrumental in creating an economic climate consistent with high levels of productive entrepreneurship. The third comparison, where there was the least difference in economic freedom between the two states, shows Michigan, the state with less freedom, exceeding Indiana in all four categories. In two of the categories, Average Venture Capital Investment per Capita and Total Establishment Birth Rate, this difference is very small but, in the other two categories of Average Patents per Capita and Sole Proprietorship Growth Rate, the difference between the two states is quite large. This is inconsistent with the result found by Sobel (2008b), but it is likely that Michigan's measures of entrepreneurship are bolstered by the innovations of the automobile industry, which has long been established within the state and makes up a significant part of the states economy.

Popular perception of business climate

The perception of the quality of the business climate of the state compared to that of other states may influence a business owner's decision to locate in one state rather than another. In deciding where to establish an enterprise, and all of the production

[7] Please refer to Sobel, 2008b for broad-based empirical evidence on the connection between economic freedom and these measures of productive entrepreneurship.

Table 3.4: Economic freedom and productive entrepreneurship, 1986–2007

	Average Patents per Capita, 1988–2008	Avg. Venture Capital Investment per Capita, 1991–2008	Sole Proprietorship Growth Rate, 1986–2008	Total Establishment Birth Rate, 1999–2005
Comparison 1: Virginia versus West Virginia				
Virginia	135.18	81.35	50.02	11.9
West Virginia	75.67	11.22	47.83	9.56
Comparison 2: Georgia versus Mississippi				
Georgia	130.69	64.01	86.2	13.4
Mississippi	48.17	9.84	73.57	10.8
Comparison 3: Indiana versus Michigan				
Indiana	195.63	12.17	49.28	10.1
Michigan	326.13	14.02	86.73	10.3

Note: A list of the variables used as column headings in the tables in this chapter, along with their description, appears in appendix A.

and employment that come with it, an owner may consult reports concerning a state's business climate and compare it with surrounding states. Therefore, it is useful to consider how relative rankings of the business climate compare across these states that differ in their level of economic freedom. To make this comparison, this study used *Forbes Magazine's Best States for Business* (Badenhausen, 2009, September 23) annual analysis, which has been ranking states according to their business climates since 2006. The study by *Forbes Magazine* is based on an index that combines measures for business costs, labor, regulatory environment, economic climate, growth prospects, and quality of life. They then rank the business climate of all 50 states using this composite score.

The results for Virginia, West Virginia, Georgia, Mississippi, Indiana, and Michigan from the *Forbes Magazine's* study for every year it has been in effect are given in table 3.5. For all four years, in each of the three comparisons, the state with the higher level of economic freedom also ranks higher according to the *Forbes* study that compares perceptions of business climates. The most glaring difference is, once again, found in the comparison of Virginia and West Virginia. Virginia, whose economic-freedom score is among the highest of all states and considerably higher than West Virginia's, has dominated the *Forbes* index, ranking first in each of the four years. West Virginia, whose economic-freedom score ranks dead last among the 50 US states has been at, or near the bottom of, the *Forbes* index in all four years. In 2006, West Virginia ranked 49th, beating out Louisiana only because of the devastation caused by hurricane Katrina, and then ranked last among all 50 states in both 2007 and 2008. Only in 2009 has West Virginia been able to climb out of the bottom of the index, but this may have been skewed by the recent economic downturn, which did not affect West Virginia as severely as some other states since

Table 3.5: Economic freedom and perception of business climate, 2006–2009

	Rank from Forbes Magazine Best States For Doing Business			
	2006	2007	2008	2009
Comparison 1: Virginia versus West Virginia				
Virginia	1	1	1	1
West Virginia	49*	50	50	46
Comparison 2: Georgia versus Mississippi				
Georgia	10	15	5	6
Mississippi	48	43	42	40
Comparison 3: Indiana versus Michigan				
Indiana	32	27	25	30
Michigan	45	46	47	49

Note *: "In 2006, West Virginia ranked ahead only of Louisiana, which was still suffering from the devastation caused by hurricane Katrina.

Note: A list of the variables used as column headings in the tables in this chapter, along with their description, appears in appendix A.

it was sheltered by its heavy reliance on coal production. An employer looking to set up his firm in West Virginia could easily decide to place his business across the border to take advantage of Virginia's business-friendly climate, a reoccurring scenario that haunts West Virginia's economy. In fact, Sobel (2007) edited a policy analysis book that highlighted West Virginia's lack of reliance on economic freedom among the reasons for the state's poor economic performance, and the book's cover was littered with satellite photos that show businesses located across the West Virginia border in surrounding states, while the West Virginia side of the border is populated with nothing but trees.

Comparisons 2 and 3 also show the expected result that the state exhibiting a higher level of economic freedom ranks higher on the business-climate index. The differences in these rankings are narrowest in comparison 3, where the difference in economic freedom is also the smallest, giving the appearance that economic freedom may play a significant role in a state's business climate.

The next section of this study will compare these states across measures that relate to people's desire to live and work within the state to see if these measures differ on the basis of economic freedom.

Population Density and Migration Rates

Perhaps the best measure of the economic climate of a state is people's willingness to live and work within that state. This section analyzes the population density of these states and how that population density has changed over the years, and then goes on to examine the migration patterns among the states in question of those people who are young, single, and college educated—the productive section of the population most likely to be mobile and willing to move for professional reasons.

Population density

Population density, measured as the number of people per square mile, is used in this study to compare people's desire to live within the respective state. Table 3.6 shows the results of comparing population density averaged over the years from 1986 to 2008 as well as the percentage change in population density over this time period. The largest gap in population density when averaged over the time period examined within this study occurs in Comparison 1: Virginia has over 96 more people per square mile than the less economically free West Virginia. Virginia also has seen a large increase in population density from 1986 to 2008, while West Virginia, which ranks last among all states for economic freedom, is the only state of the six examined in this study that has experienced a negative change in population density over this time period. In the second comparison, Georgia also has a significantly higher number of people per square mile than Mississippi and has seen a much larger increase in population density from 1986 to 2008, although Mississippi has also seen its population density increase over this time period. In the third comparison, where the difference in economic freedom between the two

Table 3.6: Economic freedom and population density, 1986–2008

	Average Population Density, 1986–2008	Percent Change in Population Density, 1986–2008
Comparison 1: Virginia versus West Virginia		
Virginia	171.81	33.67
West Virginia	75.44	–3.61
Comparison 2: Georgia versus Mississippi		
Georgia	132.58	59.18
Mississippi	58.49	13.3
Comparison 3: Indiana versus Michigan		
Indiana	164.4	16.92
Michigan	170.95	9.59

Note: A list of the variables used as column headings in the tables in this chapter, along with their description, appears in appendix A.

states is the smallest, the differences for average population density and the change in population density is also much smaller. Michigan has a slightly higher number of people per square mile but Indiana has experienced a greater positive change in this measure over the examined time period.

Previous research has examined the relationship between economic freedom and migration flows. Ashby (2007), studying Tiebout's (1956) theory that citizens will "vote with their feet" and establish their institutional preferences by relocating to economies with institutions that best suit those preferences, found that economic freedom is positively related to the migration rate. He found that migration is positively related to government expenditures and transfers, which are represented by a lower score in Area 1 of the economic freedom index, but migration is positively related to both lower tax burdens and a freer labor market, which are represented by a higher score in Area 2 and Area 3 of the EFNA index. Table 3.6 shows evidence of a greater increase in population density in states with higher levels of economic freedom across all three comparisons over the time period being examined, and the next section will analyze migration across these states by focusing on the migration of a skilled and mobile workforce.

Table 3.7 takes a closer look at the domestic migration rates of the states used in these comparisons over the period from 1995 to 2000. In examining the native-born net domestic migration rate, it appears that across all three comparisons people are coming into the states with more economic freedom at a higher rate than they are leaving. West Virginia and Michigan both have negative native-born net migration rates, indicating that there are more people choosing to leave the state than there are choosing to move to the state. Mississippi's native-born net migration rate is positive but pales in comparison to Georgia, its more economically free

Table 3.7: Economic freedom and migration rates, 1995–2000

	Native-born Net Domestic Migration Rate, 1995–2000	Foreign-born Net Domestic Migration Rate, 1995–2000
Comparison 1: Virginia versus West Virginia		
Virginia	10	39.7
West Virginia	–5.8	–60.3
Comparison 2: Georgia versus Mississippi		
Georgia	42.1	178.1
Mississippi	10.1	38.7
Comparison 3: Indiana versus Michigan		
Indiana	2.1	84
Michigan	–11.2	17.3

Note: A list of the variables used as column headings in the tables in this chapter, along with their description, appears in appendix A.

counterpart. Only West Virginia has a negative foreign-born net domestic migration rate (the domestic migration rate of those born outside the United States) but the economically free states once again trump the less economically free states across all three comparisons.⁸

Migration of the educated workforce

Recent years have seen states make greater attempts to educate their workforce by subsidizing advanced education at in-state colleges and universities in the hopes that residents of the state will continue to work within the state after their education has been completed. However, the reality of the situation is that those who are educated are more likely to relocate to other states that have more promising opportunities (Moutray, 2009). An educated workforce can provide a higher level of human capital that can lead to greater production and a more prosperous business climate. Table 3.8 shows the percent of the population, 25 years old and older, that has at least a Bachelor's degree, averaged over the years from 1993 to 2007. The first two comparisons show that a higher percentage of the population of the more economically free states hold a college degree than is the case in their less economically free counterparts. Similar to previous results, the gap in this variable is largest in the first comparison where the difference in economic freedom is also at its highest. Comparison 3, where the difference in economic freedom is the smallest, once again, shows the smallest gap in this education variable.

The level of education attained by the population of any given state may be related to how much spending on education is conducted by the state government, so for the most accurate analysis of which states are best at attracting educated workers it is necessary to look at the net migration rate of those who hold a Bachelor's degree. Previous research has examined the migration of college-educated individuals among US states (Moutray, 2009) and found that those individuals with a Bachelor's degree, particularly those who have good grades and attended top-tier universities are very mobile and willing to move away from their home state in search of better opportunities. A sociological study by Carr and Kefalas (2009) indicates that the highest achieving students who moved away from their home state were encouraged to do so by parents, teachers, and other advisors, and this has worked to the detriment of the home economy:

The youth exodus is a zero-sum phenomenon: it benefits the destination cities and hurts regions that migrants flee. For every thriving metropolis now, there are dozens of agro-industrial brain-drain areas where economic growth has stalled. Experts believe that regions are in so much trouble largely because too few of their most-likely-to-succeed types with college credentials and upwardly mobile aspirations remain, and too many of the local kids with vocational certificates and the most diminished economic prospects do. (Carr and Kefalas, 2009: 5)

[8] Please refer to Ashby, 2007 for broad-based empirical evidence on the connection between economic freedom and migration.

Table 3.8: Economic freedom and migration rates of the educated workforce, 1995–2000

	Average Percent of Population with Bachelor's Degree, 1993–2007	Skilled Net Migration Rate, 1995–2000
Comparison 1: Virginia versus West Virginia		
Virginia	30.35	38.4
West Virginia	15.02	-197.1
Comparison 2: Georgia versus Mississippi		
Georgia	24.15	150.5
Mississippi	19.71	-134.1
Comparison 3: Indiana versus Michigan		
Indiana	19.09	-142.3
Michigan	22.47	-86.7

Note: A list of the variables used as column headings in the tables in this chapter, along with their description, appears in appendix A.

Clearly, those individuals with a higher level of education and greater employment prospects are more likely to move and this could negatively affect their home state. This is echoed by the results of Moutray (2009), who found that those individuals with at least a bachelor's degree are much more likely to move to areas with greater opportunities, evidenced by a strong relationship between mobility and economic growth. However, these educated individuals are more likely to remain in their home state if they have strong family or personal ties that include an existing business, home-ownership, marriage, and children⁹ (Moutray, 2009).

In order to examine the results of these studies with respect to the state comparisons used in this study, the variable Skilled Net Migration Rate is used. This is measured as the net migration rate from 1995 to 2000 of those who are young (age 25–39), single (never married, divorced, or widowed), and college educated (having at least a Bachelor's degree). This measure most accurately reflects those who would be most mobile and willing to move in search of better economic opportunity according to the study by Moutray (2009). Table 3.8 shows that Georgia and Virginia, the two states in this study with the highest levels of economic freedom, have enjoyed a positive inflow of skilled workers over the time period examined. The four remaining states have been experiencing the “brain drain” phenomenon of having your best and brightest leave in search of opportunity elsewhere, with West Virginia exhibiting the greatest exodus of skilled labor among the states in this study

[9] However, in the case of marriage, the presence of a well-educated spouse does increase mobility

and ranking 46th across all US states. This effect of the net migration of the skilled workforce illustrates the potential negative impact that a lack of economic freedom can have on an economy.

One anomaly is that Michigan's percentage of skilled workers is higher than Indiana's and the rate at which skilled labor is leaving Michigan is lower than that of Indiana. This is likely again due to the influence of the automobile industry and its need for skilled workers, especially managers and technicians at the automobile headquarters and research facilities but also managers, foremen, and technicians on the shop floor. In fact, it is remarkable that the state at the nexus of US automobile manufacturing, management, and research—a very high-tech sector—has the large emigration of skilled labor that it does, a result that may at least partially be driven by Michigan's relative lack of economic freedom.

Does Economic Freedom Leave the Poor Behind?

Many may accept that economic freedom leads to better measures of prosperity such as Gross Domestic Product (GDP) per capita but fear that an economy with fewer regulations and lower government spending and transfers will lead to most of this wealth being concentrated in the hands of the richest few people in the population and that the poorest individuals in the population will not reap the benefits of an economically free environment. International studies that look at the relationship between economic freedom and income inequality across countries have met with conflicting results. Berggren (1999) finds that higher levels of economic freedom are positively correlated with a higher level of income inequality. Scully (2002), on the other hand, finds that, once the fact that countries use different calculations of income distribution is accounted for, there is a negative relationship between economic freedom and income inequality, indicating that countries with more economic freedom have less inequality. Further, those countries with more economic freedom showed greater income growth than those with the lowest income levels. In a study that analyzed the relationship between economic freedom and income inequality across US states, Ashby and Sobel (2008) found that increases in economic freedom are associated with higher incomes, higher growth across all income quintiles, and less income inequality.

Where there is less economic freedom, there is less private economic activity and a greater amount of government spending and transfers. Such environments may lead to greater income inequality because the allocation of government spending and transfers are usually more highly concentrated in the hands of the politically powerful than are the benefits of private production. Well-organized special interest groups can dominate such economic environments and take the wealth of others through government redistribution, which tends to increase the level of income inequality in these economies. Economic freedom, however, allows everyone an opportunity for growth and economic advancement through their own productive

Table 3.9: Percentage of households living within various ranges of yearly income (US\$), 2003–2007

	Under \$25,000	\$25,000– \$50,000	\$50,000– \$75,000	\$75,000– \$100,000	\$100,000– \$150,000	\$150,000– \$200,000	Over \$200,000
Comparison 1: Virginia versus West Virginia							
Virginia	21.43%	24.56%	19.45%	12.69%	12.75%	4.76%	4.38%
West Virginia	38.36%	28.94%	16.54%	8.60%	5.42%	1.19%	1.00%
Comparison 2: Georgia versus Mississippi							
Georgia	26.86%	27.44%	19.07%	11.21%	9.53%	3.04%	2.85%
Mississippi	38.45%	28.31%	16.22%	8.23%	5.86%	1.49%	1.43%
Comparison 3: Indiana versus Michigan							
Indiana	26.35%	29.41%	20.81%	11.56%	8.12%	2.06%	1.72%
Michigan	26.18%	27.33%	19.64%	11.70%	10.12%	2.80%	2.22%

Source: US Department of Commerce, Census Bureau (2009). *Statistical Abstracts of the United States (2009)*.

Note: A list of the variables used as column headings in the tables in this chapter, along with their description, appears in appendix A.

entrepreneurial skills. Table 3.9 shows the percentage of households living within various ranges of yearly income from 2003 to 2007.¹⁰ For example, Virginia has over 21% of its households with an income of \$25,000 or less while over 38% of households in West Virginia are in the same range averaged over the years from 2003 to 2007.

It is clear from this table that states like West Virginia and Mississippi that have less economic freedom have more households in the lower income ranges and fewer households in the higher income ranges compared to Virginia and Georgia. There is little difference across all income ranges between households in Indiana and Michigan.

Economic freedom and the growth of average income

Measuring growth rates of different income levels across the states gives an effective analysis of whether economic freedom leaves the poor behind.¹¹ Bernstein, McNichol, and Lyons (2006) performed such a study for the Center of Budget and Policy Priorities. The study divided average income in each state into quintiles and then looked at the growth rates of these income quintiles from 1980 to 2003.

[10] These percentages are averaged over the years 2003 to 2007 for each state. This data was found in the US Department of Commerce, Census Bureau (2009), *Statistical Abstracts of the United States (2009)*.

[11] Please refer to Ashby and Sobel, 2008 for broad-based empirical evidence on the connection between greater economic freedom and less income inequality.

Comparison 1: Virginia versus West Virginia

Virginia has experienced greater growth across all quintiles than West Virginia (figures 3.1, 3.2). There is little difference in growth across the two states for the top 20% of the population but the bottom income quintiles of Virginia have experienced much greater growth over this time period than the bottom quintiles of West Virginia. This illustrates that economic freedom is even more important for those who are at the bottom of the economic ladder.

Figure 3.1: Virginia, growth (%) in average income, 1980–2003

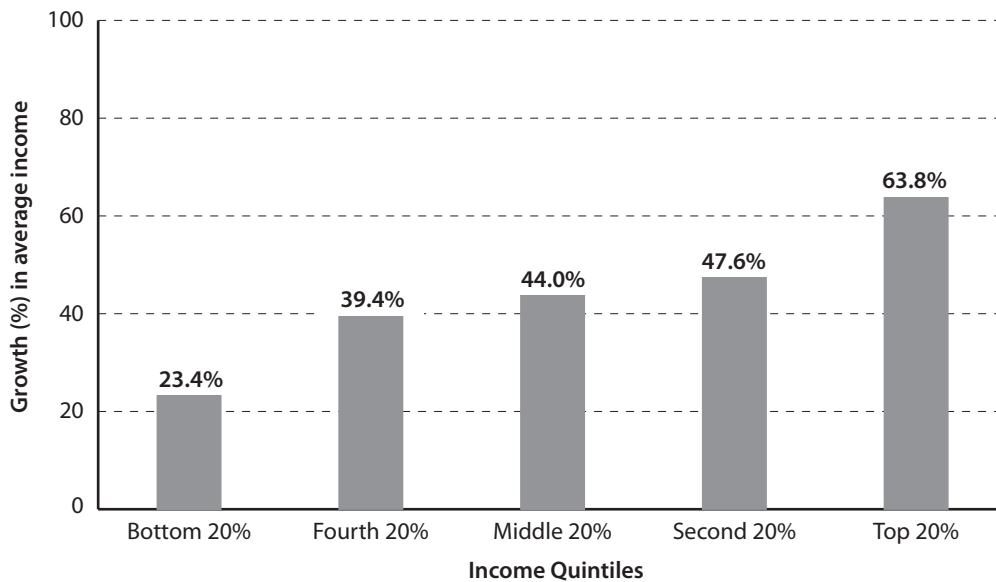
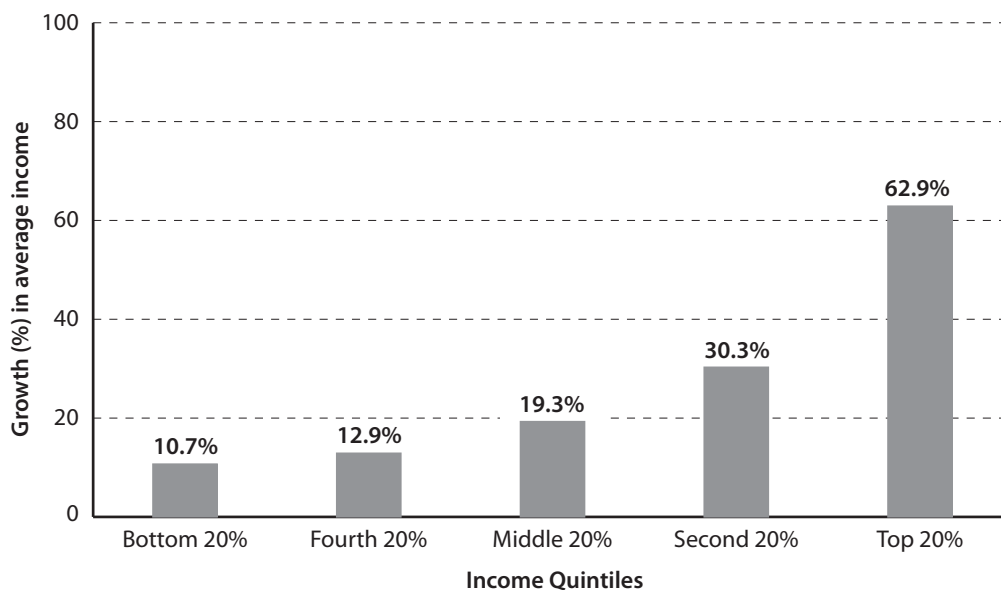


Figure 3.2: West Virginia, growth (%) in average income, 1980–2003



Comparison 2: Georgia versus Mississippi

Economies that are more economically free also tend to grow more evenly than their less economically free counterparts (figures 3.3, 3.4). Georgia's growth across all five quintiles was remarkably even while Mississippi showed greater growth than Georgia across the top two quintiles and less growth than Georgia in the bottom two quintiles. Again, economic freedom is a boon for the poor and leads to greater equality.

Figure 3.3: Georgia, growth (%) in average income, 1980–2003

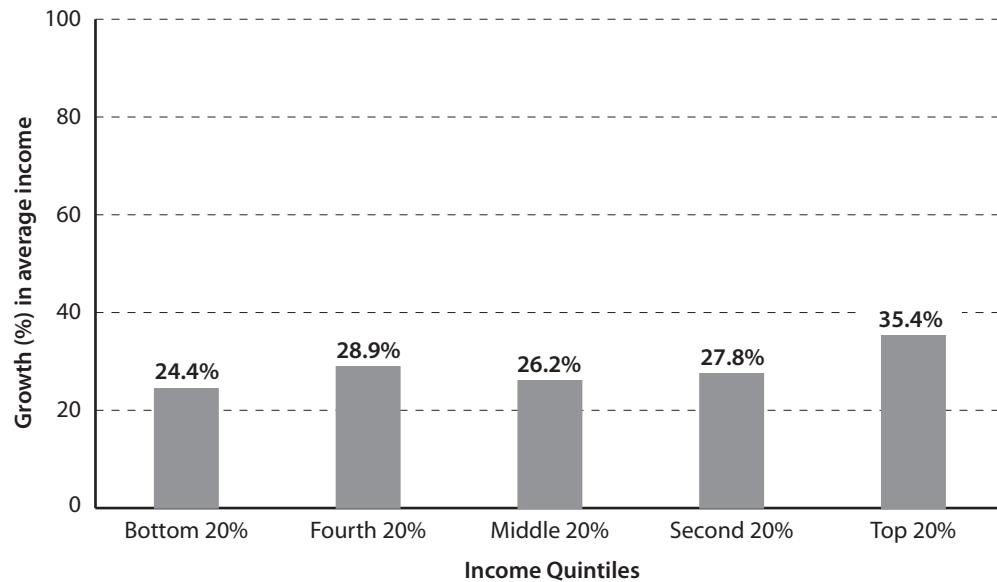
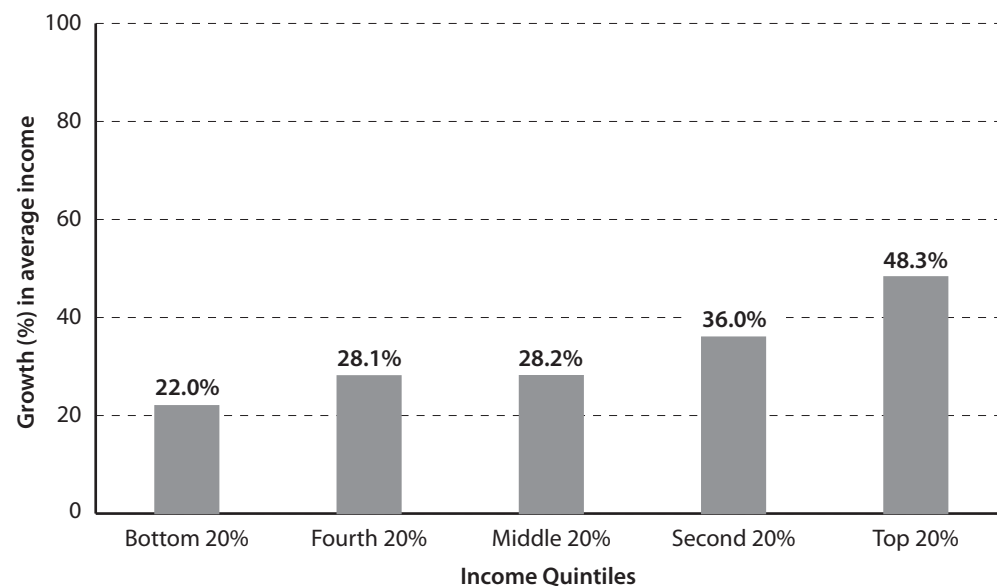
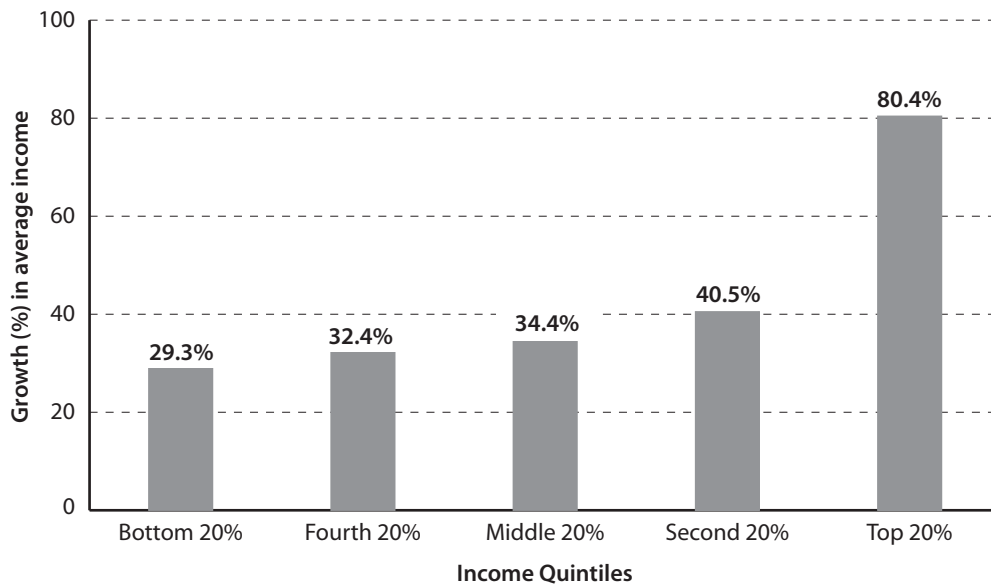
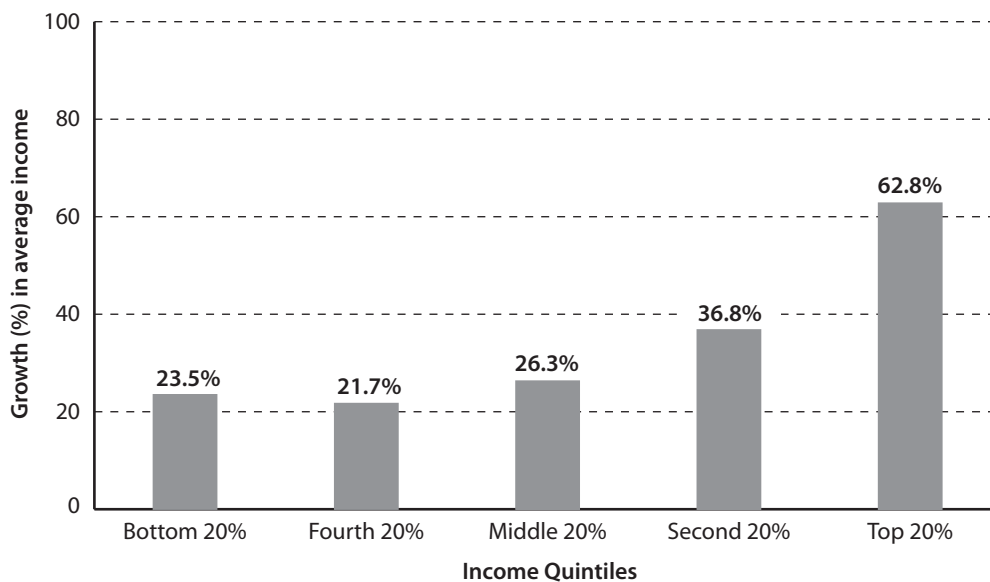


Figure 3.4: Mississippi, growth (%) in average income, 1980–2003



Comparison 3: Indiana versus Michigan

Figures 3.5 and 3.6 show a story similar to that of the first comparison where Indiana, which is considered to be more economically free than Michigan (although by the smallest margin of the three comparisons), is experiencing more income growth across all five quintiles including those at the bottom. All three comparisons illustrate that economic freedom increases prosperity for everyone, including those who are currently worst off in the economy.

Figure 3.5: Indiana, growth (%) in average income, 1980–2003**Figure 3.6: Michigan, growth (%) in average income, 1980–2003**

Conclusion

Research has consistently shown economic freedom to be a key variable for economic growth and prosperity. This study used a comparison of selected states to examine similar states to isolate economic freedom as the instrumental variable that affects a state's economic climate. Three comparisons of pairs of states were used to isolate the effect of economic freedom on income, unemployment, entrepreneurship, business climate, population density, skilled migration, and income equality to illustrate the broad-based statistical evidence found in previous studies. Consistent with results from other studies, in the first two comparisons, Virginia with West Virginia and Georgia with Mississippi, those states with considerably higher levels of economic freedom had higher measures in every category analyzed by this study. This included comparisons of the standard of living as measured by variables such as Gross State Product (GSP), median income, and percentage of individuals below the poverty level as well as measurements of overall business conditions with such variables as unemployment, business climate as measured by *Forbes Magazine's* study on the best states for doing business, and four different variables used to analyze individuals' attempts to innovate and engage in industrial pursuits. Those states in the first two comparisons with higher levels of economic freedom also had a higher population density that has been increasing by a larger amount over the years, along with a greater net migration of college-educated individuals into the state, indicating a greater willingness of people to live and work within these states. These states also experienced greater and more even growth among its poorest individuals than states with less economic freedom. These comparisons highlight the importance of economic freedom as a crucial economic ingredient in the recipe for growth.

The picture painted by the results of the third comparison, Indiana with Michigan, is less clear. The difference in economic freedom between these two states is smaller than that of the other two comparisons and, interestingly, the gap between the two states in the variables analyzed is often smaller than the gap exhibited in the first two comparisons, with Indiana leading in some categories and Michigan leading in others. A possible explanation for this result is that Michigan's economy has been bolstered over the years by the performance of the automobile industry, which makes up a large part of Michigan's business sector. If this is true, then the current difficulties experienced by the automotive sector, which has led to sizeable government bailouts, may cause the gap between Michigan and Indiana to begin to widen as Michigan falls behind. Indeed, there appears to be evidence that this is starting to happen. While Michigan is ahead of Indiana in average GSP per capita, Indiana is ahead of Michigan in measures of current GSP per capita and also has a lower percentage of individuals below the poverty line in the most recent measure. Further, the state of Michigan is now experiencing some of the highest unemployment rates in the country and has steadily been losing ground in the *Forbes* index measuring the best states for doing business. In fact, in the 2009 *Forbes* index, Michigan ranked dead last in the category measuring the growth prospects of the state's economy.

Without a thriving automobile industry to shelter it, Michigan's economy could suffer from the same low growth levels and economic stagnation that other states lacking economic freedom currently experience.

Meanwhile, West Virginia, which is typically last among all states in economic freedom was awarded its highest economic freedom ratings in the subnational category that excludes government spending in 2006 and 2007, climbing above 6 on the 10-point scale in this category for the first time since the index's construction. Interestingly, the growth prospects category of the 2009 *Forbes* index ranked West Virginia 43rd out of 50 states, which marks the first time that West Virginia was not ranked 50th in this category since the *Forbes* index started publishing the study in 2006. Whether this is an aberration caused by the recent economic downturn or the beginning of West Virginia's climb to economic freedom remains to be seen. It will be interesting to track the future development of both Michigan and West Virginia, as well as the other US states, to see how economic freedom continues to influence economic development in the years to come.

Appendix A: Description of the data and its sources

Avg. EFNA Score (no Fed Gov.) the composite score of the economic freedom index, excluding the federal government spending and transfers, averaged over the years 1986–2007.

Source Nathan Ashby.

Avg. EFNA Rank (no Fed Gov.) the respective states rank among all 50 states when considering the composite score, excluding the federal government averaged over the years 1986–2007. A higher ranking indicates that the state is more economically free than the states that are ranked lower.

Source Nathan Ashby.

Avg. EFNA All Gov. Score the composite score of the economic freedom index, including the federal government, averaged over the years 1986–2007.

Source Nathan Ashby.

Avg. EFNA All Gov. Rank the respective states rank among all 50 states when considering the composite score, including the federal government averaged over the years 1986–2007. A higher ranking indicates that the state is more economically free than the states that are ranked lower.

Source Nathan Ashby.

Combined Avg. EFNA Score the average of the Avg. EFNA Score (no Fed Gov.) and the Avg. EFNA All Gov. Score mentioned above.

Combined Avg. EFNA Rank the respective states rank among all 50 states when considering the average of the Avg. EFNA Score (no Fed Gov.) and the Avg. EFNA All Gov. Score. A higher ranking indicates that the state is more economically free than the states that are ranked lower.

Average GSP per capita the average Gross State Product (GSP) per capita from the years 1986–2008 measured in current US dollars.

Source US Department of Commerce, Bureau of Economic Analysis (BEA 2009)

GSP per capita 2008 Gross State Product (GSP) per capita in the year 2008 measured in current US dollars.

Source US Department of Commerce, Bureau of Economic Analysis (BEA 2009)

Average Current Median Income average median income from the years 2003–2008.

Source US Department of Commerce, Census Bureau (2009).

Average % individuals below poverty level the percentage of individuals living below the poverty level each year according to the US Census averaged over the years 1986–2007.

Source US Department of Commerce, Census Bureau (2009).

% Individuals Below Poverty Level in 2007 the percentage of individuals living below the poverty level in the year 2007 according to the US Census.

Source US Department of Commerce, Census Bureau (2009).

Average Unemployment Rate, 1986–2007 the average of the unemployment rate for every year over the years 1986–2007.

Source US Census Bureau, Statistical Abstracts of the United States (2009).

Average Patents Per Capita, 1988–2008 the average annual number of utility patents granted per 100,000 people over the time period 1988–2008.

Source US Patent and Trademark and Office, Utility Patent Counts by Country/State and Year, Washington, DC (2009).

Average Venture Capital Investment Per Capita, 1991–2008 Average annual venture capital investment per capita over the years 1991–2008.

Source Pricewaterhouse-Coopers at <http://www.pwcmoneytree.com/moneytree/index.jsp> (2009).

Sole Proprietorship Growth Rate, 1986–2008 cumulative percent change in non-farm proprietor employment as percentage of labor force (NPE), calculated as $((NPE_{2008} - NPE_{1986})/NPE_{1986}) \times 100$.

Source US Department of Commerce, Bureau of Economic Analysis (2009).

Total Establishment Birth Rate, 1999–2005 average annual number of new establishment births as percentage of existing large firms over the years 1999–2005.

Source Office of Advocacy, US Small Business Administration (2009).

Forbes Magazine's Best States for Business Ranking The states ranking among all 50 states according to their composite score of an index that includes measures of business costs, labor, regulatory environment, economic climate, growth prospects, and quality of life.

Source *Forbes Magazine* <http://www.forbes.com> (2006–2009).

Average Population Density, 1986–2008 the number of people per square mile for each year averaged over the years 1986–2008.

Source US Census Bureau, *Statistical Abstracts of the United States* (2009).

Percent Change in Population Density, 1986–2008 percent change in population density (PD) calculated as $((PD_{2008} - PD_{1986})/PD_{1986}) \times 100$.

Source Calculated using the data provided by the US Census Bureau, *Statistical Abstracts of the United States*.

Native Net Domestic Migration Rate 1995–2000 net migration 1995–2000 of those born in the United States, Puerto Rico, or other US Territories divided by the approximated 1995 population and multiplied by 1,000.

Source US Census Bureau, 2000 Census.

Native Net Foreign Born Migration Rate 1995–2000 net migration 1995–2000 of those born outside the United States (including both naturalized US citizens and those who are not citizens of the US) divided by the approximated 1995 population and multiplied by 1,000.

Source US Census Bureau, 2000 Census.

Average Percent of Population with College Degree, 1993–2007 percent of population 25 years old and older who have a bachelor's degree or higher, averaged over the years 1993–2007.

Source US Census Bureau, *Statistical Abstracts of the United States* (2009)

Skilled Net Migration Rate, 1995–2000 net migration rate 1995–2000 of young, single, and college-educated individuals divided by the approximated 1995 population and multiplied by 1,000.

Source US Census Bureau, *Migration of the Young, Single, and College Educated: 1995–2000*, Census 2000 Special Reports.

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Chapter 4

Economic Freedom and New Federal Policy Initiatives

by Noel D. Campbell, Alex Fayman, and Tammy Rogers

Introduction

The index published in *Economic Freedom of North America* (EFNA) has withstood the test of time and, since its inception, has been used effectively by researchers to shed light on many economic issues. The response of the US federal government to the on-going recession appears (at the time of this writing, Spring 2010) to involve increasing the government's consumption expenditures, subsidies, and transfer payments; expanding governmental employment; raising minimum wages; and promoting unionization. Furthermore, even the proponents of the federal government's approach concede that the newly-expanded government cannot fund itself indefinitely via debt (Schmidt, 2009). However, reducing deficits and ultimately—perhaps—reducing debt will almost certainly entail higher taxes, especially as many of those who say the federal deficits are unsustainable are also the architects of the increase in federal spending. Government spending, taxation, government employment, and labor regulation, including unionization, are precisely the elements of which the EFNA index is composed. It seems that the current economic and political environment increases the focus on, and the pertinence of, this index.

The new administration of Barack Obama and the new Congress have worked aggressively to implement their largely common agendas. Starting with the American Recovery and Reinvestment Act, the stimulus bill, (much of which will not come on-line until well into 2010), Congress acted to entrain the Employee Free Choice Act (the “card-check bill”), the American Clean Energy and Security Act (the “cap & trade bill”), and the newly passed Patient Protection and Affordable Care Act (PPACA) (the “health care bill”), among others. With the exception of the stimulus bill and the PPACA, these bills remain in the midst of the legislative process. As of this writing, these bills, and even the ideas that lie behind them, are still very

fluid. Their final form and even their likelihood of passage, separately or jointly, are unknown. Even if the bills are not passed in the immediate future, the ideas behind them will remain compelling for some and thus the concepts will remain on the legislative agenda and may well re-emerge in the future.

The EFNA index and research

Like the conceptually related index published in *Economic Freedom of the World* (EFW) before it, the EFNA index has proven itself to be a powerful and versatile research tool. Researchers have embraced the EFNA index and many continue active research agendas prominently featuring it. This is for two reasons. First, the EFNA index is a powerful and useful summary of the institutional conditions in the states and provinces of North America, and allows researchers keener insight into a wide—and expanding—range of research questions. Second, the EFNA has been the basis of consistently persuasive arguments that champion economic freedom as an under-used solution to economic and social problems.

The original intention of the EFW index was to provide a measurement of economic freedom to test Milton Friedman's (1962) assertion that economic freedom significantly improves human wealth and well-being. Similarly, the EFNA index was first used to extend Friedman's hypothesis to subnational governmental units. Karabegović et al. (2003) answered Friedman's question in the affirmative: states and provinces with higher levels of economic freedom or faster increases in economic freedom—as measured by the EFNA index—enjoy higher levels of income and faster rates of income growth, respectively. This result has become what we characterize as the first stylized fact of economic freedom research. Economically free polities are wealthier polities.

Since then, researchers have applied the EFNA index to a wide variety of research questions. Filtered through a wide variety of approaches, a few general results emerge. Generally, institutions matter: the government policies and activities that lead to more economic freedom positively affect income, entrepreneurship, population growth, employment, and other social and economic outcomes.

The Federal Response to the Financial Crisis

In times of economic crisis, federal (as well as state and local) elected officials endure profound public pressure to “do something.” Concrete action—stimulus packages and the like—is often the easiest path for politicians. Accordingly, economic crises predictably result in a raft of governmental policy changes. Unfortunately, many of those policy changes and new policy interventions will be revealed as having been ill-timed, improperly sized, rife with unintended consequences, and injurious to economic freedom (Rosenberg, 2009; Linck, Netter, & Yang, 2009; Jarrell, Welker, Silsbee, & Tucker, 2008). While attempting to better peoples' condition, the federal government often reduces economic freedom, which damages peoples' well-being.

The world—and the United States in particular—is in the midst of (or may have only recently emerged from) such an economic crisis. Apportioning blame for the financial crisis and subsequent recession continues in earnest. One could make a strong argument that the roots of the recent financial crisis lay in the fiscal policy of the previous Congresses and administrations. The previous decade is marked by extravagant federal expenditures, moral hazard in mortgage markets, and the expansion of federal control in markets such as prescription medication and airport security. If current fiscal policy promises to expand federal power and diminish economic freedom, it differs from the policies of previous legislatures and presidents only in degree.

Current, or proposed, fiscal policy promises to expand federal power and diminish economic freedom. As discussed earlier, trying to predict whether, which, and in what final forms these bills will become law is very speculative. Because of this, we keep our discussion very general and abstract. Our analysis is based on policies that have been considered in the past.

Reducing carbon emissions with cap-and-trade schemes

As our first example, consider the American Clean Energy and Security Act, commonly referred to as “cap & trade.” All cap-and-trade schemes seek to limit the production of carbon emissions using some specific form of this general idea. A government (or its agent) establishes a maximum amount of allowable carbon emissions per time period, by industry, geographical area, per capita, and so on—the “cap.” The government issues to firms vouchers that allow the emissions. The government creates or allows firms to create markets in which these vouchers are traded. Those firms that can cheaply reduce their carbon emissions below their allotted amounts would then sell their excess vouchers to those firms that cannot easily reduce their emissions—the “trade.” As the maximum allowable amount of emissions would be less than the current, non-regulated amount, net emissions would decrease. Over time, the government agency would lower the cap.

Cap-and-trade schemes should be more efficient at reducing emissions than traditional “command” regulations. However, there can be no doubt that an economy-wide cap-and-trade system is analytically equivalent to a massive, new federal tax, very similar to a value-added tax. Cap-and-trade represents a significant further intrusion of the federal government into the US economy, and would be highly detrimental to economic freedom.

Starting with the assumption that the current level of carbon emissions is the result of profit-maximizing behavior by competitive producers, today’s emissions are the result of producing the market quantity of products at the lowest possible cost. To achieve the goal of reducing emissions, the “cap” must be set below the current level of emissions. To comply with the “cap,” firms will alter their technology, or scale of operations, or location of production, or any combination of these. If these changes would reduce costs, presumably competitive firms would have already made them. We must conclude, then, that these changes will increase firms’ production costs. Setting aside any potential social benefits from reducing emissions, cap

and trade will affect firms like a tax on the value added by each firm in a production chain. A broad-based cap-and-trade scheme will affect every firm in the value chain between raw resources and final consumer. The revenue generated by the “trade” is, in actuality, an efficient re-distribution of the direct burden of this tax. Given that demand is typically more inelastic than supply, a majority of these “taxes” will be passed onto the consumer.

The proponents on cap and trade have argued that the scheme will generate new jobs. However, this is an example of the “broken window fallacy.” These new jobs would be created as some firms expand in the new regulatory environment but this expansion is concurrent with other firms contracting—shedding jobs—because of the new regulation. Furthermore, many firms will simply move their operations overseas, out-sourcing jobs into countries with more lenient regulations. These job losses are unlikely to be offset by new job growth.

One may ask, what about those benefits from a cleaner environment that we set aside earlier? For the sake of argument, we assume that the current level of emissions is socially too high, generating a negative externality on the relevant population, and that cap and trade is the relevant regulatory solution. To achieve overall efficiency, the government must select precisely the efficient amount of emissions as the “cap.” There is an abundance of research that says that it would be practically impossible to select the efficient cap, even for selfless altruists, much less for a government composed of rationally self-interested individuals. Furthermore, would the benefit from reducing the externality be larger than the cost of the regulatory solution? It is far from certain that a cap-and-trade scheme would pass a cost-benefit test. Neither is it certain that cap and trade would reduce global levels of emissions, as industries emitting a great deal of pollution would relocate to other locales offering less stringent regulation. Indeed, the regulation in other countries may be less stringent than current US environmental regulations. In this case, it is possible that cap and trade would impose massive costs on the US economy while leading to a net *increase* in global carbon emissions.

Certifying unions under the card-check bill

As introduced in March 2009, the Employee Free Choice Act, the “card check bill,” would require the National Labor Relations Board to certify a union as the bargaining representative—without ordering an election—if a majority of employees signed cards—the “checked cards”—indicating their desire to become unionized. Currently, employers retain the ability to select either the card-check process or hold a secret-ballot election. The card-check bill would give employees the ability to choose a secret-ballot election only in cases where less than a majority of employees has chosen to unionize through card-check. The bill establishes a process that requires companies with workers who choose to unionize to provide a contract. Under the card-check bill, a union would be able to demand that a company begin bargaining within ten days of the union’s certification as the exclusive bargaining representative for employees via a majority sign-up (card check). If no agreement is reached after 90 days, either side may request federal mediation. If, after 30 days of mediation,

there is still no agreement, then binding arbitration would ensure that employees have a contract. Furthermore, the card-check bill allows treble damages if employers unlawfully terminate employees for unionization activities and impose penalties violating workers' rights during union organization and bargaining, as well as injunctive relief.

As Karabegović and her co-authors stated,

[w]orkers should have the right to form and join unions, or not to do so, as they choose. However, labor-market laws and regulations 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 for public voting), and may make decertification difficult even when a majority of workers would favor it. (Karabegović et al., 2004: 9)

Research (e.g., Riddell, 2004, 2001; Taras and Ponak, 2001) has shown that secret-ballot voting reduced both certification attempts and unionization success rates and that more worker choice with respect to union membership and dues payments results in lower unionization rates.

Thus, passage of the card-check bill would seriously diminish economic freedom throughout the United States by effectively reducing workers' choice and undemocratically lead to higher rates of unionization throughout the economy. The greater unionization of the US workforce would result in higher costs for business, likely leading to slower economic growth and higher prices throughout the economy. Furthermore, American businesses have demonstrated great sensitivity to labor costs in their location decisions. The massive loss of economic freedom and increase in costs attendant upon the card-check bill would drive many businesses to out-source jobs to the international labor market.

Providing medical insurance with the health-care bill

As a final example, consider the Patient Protection and Affordable Care Act (PPACA). As of March 2010, the PPACA has passed and been signed into law along with the Reconciliation Act of 2010. This legislation includes a federal mandate for health-insurance exchanges; a legal requirement that all citizens purchase insurance or face financial penalties or other punishments; and provisions that will prevent insurers from denying coverage on the basis of pre-existing conditions or charging risk-adjusted individual premiums. Funding will come from additional taxes on health-care providers and pharmaceutical companies, taxes on insurance companies, taxes on consumers, and reductions in Medicare or Medicaid benefits.

The provision of health care in the United States is decidedly not a free market, wherein prices reflect production costs and consumers' willingness to pay. US health-care provision is an ungainly and uncomfortable mixture of public and private elements. However, equally certain, the health-care bill represents a nearly unprecedented reduction in economic freedom. The new legislation will greatly increase government spending, particularly in the form of transfers and subsidies.

Rhetoric notwithstanding, this law requires both a drastic decrease in service provided and a large increase in taxation, which would lead to a large marginal increase in the tax burden on the economy. Administering the federal government's greatly expanded role in health care will require a large expansion in government employees. Over time, it is likely that these government employees would become unionized to a much greater extent than similar private-sector employees. Within the framework of the EFNA index, PPACA seems almost perfectly designed to decrease economic freedom within the United States.

Estimates of the Federal Response

Although these three new or potential laws are very fluid and their effects resist accurate prediction, many people in the government and outside the government have conducted economic analyses on existing versions of these bills. We now consider some of these analyses and re-interpret them in light of their possible impacts on the EFNA index.

On June 5, 2009, the Congressional Budget Office (CBO) released its formal cost estimate of the cap-and-trade bill (CBO, 2009, June 5). The CBO estimates that over the period from 2010 to 2019, cap and trade will generate \$845.6 billion in federal revenues, resulting largely from firms purchasing emissions permits from the federal government. That is, the CBO estimates that an additional \$845.6 billion will be removed from the productive economy through a form of indirect taxation. Although "emissions permits payments" is not currently included in EFNA index's component 2C, "Indirect Tax Revenue as a Percentage of GDP," these payments are clearly a form of indirect taxation that would be included in future formulations of the index.

Furthermore, the CBO estimates that the federal government will directly spend an additional \$821.2 billion, through a combination of new subsidies and new government consumption. These expenditures, too, will have a direct impact on the EFNA index, via components 1A, "General Consumption Expenditures by Government as a Percentage of GDP," and 1B, "Transfers and Subsidies as a Percentage of GDP." Using the CBO's two figures, and re-classifying the "revenues" as indirect taxation, we estimate the cost of cap and trade to be nearly \$1.7 trillion over ten years.

The Canadian experience with changes in union card-check rules provides an excellent basis for predicting the likely impact in the United States, should the card-check bill pass. Prior to 1976, Canada employed a process for certifying unions similar to that envisioned in the card-check act. After 1976, Canada began allowing its provinces to choose between card-check procedures and secret ballots, like the current US system. Currently half of Canada's provinces and the majority of its workers become union-certified under a secret-ballot process. Half of Canada's provinces and a minority of its workers become union-certified under a card-check process. Johnson (2004) presents simulations, based on Canadian experience, that

examine how changes in union-recognition procedures in Canada have affected the difference between union density in Canada and the United States. Johnson's simulations estimate what Canadian union density would have been if mandatory votes or if card check had been in effect in all jurisdictions from 1980 to 1998. These simulations suggest that roughly 20% of the difference between union density in the United States and union density in Canada is attributable to the difference in union certification processes (that is, over the long term, the differences in recognition procedures between Canada and the United States accounted for at least three to five percentage points of the gap in overall union density between the United States and Canada in 1998). In 2007, the difference between the nations' unionization rates was around 18.2%, of which 20% is 3.64 percentage points. However, Johnson (2009) states: "Differences in labour law governing mandatory votes and unfair labour practices in Canada, compared to the changes proposed in the [card-check bill], mean that these results, based on Canadian experience, likely underestimate the effect of a change from mandatory votes to card check on union density in the US if the [card-check bill] is passed" (Johnson 2009: 18–19). Johnson's 2009 statement notwithstanding, if card-check certification has an impact in the United States similar to that in Canada, the US union density would rise from 12.1% to 15.74% over the long term, solely on the basis of the law and *not* on the basis of people's preferences for unionization. Changes in the unionization rate would have a direct impact upon the EFNA index, as component 3C is "Union Density."

On March 20, 2010 the CBO's director offered a revised analysis of the PPACA and the Reconciliation Act of 2010. Director Elmendorf summarized the act by writing that the bill

would, among other things, establish a mandate for most residents of the United States to obtain health insurance; set up insurance exchanges through which certain individuals and families could receive federal subsidies to substantially reduce the cost of purchasing that coverage; significantly expand eligibility for Medicaid; substantially reduce the growth of Medicare's payment rates for most services (relative to the growth rates projected under current law); impose an excise tax on insurance plans with relatively high premiums; and make various other changes to the federal tax code, Medicare, Medicaid, and other programs. The reconciliation proposal includes provisions related to health care and revenues, many of which would amend H.R. 3590. (The changes with the largest budgetary effects are described below.) The reconciliation proposal also includes amendments to the Higher Education Act of 1965, which authorizes most federal programs involving postsecondary education. (Elmendorf, 2010, March 20: 2)

The second table (following p. 17) in Director Elmendorf's letter offers an analysis of the bill. This table states that the gross cost of the act including tax credits will be \$1.072 trillion between 2010 and 2019. The CBO's estimates are designed to reflect a bill's impact on the federal budget. The net impact of the act on the federal budget

is estimated to be a decrease in the budget deficit over this same time period of \$124 billion from the imposition of new taxes and fees amounting to \$669 billion and reducing Medicare and other entitlement spending by an additional \$525 billion. From a perspective outside the CBO, we would classify the reduction in the deficit as coming from taxation, indirect taxation, and reductions in transfer payments. These funds originate from penalties paid by uninsured individuals and by employers and reductions in Medicare and Medicaid spending (transfer payments). Overall, for the freedom index measures, we would assign \$37 billion to component 1A, General Consumption Expenditures, and \$509 billion to component 1B, Transfers and Subsidies. In the tax area, we would assign \$345 billion to component 2A, Total Tax Revenue, and \$324 billion to component 2C, Indirect Tax Revenue. Thus, we estimate the cost of the PPACA to be \$1.215 trillion between 2010 and 2019. (Note: These estimates are based on the CBO measures directly and do not include information about the education elements of the Reconciliation Act.)

These amounts should be considered a very conservative estimate of the final impact of the legislation. Douglas Holtz-Eakin, who was the director of the Congressional Budget Office from 2003 to 2005, argues that the CBO estimates contain “unrealistic annual Medicare savings (\$463 billion) and the stolen annual revenues from Social Security and long-term care insurance (\$123 billion).” He also points out that, “[t]o operate the new programs over the first 10 years, future Congresses would need to vote for \$114 billion in additional annual spending” (Holtz-Eakin 2010, March 20: 1). The current director of the CBO writes in his letter to Pelosi that:

CBO and JCT previously determined that H.R. 3590, as passed by the Senate, would impose several intergovernmental and private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA). CBO and JCT estimated that the total costs of those mandates to state, local, and tribal governments and the private sector would greatly exceed the annual thresholds established in UMRA (\$70 million and \$141 million, respectively, in 2010, adjusted annually for inflation) in each of the first five years that the mandates would be in effect. If both the reconciliation proposal and H.R. 3590 were enacted, that combination would impose similar mandates on both intergovernmental and private-sector entities with costs exceeding the thresholds established in UMRA. The incremental effect of enacting the reconciliation proposal—assuming that H.R. 3590 had already been enacted—would be to increase the costs of the mandates on private-sector entities. That increase in costs would exceed the annual UMRA threshold as well. (Elmendorf, 2010, March 20: 15–16)

Obviously, the total impact of the bill on economic freedom will be even greater than our initial estimates suggest because of this unfunded mandate that will require additional spending and taxes by states as well. However, no analysis at that state level is available yet.

The Implications for Economic Freedom and Income

As tentative as these projections may be, we are now in a position to use the estimates and the EFNA index to discuss the impact these bills may have upon the US economy by reducing economic freedom. The goal is modest: to provide a rough estimate of these policies' impact on economic freedom and the consequences.

We begin by recalculating the EFNA index as if all three bills had passed and the preceding estimates were correct. To construct the recalculated EFNA index we must make some simplifying assumptions. First, we assume that multi-year costs are incurred uniformly across the time period: that, for example, the health-care act's cost of \$1.22 trillion would be incurred at a rate of \$122 billion per year. Second, we assume that all changes within states are proportional to each state's population; that is, we use state population to weight the policies' impacts on economic freedom. Third, we assume that the impact of the card-check bill will be to increase each state's union density by 3.74 percentage points. Fourth, we evenly distribute the \$821 billion new expenditure under cap and trade across components 1A and 1B. Thus, components 1C, 2B, 2D, 3A, and 3B will be unchanged in the recalculation.

The strongest result of research into economic freedom is that freer societies are wealthier societies, so we focus on the relationship between income and the changes in economic freedom that would result from these fiscal policies. We used the EFNA index for 2007 (see chapters 1 and 2) as our starting point. We calculated the long-term relationship between economic freedom and real per-capita gross state product using the estimate published in this report on levels of GDP and economic freedom (table 1.3/4.1). We calculate the marginal effect of the change in economic freedom by multiplying the change in the EFNA index for each state by the coefficient from this regression.

The 2007 EFNA index had a mean value of 6.8 and a range of 5.4 (West Virginia) to 8.3 (Delaware) (see figure 1.1, p. 2; col. 1, table 2.1, p. 29). Predictably, the recalculated index has a lower mean value, 6.0, and ranges from 4.2 (Mississippi) to 7.7 (Delaware). While estimates can be made about the overall reduction across the United States, it is not possible to make good estimates for the states. The impact there will depend on the structure of new taxes and the economic structure of each individual state and, thus, how the burden of the taxes will fall; similarly, increases in spending will depend both on each state's economic structure, unpredictable political decisions on spending, the political clout of individual politicians, and even which seats are open for upcoming elections. However, for illustrative purposes only, based on distribution related to GDP, the changes range from a drop of 1.36 (for Mississippi) to 0.53 points (for Ohio). Using 2007 as our reference, this is equivalent, for example, to today's California, Florida, Tennessee, and Texas resembling today's New Mexico, Vermont, New Jersey, and Indiana.

Using the estimates from table 3.1/4.1, a one-point decline in a state's EFNA value relative to the national mean value would lead to a \$5,335 decline in real GDP per capita, other things being equal. Therefore, the long-run mean decline in real per-capita income due to diminished economic freedom (that is, should these policies remain in effect and unchanged for a long term) is approximately \$4,000 per person per year.

Table 4.1: Level of Economic Freedom and GDP per Capita

Regressions at All-Government Level (ALLG)					Regressions at Subnational Level (SUBN)				
Dependent Variable: Real GDP per Capita (1981–2006)					Dependent Variable: Real GDP per Capita (1981–2006)				
Method: Pooled Least Squares					Method: Pooled Least Squares				
Canada									
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.
HG	−29.20	70.31	−0.42	0.68	HG	−17.25	73.29	−0.24	0.81
ALLG	4185.72	578.12	7.24	0.00	SUBN	3705.98	644.07	5.82	0.00
Adjusted R ² : 0.98					Adjusted R ² : 0.98				
United States									
Variable	Coefficient	Std. Error	t-Statistic	Prob.	Variable	Coefficient	Std. Error	t-Statistic	Prob.
HG	2.93	32.99	0.09	0.93	HG	−12.10	30.66	−0.39	0.69
ALLG	5334.54	819.64	6.51	0.00	SUBN	4847.55	881.51	5.50	0.00
Adjusted R ² : 0.98					Adjusted R ² : 0.98				

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 2005; ALLG is an economic freedom index at an all government level from 1981 to 2005; SUBN is an economic freedom index at a subnational level from 1981 to 2005.

Note: Table 4.1 reproduces table 1.3, p. 20.

Final Remarks

It is worth emphasizing that these losses are in addition to the direct burden of these programs. Specifically, we have estimated the *additional* income loss—in inflation-adjusted dollars—from the proposed changes in fiscal policy accruing to the loss of economic freedom, rather than the direct burden of these proposed programs. In short, our estimates *add* to the projected cost of these fiscal responses. These estimates almost certainly underestimate the loss of economic freedom and, accordingly, of income. For example, for tractability, we did not include all of the proposed changes in the various bills in our recalculated index of economic freedom. For example, we did not consider in our analysis the income-tax surcharge included in the health-care bill.

Also consider Martin Feldstein’s (1997) estimate that the marginal excess burden of one dollar of federal revenue exceeds one dollar: that is, in order to raise an extra dollar of revenue (the direct burden of taxation), the federal government imposes a second dollar of cost on the economy (the indirect burden of taxation). Neither the CBO’s figures, nor the EFNA index, nor our calculations, explicitly or implicitly consider the excess burden of taxation. The true costs to the economy of federal officials “doing something” to “fix the economy” are likely to be far higher than we think.

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Chapter 5

Economic Freedom in Mexico 2010

by Nathan J. Ashby, Deborah Martinez, and Avilia Bueno¹

Introduction

In recent years significant effort has been made 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. The long-term goal is to construct an integrated index for the United States, Canada, and Mexico. Unfortunately, such an informative index is not immediately feasible because we have not yet been able to gather the necessary data.

The most significant concern is how to measure heterogeneity within the three countries with respect to property rights and legal structure. 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. There are national indexes constructed for the index published in *Economic Freedom of the World* (Gwartney and Lawson, 2009) that could be included for the subnational jurisdictions corresponding to each country. This would capture cross-country variation but would fail to pickup variation within countries. The United States and Canada currently do not have a measure for this area at the state or provincial level. This does not appear to be a significant problem for constructing the index for these countries since there is very little heterogeneity when it comes to property rights and legal structure across US states and Canadian provinces.

[1] We acknowledge the University Research Institute at the University of Texas at El Paso for providing the grant for the summer of 2009. Fred McMahon and James Gwartney have provided us with valuable comments. Finally, we thank the two anonymous reviewers for their helpful suggestions.

Mexico, on the other hand, has significant heterogeneity across states. 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 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 US and Canada, at least at the state level. Much of the data available are not trustworthy in that they demonstrate inconsistencies throughout the years.² 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.³ 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 index⁴ 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 2007 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 two variables that were previously not included, union density and government employment. 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. 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. Admittedly, only five years are included but this may be sufficient for empirical analysis in many cases. As more years are made available in the future, better empirical analyses will become possible.

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- [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) was included in the 2008 report, *Economic Freedom of North America* (Karabegović and McMahon, 2008; Ashby, 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 is displayed in figure 5.1. This report improves upon the previous index in two important ways. First, two additional components are included: 3B, Government employment as a percentage of total employment and 3C, Union density. The component for union density is constructed as union density is constructed in the EFNA index, by controlling for the size of the government and manufacturing sectors.⁵ 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 2007. Distrito Federal is included in the current construction. However, one should consider it 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 (see footnote 2), the 2005 values are used for 2003 and 2004. The data for 4A, 4B, and 4C are 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 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, and we use the 2006 value for 2007. Also, federal tax data were not available in 2007. These measures were estimated using 2007 data for state and local taxes and 2006 data for federal taxes.⁶

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- [5] 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, the size of the manufacturing and government sectors were regressed on the actual union density by state. Manufacturing was found to be insignificant so it was dropped from the regression. The union density score 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.
- [6] More specifically, the formula for calculating 2A, 2C, and 2D in state i was as follows: $[(\text{State and Local Taxes}_{2007,i}) / (\text{GDP}_{2007,i}) + (\text{Federal Taxes}_{2006,i}) / (\text{GDP}_{2006,i})] \times 100$.

Figure 5.1 Areas and Components Used in the Index of Economic Freedom in the Mexican States

Area 1 Size of Government

- 1A Government consumption at all levels of government as a percentage of Gross State Product (INEGI, 2009a)*
- 1B Government transfers and subsidies at all levels of government as a percentage of Gross State Product (INEGI, 2009a, 2010.)*

Area 2 Takings and Discriminatory Taxation

- 2A Total Tax revenues at all levels of government as a percentage of Gross State Product (INEGI, 2009a; CEFP, 2009)*
- 2B Top marginal tax rate and the threshold at which it applies (Gwartney and Lawson, 2009)*
- 2C Total indirect taxes at all levels of government as a percentage of Gross State Product (INEGI, 2009a, 2010; CEFP, 2009)*
- 2D Total value-added taxes as a percentage of Gross State Product (CEFP, 2009)*

Area 3 Labor Market Freedom

- 3A Population-weighted daily minimum wage salary as a percentage of daily average wage in a given state (Conasami, various years; Ashby, 2008)*
- 3B Government employment as a percentage of total employment (INEGI, 2009b)*
- 3C Union Density (INEGI, 2009b)*

Area 4 Legal System and Property Rights

- 4A Impartiality of Judges (IMCO, 2006, 2008)*
- 4B Institutional quality of judicial system (IMCO, 2006, 2008)*
- 4C Trustworthiness and agility of public property registry (IMCO, 2006, 2008)*

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.

The rankings for economic freedom in 2007 for the 32 Mexican states and federal entities are displayed in figure 5.2. Guanajuato ranked the highest followed by Nuevo León, and Chihuahua. The states with the least economic freedom were Colima, Chiapas, and Tlaxcala. The overall scores and rankings between 2003 and 2007 as well as the component scores and rankings in 2007 are displayed in table 5.1, table 5.2, and table 5.3. Guanajuato ranked well due to its relatively low government consumption and government employment and stronger judicial institutions. Lower government consumption, government employment and transfers and subsidies as well as less restrictive minimum wage helped Nuevo León to rank second. Colima scored poorly mostly because of the significant amount of the tax burden that it bears relative to the rest of the country and Chiapas's penultimate position was due to the large amount of government expenditures and a restrictive minimum-wage policy. Distrito Federal ranked 15th in 2007 due to its high tax burden and government employment.

Figure 5.2: Summary of Economic Freedom Ratings for Mexico, 2007

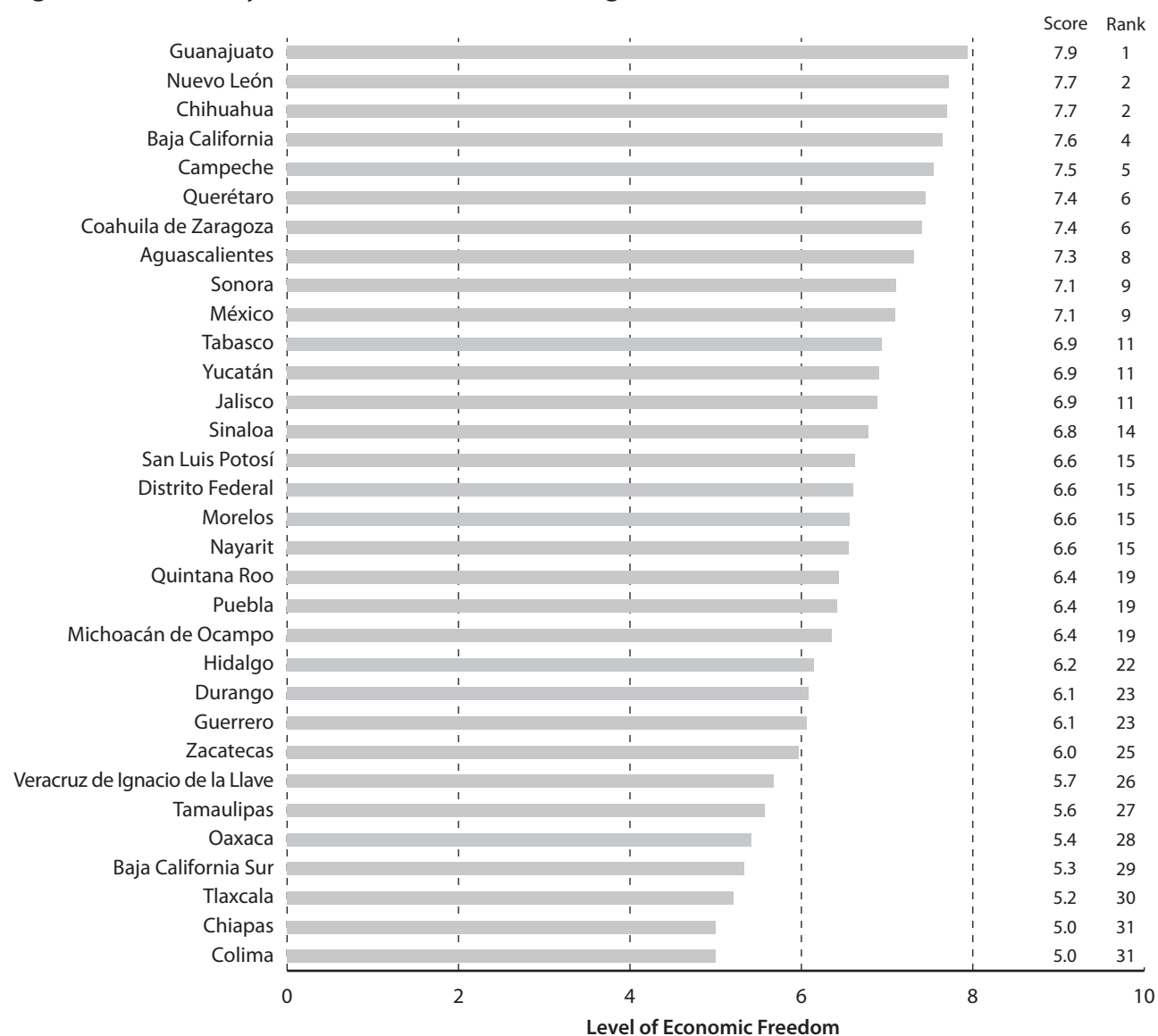


Table 5.1: Economic Freedom in the Mexican States, Overall Scores and Ranks, 2003–2007

	Score					Rank				
	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Aguascalientes	7.1	7.2	7.3	7.3	7.3	6	6	6	7	8
Baja California	7.6	7.7	7.8	7.7	7.6	2	2	1	2	4
Baja California Sur	5.9	5.8	5.8	5.5	5.3	24	26	28	29	29
Campeche	7.7	7.8	7.8	7.7	7.5	1	1	1	2	5
Chiapas	5.3	5.3	5.3	5.3	5.0	29	30	31	30	31
Chihuahua	7.4	7.6	7.6	7.6	7.7	3	4	4	5	2
Coahuila	7.1	7.2	7.3	7.4	7.4	6	6	6	6	6
Colima	5.1	5.1	5.2	5.0	5.0	31	32	32	32	31
Distrito Federal	5.8	6.2	6.4	6.5	6.6	25	21	20	18	15
Durango	6.0	6.2	6.3	6.1	6.1	23	21	22	23	23
Guanajuato	7.4	7.7	7.8	8.0	7.9	3	2	1	1	1
Guerrero	6.1	6.2	6.2	5.8	6.1	21	21	23	25	23
Hidalgo	6.2	6.5	6.4	6.3	6.2	19	15	20	22	22
Jalisco	6.9	6.9	6.9	6.8	6.9	8	10	10	12	11
México	6.8	7.0	7.1	7.2	7.1	9	9	9	9	9
Michoacán	6.3	6.5	6.5	6.4	6.4	17	15	17	21	19
Morelos	6.8	6.8	6.7	6.6	6.6	9	12	14	16	15
Nayarit	5.2	5.7	6.2	6.7	6.6	30	28	23	14	15
Nuevo León	7.2	7.4	7.6	7.7	7.7	5	5	4	2	2
Oaxaca	5.8	5.9	6.0	5.7	5.4	25	25	26	26	28
Puebla	6.5	6.5	6.6	6.5	6.4	13	15	16	18	19
Querétaro	6.8	7.1	7.3	7.3	7.4	9	8	6	7	6
Quintana Roo	6.5	6.4	6.5	6.5	6.4	13	19	17	18	19
San Luis Potosí	6.2	6.4	6.5	6.6	6.6	19	19	17	16	15
Sinaloa	6.4	6.6	6.7	6.7	6.8	16	14	14	14	14
Sonora	6.3	6.5	6.8	7.0	7.1	17	15	12	10	9
Tabasco	6.5	6.7	6.8	6.9	6.9	13	13	12	11	11
Tamaulipas	5.7	5.8	5.9	5.7	5.6	27	26	27	26	27
Tlaxcala	5.1	5.3	5.4	5.3	5.2	31	30	30	30	30
Veracruz	5.6	5.6	5.7	5.6	5.7	28	29	29	28	26
Yucatán	6.8	6.9	6.9	6.8	6.9	9	10	10	12	11
Zacatecas	6.1	6.2	6.1	6.0	6.0	21	21	25	24	25

Table 5.2: Economic Freedom in the Mexican States, Scores for Components, 2007

	1A	1B	2A	2B	2C	2D	3A	3B	3C	4A	4B	4C
Aguascalientes	6.5	6.7	8.7	9.0	9.4	8.9	6.4	4.3	7.9	8.6	7.9	6.0
Baja California	7.1	7.8	8.3	9.0	9.0	8.8	7.3	7.8	8.3	7.2	6.2	6.4
Baja California Sur	4.0	5.1	8.2	9.0	8.5	9.4	6.5	1.1	5.5	3.7	0.8	6.4
Campeche	9.9	10.0	10.0	9.0	10.0	9.8	8.7	0.0	7.6	5.9	5.8	3.7
Chiapas	2.2	0.0	9.6	9.0	9.6	9.8	3.5	6.8	7.5	5.8	4.0	0.7
Chihuahua	7.1	7.3	8.6	9.0	9.1	9.1	6.3	8.0	7.7	6.8	5.0	10.0
Coahuila	6.7	9.2	9.0	9.0	9.5	9.4	6.8	7.0	4.6	5.8	6.1	7.0
Colima	6.2	5.0	0.0	9.0	0.5	0.0	5.9	1.9	6.3	9.2	7.5	5.2
Distrito Federal	8.6	8.9	3.7	9.0	9.5	6.1	10.0	2.6	6.6	6.3	4.9	1.3
Durango	6.1	6.1	9.8	9.0	9.6	9.9	3.5	3.0	7.9	4.7	6.6	0.4
Guanajuato	7.2	7.3	9.3	9.0	9.5	9.7	5.6	9.4	7.1	9.7	8.1	5.3
Guerrero	3.7	3.6	9.5	9.0	9.5	9.6	5.1	5.1	8.7	4.1	4.1	6.4
Hidalgo	5.8	4.6	9.5	9.0	9.6	9.7	5.6	5.0	6.7	5.3	5.0	2.3
Jalisco	6.1	8.6	8.7	9.0	9.0	9.4	6.7	8.3	6.4	2.6	5.5	4.3
México	4.8	6.8	8.6	9.0	9.1	9.3	7.6	6.7	6.1	6.9	8.4	5.0
Michoacán	2.0	8.1	9.4	9.0	9.5	9.4	5.7	6.8	6.5	5.4	5.7	3.0
Morelos	5.6	5.7	9.0	9.0	9.4	9.5	7.5	5.9	6.4	5.3	3.9	5.2
Nayarit	4.0	3.1	9.3	9.0	9.3	9.7	4.4	3.1	5.6	9.8	10.0	7.2
Nuevo León	8.8	8.6	7.6	9.0	8.4	8.8	8.8	7.9	3.8	7.9	8.2	4.6
Oaxaca	0.8	2.1	9.4	9.0	9.2	9.7	4.9	6.5	7.3	6.2	6.2	1.5
Puebla	4.0	8.1	9.4	9.0	9.5	9.8	6.9	9.7	7.3	0.8	0.5	5.2
Querétaro	6.8	7.5	8.9	9.0	9.0	9.8	8.9	7.9	6.1	8.2	4.0	5.3
Quintana Roo	6.4	6.8	8.7	9.0	8.8	9.4	5.5	4.1	5.6	4.5	9.1	1.6
San Luis Potosí	6.7	5.9	9.6	9.0	9.6	10.0	6.2	6.9	4.5	7.4	6.1	0.9
Sinaloa	6.2	6.5	9.0	9.0	9.3	9.6	4.0	6.4	6.8	6.4	6.4	4.9
Sonora	7.1	6.8	9.0	9.0	9.2	9.3	5.0	6.1	5.8	7.5	7.8	4.7
Tabasco	5.8	7.9	9.8	9.0	9.8	9.7	6.0	0.3	7.0	7.9	7.4	5.3
Tamaulipas	6.3	7.5	4.9	9.0	8.4	3.3	6.5	4.7	0.7	5.0	6.1	4.1
Tlaxcala	4.8	2.8	9.7	9.0	9.7	9.8	5.4	5.9	6.3	1.9	2.7	0.1
Veracruz	3.8	7.9	8.1	9.0	9.2	8.2	5.7	5.5	6.4	1.7	0.9	4.7
Yucatán	5.4	7.6	9.2	9.0	9.4	9.5	3.9	6.6	8.3	6.4	5.1	5.1
Zacatecas	4.3	1.9	8.9	9.0	8.2	9.6	4.8	3.3	6.6	8.9	4.4	7.7

Table 5.3: Economic Freedom in the Mexican States, Ranks for Components, 2007

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

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.

There is a clear discrepancy between rankings in the 2008 report and those in this year's index. 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 and up to 2007 (Instituto Nacional de Estadística, y Geografía [INEGI], 2010). Presumably, 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 4th to first in 2003 can be explained almost solely by the new GDP measure, which in this case results in a much lower government expenditures and tax revenues as a percentage of GDP.

These measures are imperfect for many reasons. First of all, it is difficult to determine what expenditures should be included in transfer and subsidies. Mexican government accounts 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.

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 updated 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 standard of living for the people of Mexico. It is still considered to be the best measure for the size of the economy but, due to significant dependence on revenues of PEMEX, the state-owned oil company, which is transferred across the country, it is not as useful as a measure of income per capita. This results in GDP per capita as high as US\$61,000 per year in a state like Campeche. Since this is not considered to be a credible measure of the well-being of the people of Campeche, we have decided to look at a different measure, average daily wages.

Figure 5.3a and figure 5.3b show a positive relationship between economic freedom and wages across Mexican states by comparing average pesos per day (in 2007 pesos) by economic freedom quintile. The values are averaged over the period from 2003 to 2007. Figure 5.3a includes Distrito Federal, which appears to be an outlier; in figure 5.3b, Distrito Federal is excluded. Again, Distrito Federal's score for economic freedom should be interpreted with caution. In both figures, economic freedom appears to have a positive relationship with wages, although it is admittedly much weaker in the case where Distrito Federal is included.

Figure 5.3a: Relationship between average economic freedom and average real wage in Mexico, 2003–2007

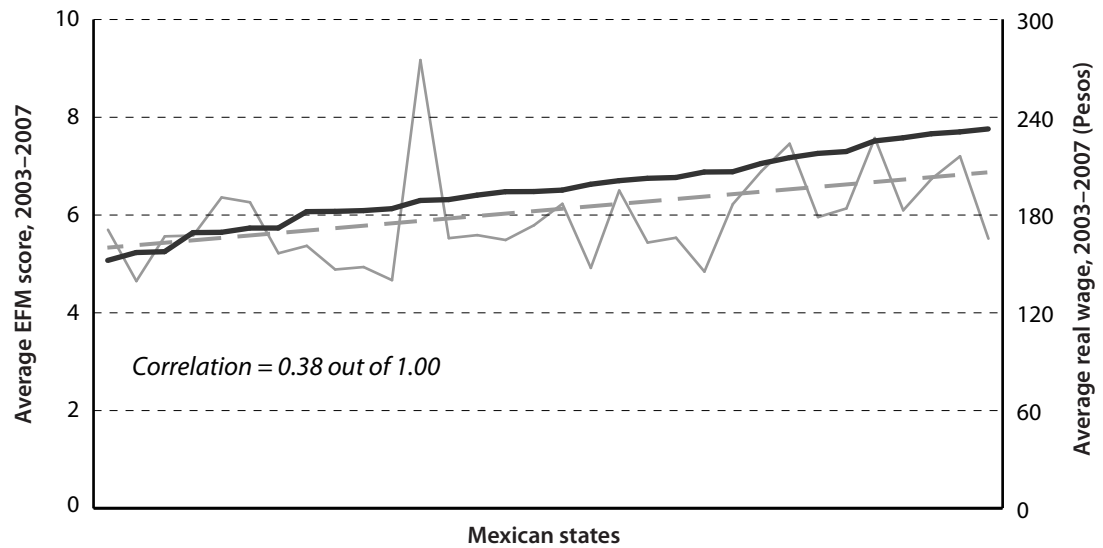


Figure 5.3b: Relationship between average economic freedom and average real wage in Mexico, 2003–2007 (Distrito Federal excluded)

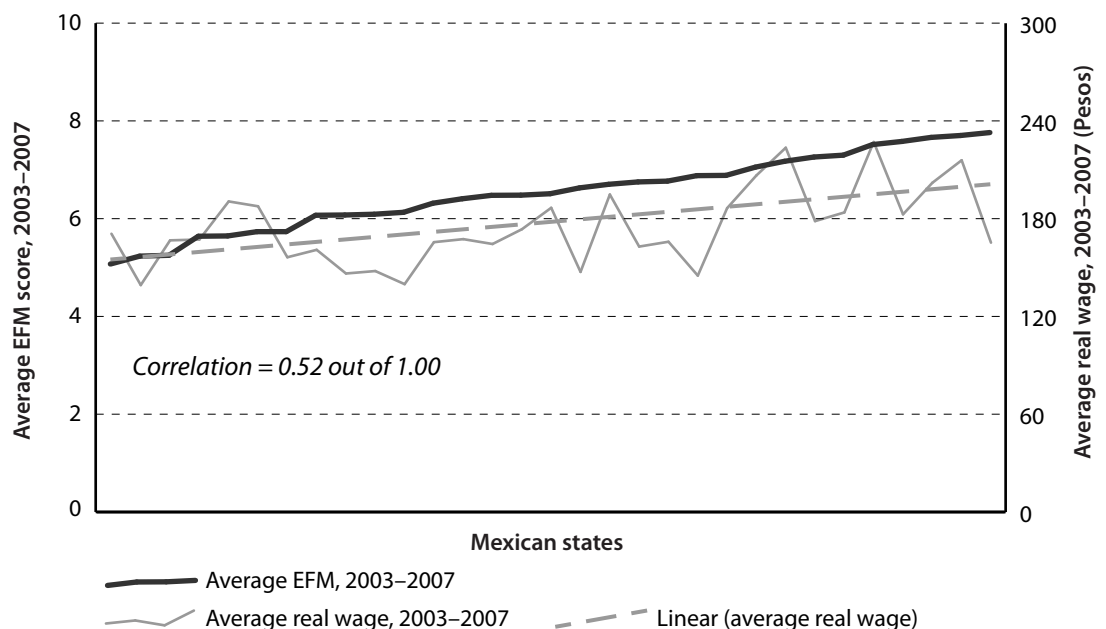
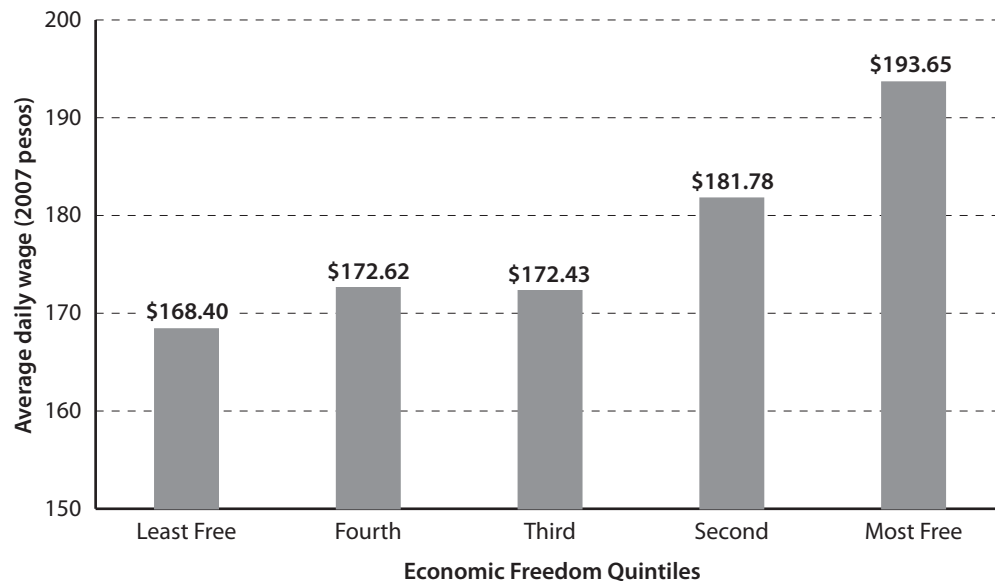


Figure 5.4 demonstrates a positive relationship between the two variables by analyzing average salaries by economic freedom quintile. The states belonging to the highest quintile averaged a salary of \$194 Mexican pesos while those belonging to the bottom quintile averaged only \$168 pesos per day, a difference of 14.99%.

Keep in mind that these graphs are just for illustrative purposes and are 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.

Figure 5.4: Average daily wage (2007 pesos) and average economic freedom of Mexican states, 2003–2007



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 minor 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,⁷ 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.

[7] Component 4C of the current index is one 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 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 (2009) 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 solution 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 occupations based on the relative number of those working in an occupation in each state.⁸

Conclusion

This report has presented the latest version of index of economic freedom in Mexico, for the years 2003 to 2007. 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 shortcomings in the data that are discovered. Some of the components that are introduced in this paper may very well not be included in future construction 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 2007, Guanajuato, Nuevo León, and Chihuahua ranked highest in economic freedom in Mexico while Colima, Chiapas, and Tlaxcala experienced the lowest levels of economic freedom. Although the economic-freedom scores for Mexican states are slightly different in this updated version, the overall correlation between economic freedom and well-being seems to hold as demonstrated in figures 5.3 and 5.4. Individuals in the most free states have higher wages than those in lower quintiles. Admittedly, these figures do not provide evidence of any significant direct relationship between these variables. More rigorous econometric analysis is necessary to determine whether there is an economically significant relationship between economic freedom and income per capita in Mexico.

[8] 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.

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 2005 Canadian dollars by using the Consumer Price Index and then converted into US dollars using the Purchasing Power Parity between Canada and US for each year. US nominal thresholds were converted into real 2005 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 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

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

Top Marginal Tax Rate	Income Threshold Level (US\$2005)		
	Less than \$50,000	\$50,000 to \$100,000	More than \$100,000
27% or less	10.0	10.0	10.0
27% to 30%	9.0	9.5	10.0
30% to 33%	8.0	8.5	9.0
33% to 36%	7.0	7.5	8.0
36% to 39%	6.0	6.5	7.0
39% to 42%	5.0	5.5	6.0
42% to 45%	4.0	4.5	5.0
45% to 48%	3.0	3.5	4.0
48% to 51%	2.0	2.5	3.0
51% to 54%	1.0	1.5	2.0
54% to 57%	0.0	0.5	1.0
57% to 60%	0.0	0.0	0.5
60% or more	0.0	0.0	0.0

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

Top Marginal Tax Rate	Income Threshold Level (US\$2005)		
	Less than \$50,000	\$50,000 to \$100,000	More than \$100,000
1.5% or less	10.0	10.0	10.0
1.5% to 3.0%	9.0	9.5	10.0
3.0% to 4.5%	8.0	8.5	9.0
4.5% to 6.0%	7.0	7.5	8.0
6.0% to 7.5%	6.0	6.5	7.0
7.5% to 9.0%	5.0	5.5	6.0
9.0% to 10.5%	4.0	4.5	5.0
10.5% to 12.0%	3.0	3.5	4.0
12.0% to 13.5%	2.0	2.5	3.0
13.5% to 15.0%	1.0	1.5	2.0
15.0% to 16.5%	0.0	0.5	1.0
16.5% to 18.0%	0.0	0.0	0.5
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%."

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 \$50,000. Let us say the jurisdiction imposes a surcharge for income earners above \$100,000, 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 judgement. 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 sub-national 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: $0.63/0.79 = 0.80$. 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 component 3B: 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 sub-national 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 income-tax 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, $\frac{19}{37}$ 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 were not available at the time the analysis for this publication was being conducted. 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 in 2006 and 2007 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 and 2007. 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.

Appendix B

Explanation of Components and Data Sources

Area 1 Size of Government

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.

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US Department of Commerce, Bureau of Economic Analysis. <<http://www.bea.gov/>> (December, 2009).

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, etc. 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 Economic Accounts, 2009*;

Sources for the United States

Special request from US Census Bureau, Governments Division, Federal Programs Branch (February 2, 2005).

Special request from US Census Bureau, Governments Division, (December 14, 2007).

US Census Bureau (2009). *Annual Survey of State and Local Government Finances and Census of Governments (1981–2006)*. <<http://www.census.gov/main/www/access.html>>.

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, <<http://www.bea.gov/>> (December, 2009).

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 Economic Accounts, 2009*.

Sources for the United States

Special request from US Census Bureau, Governments Division (December 14, 2007).

US Census Bureau (2009). *Annual Survey of State and Local Government Finances and Census of Governments (1981–2006)*, <<http://www.census.gov/main/www/access.html>>.

US Department of Commerce, Bureau of Economic Analysis, <<http://www.bea.gov/>> (December, 2009).

Area 2 Takings and Discriminatory Taxation

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 other various 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 Economic Accounts, 2009*.

Sources for the United States

US Census Bureau (2009). *Annual Survey of State and Local Government Finances and Census of Governments (1981–2006)*, <<http://www.census.gov/main/www/access.html>>.

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Internal Revenue Service (Washington, DC), *SOI Tax Stats—Internal Revenue Gross Collections*, <<http://www.irs.gov/taxstats/article/0,,id=206488,00.html>> (December, 2009)

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

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, *National Economic Accounts, 2009*.

Statistics Canada, *Provincial Economic Accounts, 2009*.

Sources for the United States

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

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

US Department of Labor, Bureau of Labor Statistics, <<http://www.bls.gov/cpi/>> (December, 2009).

US Census Bureau (2009). *Annual Survey of State and Local Government Finances and Census of Governments (1981–2006)*, <<http://www.census.gov/main/www/access.html>>.

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 other various taxes. Income-tax revenue, sales-tax revenue, and natural resource royalties are not included in this component.

Sources for Canada

Statistics Canada, *Provincial Economic Accounts, 2009*.

Sources for the United States

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

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

US Census Bureau (2007). *Annual Survey of State and Local Government Finances and Census of Governments (1981–2005)*, <<http://www.census.gov/main/www/access.html>>.

US Department of Labor, Bureau of Labor Statistics, <<http://www.bls.gov/cpi/>> (December 18, 2007).

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 Economic Accounts, 2009*.

Sources for the United States

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

US Census Bureau (2009). *Annual Survey of State and Local Government Finances and Census of Governments (1981–2006)*, <<http://www.census.gov/main/www/access.html>>.

US Department of Labor, Bureau of Labor Statistics, <<http://www.bls.gov/cpi/>> (December, 2009).

Area 3 Labor Market Freedom

3A 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/wid-dimt/mwa/menu.aspx>> (December, 2009).

Statistics Canada, *Provincial Economic Accounts, 2009*.

Sources for the United States

Division of External Affairs, Wage and Hour Division, Employment Standards Administration, US Department of Labor, <<http://www.dol.gov/whd/state/state.htm>> (December, 2009).

Special requests from various state Labor Departments.

US Department of Commerce, Bureau of Economic Analysis, <<http://www.bea.gov/>> (December, 2009).

3B 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 Economic Accounts, 2009*.

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

Sources for the United States

Regional Economic Information System, Bureau of Economic Analysis, US Department of Commerce, <<http://www.bea.gov/>> (December, 2009).

US Department of Labor, Bureau of Labor Statistics, <<http://www.bls.gov/lau/>> (December, 2009).

3C 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.

Statistics Canada, *Labour Force Historical Review 2008* (CD-ROM).

Statistics Canada, *Provincial Economic Accounts, 2009*.

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*, <<http://www.unionstats.com/>> (December, 2009).

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Additional Data Sources Used in Regression Analysis

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Temple, James (2007). *Purchasing Power Parities and Real Expenditures, United States and Canada, 1992–2005*. Income and Expenditure Accounts Technical Series. Cat. 13-604-MIE--No 053. Statistics Canada.

Sources for the United States

Regional Economic Information System, Bureau of Economic Analysis, US Dept. of Commerce, <<http://www.bea.gov/>> (December, 2009).

US Census Bureau, Population Division, Education & Social Stratification Branch, <<http://www.census.gov/population/www/socdemo/educ-attn.html>>.

US Census Bureau, Population Division, <<http://www.census.gov/popest/estimates.php>>.

US Dept. of Labor, Bureau of Labor Statistics, <<http://www.bls.gov/cpi/>> (December, 2009).

Appendix C

Selected Publications Using Ratings from *Economic Freedom of North America*

Ashby, Nathan J. (2007). Economic Freedom and Migration Flows between U.S. States. *Southern Economic Journal* 73, 3: 677–97.

Ashby, Nathan J., and Russell S. Sobel (2008). Income Inequality and Economic Freedom in the U.S. States. *Public Choice* 134, 3–4: 329–46.

Bezmen, Trisha L., and Craig A. Depken II (2006). Influences on Software Piracy: Evidence from the various United States. *Economics Letters* 90: 356–61.

Campbell, Noel D., K.C. Heriot, and A. Jauregui (2008). Housing Prices and Economic Freedom. *Journal of Private Enterprise*, 23:2. 1-17.

Campbell, Noel D., K.C. Heriot, and Tammy M. Rogers. (2007/2008). The Economic Freedom Index as a Determinant of Firm Births and Firm Deaths. *Southwest Business & Economics Journal* 16: 37–51.

Campbell, Noel D., and Tammy M. Rogers (2007). Economic Freedom and Net Business Formation. *Cato Journal* 27, 1: 23–36. <<http://www.cato.org/pubs/journal/cj27n1/cj27n1-2.pdf>>.

Clark, J.R., and D. Pearson (2007). Economic Freedom, Entrepreneurship, Migration, and Economic Growth. *Clarion Business and Economic Review* 6: 10–23.

Corey, Joab (2009). *Development in US States, Economic Freedom and the “Resource Curse.”* Fraser Institute Studies in Mining Policy. Fraser Institute. <<http://www.fraserinstitute.org/researchandpublications/publications/7088.aspx>>.

Cumming, Douglas, and Dan Li (2009). *Public Policy and Business Creation in the United States.* Social Science Research Network Working Paper Series. <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1443508>.

Garrett, Thomas A., and Russell M. Rhine (2010). Economic Freedom and Employment Growth in U.S. States. Federal Reserve Bank of St. Louis Working Paper. <<http://research.stlouisfed.org/wp/2010/2010-006.pdf>>.

Hall, Joshua C., and Russell S. Sobel (2008). Institutions, Entrepreneurship, and Regional Differences in Economic Growth. *Southern Journal of Entrepreneurship* 1: 70–96.

Kreft, F. Steven, and Russell S. Sobel (2005). Public Policy, Entrepreneurship, and Economic Freedom. *Cato Journal* 25, 3 (Fall): 595–616. <<https://www.cato.org/pubs/journal/cj25n3/cj25n3-15.pdf>>.

Lawson, R.A., and S. Roychoudhury (2008). Economic Freedom and Equity Prices among U.S. States. *Credit and Financial Management Review* 14: 25–35.

Lopez, Edward, Todd Jewell, and Noel Campbell (2009). Pass a Law, Any Law, Fast! State Legislative Response to the Kelo Backlash. *Review of Law & Economics* 5, 1: 101–35. <<http://www.bepress.com/rle/vol5/iss1/art5/>>.

Lopez, Edward, ed. (2010). *The Pursuit of Justice: Law and Economics of Legal Systems*. Palgrave Macmillan, The Independent Institute.

Schum, Richard M. (2009). A Study in Direct Democracy: The Citizen Initiative & the Determinants of Voter Behavior. Unpublished Ph.D. dissertation, George Mason University School of Public Policy. <http://digilib.gmu.edu:8080/xmlui/bitstream/1920/3409/3/Schum_Richard.pdf>.

Gerald W. Scully (2008). *Economic Freedom and the Trade-Off between Inequality and Growth*. NCPA Policy Report No. 309. National Center for Policy Analysis. <<http://www.ncpa.org/pub/st/st309>>.

Sobel, Russell S., ed. (2007). *Unleashing Capitalism: Why Prosperity Stops at the West Virginia Border and How to Fix It*. Public Policy Foundation of West Virginia. <<http://www.be.wvu.edu/divecon/econ/sobel/UnleashingCapitalism/>>. Includes: Chapter 2: The Sources of Economic Growth, by Russell S. Sobel and Joshua C. Hall; Chapter 3: Why Capitalism Works, by Russell S. Sobel and Peter T. Leeson; Chapter 6: Three Specific Tax Reforms for Increasing Growth, by Robin C. Capehart and Pavel A. Yakovlev; Chapter 7: Make Property Rights More Secure: Limit Eminent Domain, by Edward J. López, Carrie B. Kerekes, and George D. Johnson.

Sobel, Russell S. (2008). Testing Baumol: Institutional quality and the productivity of entrepreneurship. *Journal of Business Venturing* 23: 641–55.

Sobel, Russell S., J.R. Clark, and D.R. Lee (2007). Freedom, Barriers to Entry, Entrepreneurship, and Economic Progress. *Review of Austrian Economics* 20: 221–36.

Sobel, Russell S., and Joshua C. Hall (2007). The Sources of Economic Growth. In Peter T. Calcagno, ed., *Unleashing Capitalism: A Prescription for Economic Prosperity in South Carolina* (South Carolina Policy Council): 23–47. <<http://www.unleashingcapitalism.org/pdf/Chapter2.pdf>>.

Sutter, Daniel S., and Andres Bello “Constitutionally Constrain Government to Unleash Capitalism” In Peter T. Calcagno, ed., *Unleashing Capitalism: A Prescription for Economic Prosperity in South Carolina* (South Carolina Policy Council): 225–46. <<http://www.unleashingcapitalism.org/pdf/Chapter12.pdf>>.

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Fred McMahon is the vice president of Research and director of the Centre for Trade and Globalization Studies at the Fraser Institute. He manages the Economic Freedom of the World Project and examines global issues, such as development, trade, governance, and economic structure. The Centre coordinates the Economic Freedom Network, an international alliance of independent think tanks in 80 nations and territories, and publishes the Fraser Institute’s *Annual Survey of Mining Companies*. Mr McMahon is the author of numerous research articles and several books, including *Looking the*

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