

Restoring a Competitive Labour Market in Alberta

Examining Right-to-Work and Other Policy Changes

Robert P. Murphy



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Fraser Institute

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Executive Summary

For the first decade and a half of the new millennium, Alberta was the engine of the Canadian economy. The province enjoyed brisk growth in its population, employment, and economic output, especially compared to other provinces. An important contributing factor to this prosperity was a pro-growth tax and regulatory framework, which included the lowest tax rates in Canada in corporate and personal income-tax rates. Indeed, in the all-government index of *Economic Freedom of North America 2017* (based on data from 2015) Alberta, with a score of 8.0, tied with New Hampshire as top jurisdiction in North America, its sixth year holding that position. The literature has established a strong correlation between economic freedom and growth, and so it is reasonable to assume that Alberta's high scores on economic freedom were a contributor to the province's prosperity.

However, in more recent years the Albertan economic juggernaut has stalled. The province's economic downturn began in 2014 with a dramatic fall in the price of oil. Following a recession in 2015/16, Alberta's economy has begun to recover but the process has been sluggish. In 2017, Alberta's unemployment rate remained 1.5 percentage points above the national average, a sharp turnaround from the earlier norm when unemployment was consistently lower in Alberta than in the rest of Canada. Indeed, by the end of 2017, Alberta's economic output remained, in real terms, lower than it was all the way back in 2014.

Of course, the oil price decline of 2014 precipitated the recent recession, and factors outside of government's control contributed to its length and depth. However, the provincial government has taken a number of actions—such as tax rate increases and aggressive minimum wage hikes—that the evidence strongly suggests have contributed to the province's economic woes.

We can contrast the experience of Alberta with that of the largest oil-producing US states. Although they too suffered during the recent collapse in oil prices, over the entire cycle states like Texas and North Dakota (currently the #1 and #2 oil-producing states) have on balance performed better economically than Alberta. This study documents the various metrics of economic performance and shows that Alberta's woes cannot be entirely attributed to the fortunes of the world oil market, since its peer group in the United States has weathered the cycle better.

This publication explores the possible role of labour market policies in particular, and their possible impact on economic performance in Alberta compared to US oil-producing states. While the Alberta government introduces the highest minimum wage in North America, most US oil-producing states do not enact thresholds higher than the federal baseline. Furthermore, there is a correlation between American “right-to-work” states—in which private-sector unions cannot compel non-member workers to pay dues—and increased oil production.

Although the literature on both the minimum wage and right-to-work legislation is nuanced, on balance it suggests that policy makers should seriously consider whether their efforts to assist workers could be backfiring. Alberta's current policy trajectory would be problematic enough in isolation but, when several US oil-producing states are taking the opposite path, it is particularly hazardous. In addition to marginal tax rate reductions, by reducing regulations and enhancing flexibility in Alberta's labour market, policy makers would help pave the way for a solid economic recovery and future growth in the province.

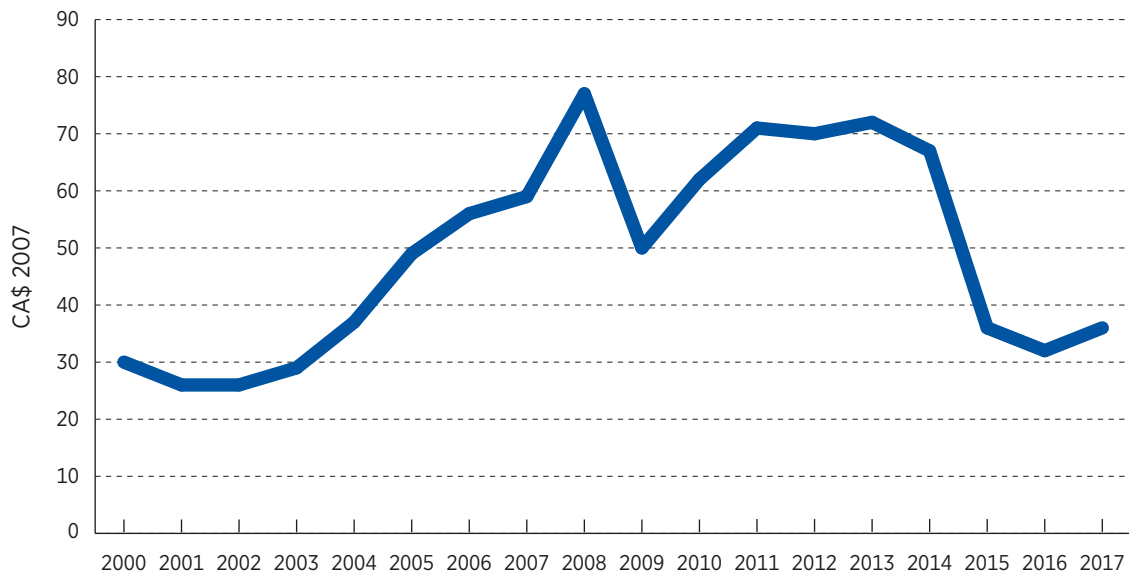
1 Introduction

For the first decade and a half of the new millennium, Alberta was the engine of the Canadian economy. The province enjoyed brisk growth in its population, employment, and economic output, and often boasted the lowest unemployment rate among all the provinces. Rising oil prices could explain some of the province's success but another important contributing factor was a pro-growth tax and regulatory framework. This policy framework included the lowest tax rates in Canada in key areas (of particular importance for driving growth were the corporate and personal income-tax rates) as well as a lighter approach to economic regulation than prevailed in many other North American jurisdictions. Indeed, in the all-government index of *Economic Freedom of North America 2017* (based on data from 2015) Alberta, with a score of 8.0, tied with New Hampshire as top jurisdiction in North America, its sixth year holding that position (Stansel, Torra, and McMahon, 2017). There is a strong correlation between economic freedom and growth, and so it is reasonable to assume that Alberta's strong performance in terms of economic freedom was a contributor to the province's growth story.

As is widely known, over the past years, the Albertan economic juggernaut has stalled. Alberta's economic downturn began in 2014 with a dramatic and economically destructive fall in the price of oil. In real terms, crude prices fell 46% from 2014 to 2015 (**figure 1**). Following a recession in 2015 and 2016, Alberta's economy has begun to recover but it has been a gradual and painful recovery, particularly given the steepness of the recession itself. In 2017, for example, Alberta's unemployment rate remained 1.5 percentage points above the national average. This is a sharp turnaround from the prevailing norms in the years prior to the 2014 downturn when unemployment was consistently lower in Alberta than in the rest of the country. Alberta's real (inflation-adjusted) GDP, after falling by 3.7% in 2015 and then an additional 4.2% in 2016, has begun to trend back up (with 4.4% growth in 2017). However, as of the end of 2017, the provincial economy's output remained, in real terms, lower than it was all the way back in 2014. In short, the combined effect of the recession and a weak recovery resulted in net negative real economic growth over what is now approaching nearly half a decade.

Meanwhile, the provincial government has refused to respond to these challenging economic circumstances by working to reduce and reform provincial spending, which had increased substantially under its predecessors. Indeed, since the election of the new government in 2015, changes in taxation, spending, and regulation have had a significant negative effect on economic freedom so that, in the all-government index in *Economic Freedom of North America 2018* (based on data from 2016), Alberta had fallen to a tie for sixth place at 7.99 (Stansel, Torra, and McMahon, 2018). As a result, the provincial budget deficit swelled to over \$10 billion, and remains nearly as large today as the province quickly racks up debt. Of course, the oil price decline of 2014 precipitated the recent recession, and factors outside of government's control contributed to its length

Figure 1: WTI crude oil prices (CA\$ 2007), 2000–2017



Sources: International Monetary Fund, 2018; Statistics Canada, table 36-10-0130-01; US Energy Information Administration, 2018b; calculations by authors.

and depth. However, it would be a mistake to assume the provincial government’s policy has been irrelevant in contributing to Alberta’s disappointingly weak recovery in recent years. Indeed, the provincial government has taken a number of actions that the evidence strongly suggests will weaken the provincial economy’s performance from a growth perspective, and have thereby contributed to the province’s economic woes while reducing prospects of strong growth in the future.

Of particular note, the province has implemented a number of tax increases in recent years, with the effect of reversing the province’s long-held “tax advantage” over other North American jurisdictions in the key areas of personal income and corporate income taxation. Specifically, shortly after taking office the new NDP government of Rachel Notley eliminated the province’s single-rate income tax and raised the top personal income-tax rate from 10% to 15%. At the same time, the NDP government increased the corporate income tax (CIT) from 10% to 12%. Simultaneously, two key pillars of the Alberta tax advantage disappeared. Especially in relation to leading oil-producing states in the United States, this trend in Alberta does not bode well for its competitiveness (**table 1**).

While this growth in the tax burden facing Albertans has (deservedly) received substantial attention in recent years as a factor undermining economic competitiveness, this publication will examine another policy area that has received somewhat less attention: labour market regulation. Specifically, we will show a trend towards pro-growth deregulation of labour markets in the United States—especially among US oil-producing states—coinciding with a period of rapid growth in the minimum wage in Alberta. The change in relative labour-market regulation, along with changes to the tax code, have meaningfully eroded the province’s competitiveness in this area.

Table 1: Top corporate and personal income-tax rates (%), various jurisdictions, 2014–2018

	2014	2015	2016	2017	2018
Corporate Income Tax					
<i>Canada</i>	15%	15%	15%	15%	15%
<i>Alberta</i>	10%	10.50%	12%	12%	12%
<i>United States</i>	35%	35%	35%	35%	21%
<i>Texas*</i>	0%	0%	0%	0%	0%
<i>North Dakota</i>	4.53%	4.31%	4.31%	4.31%	4.31%
Personal Income Tax					
<i>Canada</i>	29%	29%	33%	33%	33%
<i>Alberta</i>	10%	11.25%	15%	15%	15%
<i>United States</i>	39.6%	39.6%	39.6%	39.6%	37%
<i>Texas</i>	0%	0%	0%	0%	0%
<i>North Dakota</i>	3.22%	2.9%	2.9%	2.9%	2.9%

Note *: Texas has no corporate income tax but it does have a gross receipts tax.

Sources: Canada Revenue Agency, 2018; Scarborough, 2018.

One dimension of labour policy where Alberta stands out from other energy jurisdictions that were hit hard by the recent recession has been rapid growth in the province's minimum wage. Indeed, Alberta's minimum wage has increased every year since 2015, and was increased to \$15 per hour this year, the highest rate in the country and much higher than American energy jurisdictions. Simultaneous with this rise in the minimum wage, the Notley government has introduced a range of further labour regulations that have promoted unionization and generally raised costs for employers.

While Alberta has been implementing rapid minimum-wage increases and adding new regulations, we can document a trend in the opposite direction towards pro-growth policy among certain US states, in particular the growing adoption of “right-to-work” laws. Although some states have raised their minimum wages above the federal level, many others have not and minimum wage levels remain generally far lower than is the case in Alberta. Of particular relevance to our study are the top oil-producing US states, which naturally serve as the prime competitors to Alberta. The leaders of the pack—Texas and North Dakota—enjoy a very pro-business environment, and their economic fortunes have not suffered nearly as much as Alberta's, despite their dependence on oil.

In this publication, we discuss both of these trends: the move towards right-to-work (RTW) legislation in several American states and the rapid increase in Alberta's minimum wage (combined with the introduction of new, more restrictive, labour regulations), which has not been matched by similarly large increases in the American states with which Alberta generally competes for investment.

The publication proceeds as follows. In the next section, we review data surrounding the performance of Alberta's labour market in recent years, demonstrating that the province faces challenges in this area. Next, we examine recent trends in the United States, showing a proliferation of right-to-work laws. We also examine the literature surrounding the efficacy of such laws. Next, we compare the recent change in Alberta's minimum wage to developments in key jurisdictions with which the province competes in the United States, showing that the province is an outlier among North American energy jurisdictions (many of which suffered similar economic shocks as Alberta in 2014/15) in this area. Next follows a short discussion section about the broad need for pro-growth policy reform and the extent to which regulatory reform of the labour market represents one promising avenue for reform. The final section provides a brief conclusion.

2 Alberta's Weak Labour Market Performance

In this section, we briefly illustrate some of the trends described in the introduction, showing that even with the recession now long over, Alberta's labour market continues to struggle relative to typical pre-recession performance. It is well known that Alberta's economy was hit hard by the recession of 2014–2016. Indeed, real GDP fell by 3.7% in 2015 and by an additional 4.2% in 2016. Predictably, labour markets suffered, unemployment increased, and average wages fell. What is less well known, perhaps, is the fact that Alberta's labour market recovery has been relatively slow (in relation to the steepness of the fall) during the economic recovery that began in 2016. Specifically, now fully four years removed from the oil-price fall of late 2014, Alberta's unemployment rate remains stubbornly and meaningfully above the national average. In October of 2018, Alberta's unemployment rate was 7.3%—a full 1.5 percentage points above the national average. [1] This is a sharp reversal from the state of affairs pre-recession, when Alberta's unemployment rate was consistently below the national average.

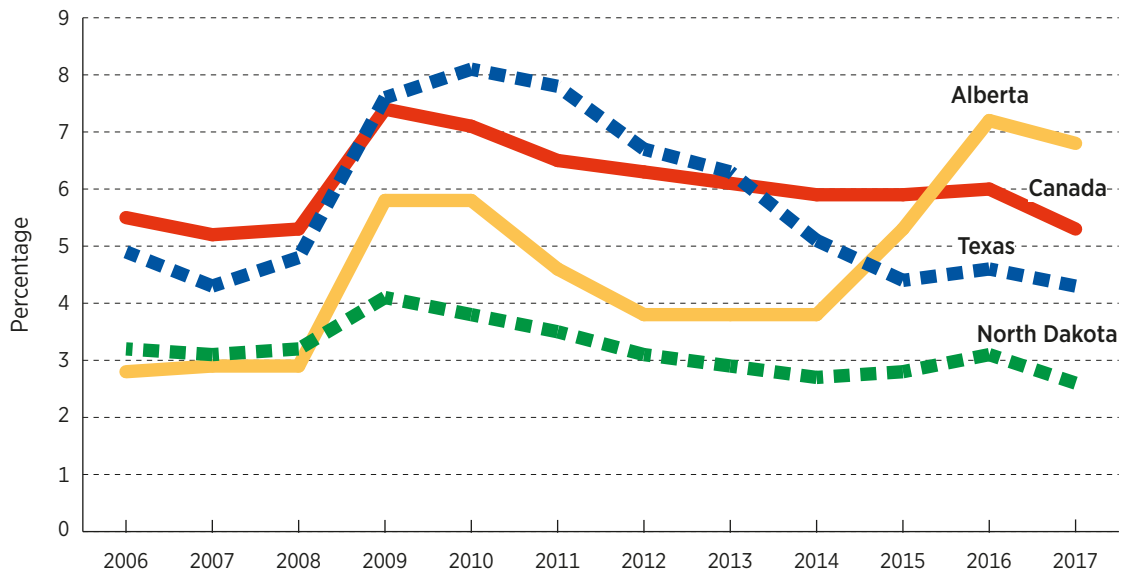
It should be here noted that, while Alberta's unemployment rate has remained much higher than the national average in the years following the oil-price fall that started in 2014/15, this has not been the case for energy jurisdictions south of the border. In 2017, for example, the unemployment rate in Texas was just 4.3%—a bit *lower* than the national average in the United States. In North Dakota, unemployment was just 2.6% in 2017, well below the US average and far below Alberta's annual rate of 6.8%. [2] In short, Alberta's unemployment rate as of 2017 was substantially higher than that of key US energy states. Further, while Alberta's unemployment rate was higher than its national average (and remains so today), the unemployment rate in Texas and North Dakota was either roughly the same as or below the overall American unemployment rate (**figures 2, 3**).

Of course, the unemployment rate is an imperfect metric of economic performance and even of labour-market performance. Other indicators, however, also suggest weakness in Alberta. When it comes to average weekly earnings, for example, while Alberta remains far above the national average, the gap has shrunk substantially in recent years. As of August 2018, average weekly earnings in nominal terms still had not recovered to their peak of \$1,176 in February of 2015. In other words, average weekly wages in the province still have not made up the ground that was lost in the recession—and this doesn't even take into account the impact of price inflation. For comparison, in North

[1] Labour market statistics in this section are drawn, unless otherwise noted, from the provincial government's *Economic Dashboard* (Alberta Government, 2018).

[2] Statistic Canada's R3 unemployment rate was used for the Canadian provinces to ensure data comparability with the United States.

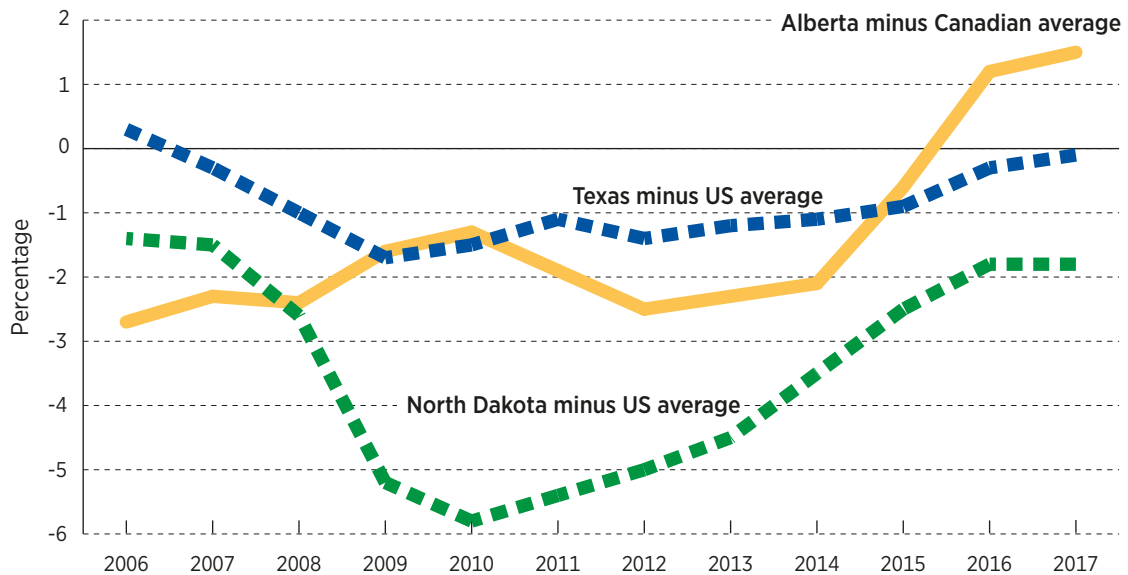
Figure 2: Unemployment rate (%) for Alberta, Canada, Texas, and North Dakota, 2006–2017



Note: Statistic Canada's R3 unemployment rate was used for the Canadian provinces to ensure data comparable with that of the United States.

Sources: Bureau of Labor Statistics, US Dep't of Labor, 2018a; Statistics Canada, table 14-10-0078-01.

Figure 3: Unemployment rate (%) for Alberta, Texas, and North Dakota minus national average, 2006–2017



Note: Statistic Canada's R3 unemployment rate was used for the Canadian provinces to ensure data comparable with that of the United States.

Sources: Bureau of Labor Statistics, US Dep't of Labor, 2018a; Statistics Canada, table 14-10-0078-01.

Dakota average weekly private-sector wages in the first quarter of 2018 were the same as they had been three years earlier, while in Texas weekly wages were up 7.3% from first-quarter 2015 to first-quarter 2018. [3]

When it comes to total employment in the province, despite substantial population growth, Alberta has recovered the jobs lost during the recession that began in late 2014 but has made no progress beyond that. Total employment in October 2018 is nearly identical to where it stood in September of 2015. For comparison, the state of Texas has added 792,000 jobs—an increase of 6.3%—between August 2015 and August 2018, while North Dakota has shed 6,200 jobs, or about 1.5% of total employment during the same period.

Finally, while the number of people in Alberta collecting employment insurance has dropped substantially from the mid-recession peak in July 2016, much more progress is needed to get back to pre-recession levels. Indeed, before the recession, in a typical month approximately 30,000 Albertans were collecting employment insurance. In August 2018, that number was 52,300. To be sure, this is marked progress from the mid-recession peak of 107,250 recipients. However, these numbers show that unemployment among job-seeking Albertans remains elevated far above pre-recession levels.

These data show that Alberta's labour market has not fully recovered from the recent recession—in fact, far from it. Unemployment remains elevated and is now consistently above the national average rather than below it, as had been the norm for years before the recession. Average weekly wages have recovered somewhat but are still, in nominal terms, not meaningfully higher than they were in 2014. This means that after adjusting for inflation, wages are significantly depressed compared to pre-recession levels. Total employment has recovered to pre-recession levels, but no further, and the number of Albertans collecting employment insurance is still nearly double what was the case in the years prior to the recession that began in 2014/15. Further, we have seen that this fate with respect to labour market outcomes has not been shared by energy jurisdictions in the United States, which generally have unemployment rates that are either at or below the national average in that country.

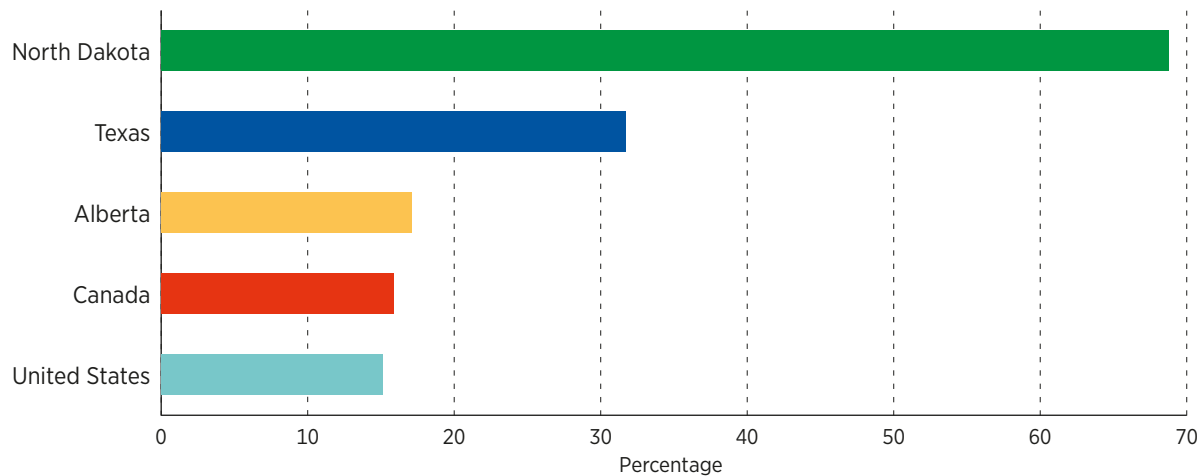
For another indicator that Alberta's economic sluggishness cannot be attributed solely to an external fall in world oil prices, consider **figure 4** and **figure 5**, where we chart the cumulative growth in real GDP and real GDP per capita during the period from 2006 to 2016, for Alberta, Canada as a whole, the United States as a whole, and the two leading American oil-producing states, Texas and North Dakota. Alberta's economic growth over a long stretch has significantly underperformed that of the leading US oil-producing states, especially once we take population trends into account. When it comes to putting the population to work in producing real output, the Alberta economic engine is clearly stalling relative to its peers.

It would be an oversimplification to pin all of these outcomes on provincial government policy. Alberta's economy is more heavily reliant on oil extraction than, for example,

[3] Data on state weekly wages is from the US Bureau of Labor Statistics' Occupational Employment Statistics (OES) survey (Bureau of Labor Statistics, US Dep't of Labor, 2018b).

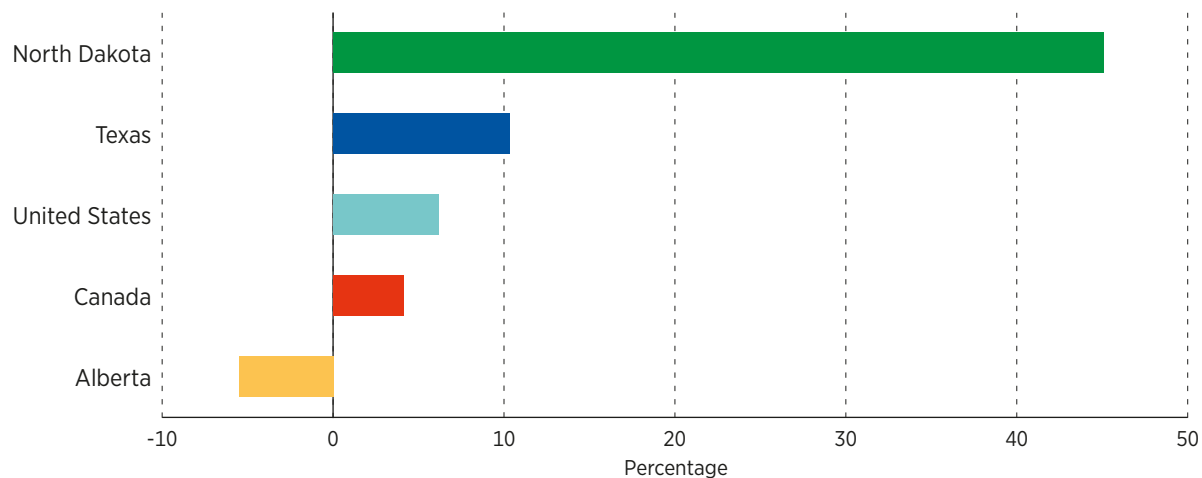
that of Texas, and this reliance contributed to a deeper recession and potentially a slower recovery in the province. We cannot tease out the precise role of government policy from external factors with certainty. That said, the data here show that Albertans continue to struggle with a comparatively weak labour market compared to the rest of Canada and key US energy jurisdictions. This reality should be kept in mind as we review in the coming sections the very different approaches to labour market policy that have prevailed in Alberta on the one hand and in important American jurisdictions on the other.

Figure 4: Cumulative growth in real GDP, 2006–2016



Sources: Bureau of Economic Analysis, US Dep't of Labor, 2018a: SAGDP9; Statistics Canada, table 36-10-0222-01; calculations by author.

Figure 5: Cumulative growth in per-capita real GDP, 2006–2016



Sources: Bureau of Economic Analysis, US Dep't of Labor, 2018a: SAGDP10; Statistics Canada, tables 17-10-0005-01, 36-10-0222-01; calculations by author.

3 Labour Market Regulations

In the preceding section we have shown that Alberta’s labour market has struggled in recent years on a wide number of metrics. Meanwhile, US energy jurisdictions have not faced similar challenges. In this section, we focus on differences between the trajectories of labour market policy in Alberta and American jurisdictions. Specifically, we examine the movement towards right-to-work (RTW) legislation in the United States, a movement not found in Alberta. In fact, the second development we discuss—rapid minimum wage increases in Alberta, which have not occurred in peer jurisdictions—have coincided with the introduction of a general tightening of labour market regulations in Alberta.

Given the many factors that influence labour market and economic performance generally—including other policy choices such as surrounding tax policy—we are not seeking to prove that these different policy trajectories ultimately bear primary responsibility for the data presented above. Instead, we demonstrate simply that labour market regulation in Alberta has been on a trajectory opposed, in important areas, to that of peer jurisdictions with whom the province competes and who have generally enjoyed stronger labour market outcomes in recent years. We do, however, present evidence about the impact of right-to-work laws and labour market regulations that suggests these policy choices have been a contributing factor to the outcomes described above.

Right-to-work trends in the United States [4]

In the United States, regarding private-sector employment, states can be classified as either “right-to-work” or not. [5] A right-to-work state is one in which unions cannot compel non-union members to pay fees if they work at a company with a union contract. A state’s prerogative was guaranteed at the federal level by the *Labor Management Relations Act of 1947 (Taft-Hartley Act)*, which itself amended the major New Deal labour legislation of 1935, the *National Labour Relations Act (NLRA)*; sometimes called the *Wagner Act*). Specifically, the 1935 *NLRA* required unions to provide the same contractual benefits to all employees at a given firm as a result of collective bargaining with management, whether the employees joined the union or not. However, the legislation allowed for “closed shops”—that is, firms where management agreed that it would *only* hire union members.

[4] The material and some of the text in this and the following subsections draws largely upon the analysis found in Murphy, Emes, and Eisen (2016), updated to reflect recent developments.

[5] The *National Labor Relations Act (Wagner Act)* and the *Labor Management Relations Act of 1947 (Taft-Hartley Act)* did not apply to state and local government. However, in the wake of the recent decision by the US National Labor Relations Board in *Janus Youth Programs, Inc. and Industrial Workers of the World, Portland Branch*, all state and local government employment is (in principle) effectively right-to-work.

The 1947 *Taft-Hartley* amendments outlawed closed shops *per se*, but *did* allow individual states to decide whether “union shops” in their jurisdictions could compel non-members to pay an “agency fee” to compensate the union for its collective bargaining activities on behalf of the employee. States that denied unions this power are considered “right-to-work” states. A succinct summary of the legal evolution is to say that the 1935 *Wagner Act* allowed the closed shop, while the 1947 Taft-Hartley amendments outlawed the closed shop but permitted individual states to decide whether a union shop would be legal.

In the 1940s, ten states passed right-to-work laws. As of this writing, a total of 28 states have done so, but currently only 27 states are right-to-work (because Missouri’s 2017 RTW legislation was signed into law but then overturned by a referendum [6]), while New Mexico could also be added to the list because, as of this writing, several of its counties have either passed or are considering local RTW ordinances (though the precise legal status of such local ordinances is still in dispute; Lyman, 2018). **Table 2** shows the US states in order of their adoption of RTW laws. As the table indicates, RTW

Table 2: US states’ adoption of right-to-work laws, by year

	Year [1]		Year
Arkansas	1944	South Carolina	1954
Florida	1944	Utah	1955
Arizona	1946	Kansas	1958
Nebraska	1946	Wyoming	1963
Georgia	1947	Louisiana	1976
Iowa	1947	Idaho	1985
North Carolina	1947	Oklahoma	2001
South Dakota	1947	Indiana	2012
Tennessee	1947	Michigan	2013
Texas [2]	1947	Wisconsin	2015
Virginia	1947	West Virginia	2016
North Dakota	1948	Kentucky	2017
Nevada	1952	Missouri [3]	2017
Alabama	1953	New Mexico [4]	2018
Mississippi	1954		

Notes: [1] Different lists of RTW adoption dates give different years for certain states though, in most cases, the difference is one year. For example, a state might pass legislation in one year that does not take effect until the following year. [2] Texas originally became RTW in 1947, but it significantly revised the legislation in 1993, which is why some listings use that as the date for Texas. [3] Missouri enacted RTW legislation in 2017 but it was later overturned by voter referendum. [4] New Mexico does not have RTW law at the state level but several counties have passed RTW measures.

Sources: National Conference of State Legislatures, 2018; National Right to Work Committee, 2018.

[6] For an explanation of RTW legislation in Missouri, see Scott Neuman (2018).

legislation is a newly revitalized trend in the United States: since 2012, seven states have adopted RTW legislation (though Missouri's was soon overturned via referendum, and New Mexico's only applies in particular counties, which itself may be challenged as a violation of state law).

Of particular relevance to Alberta's competitiveness is the ranking of the top US oil-producing states (as of 2017), their RTW status, and their medium-term increase in oil output (**table 3**). As the table indicates, seven of the top ten US oil-producing states are RTW (with the same caveat about New Mexico). Moreover, the fifth- and sixth-ranked states, New Mexico and Oklahoma, have embraced RTW (either partially or wholly) relatively recently. Finally, the pattern is not perfect, but table 3 also provides suggestive evidence that RTW is associated with increased oil production. We summarize some of the literature on RTW and its economic effects in the next subsection.

Table 3: The RTW status of the top 10 US oil producing states (as of 2017)

	Oil production 2017 (thousands bls)	Date right-to-work adopted	Increase in oil production (%), 2000–2017
Texas	1,272,575	1947	187%
North Dakota	392,127	1948	1,099%
Alaska	180,467	—	–49%
California	174,107	—	–36%
New Mexico [1]	171,440	2018	155%
Oklahoma	165,920	2001	137%
Colorado	130,732	—	607%
Wyoming	75,669	1963	25%
Louisiana	52,024	1976	–51%
Kansas	35,822	1958	4%

Notes: [1] New Mexico does not have RTW law at the state level but several counties have passed RTW measures.

Sources: National Conference of State Legislatures, 2018; National Right to Work Committee, 2018; US Energy Information Administration, 2018a.

The economic effects of right-to-work laws

The proponents of RTW laws argue that they allow more flexibility in labour markets, providing a favourable business environment that attracts firms and promotes job growth. A separate question is the possible impact RTW laws have on the level of wages, which is difficult to assess even theoretically because, for example, a RTW state might attract lower-skilled workers who were displaced by unions in other, non-RTW states.

There is a large academic literature measuring the effects of RTW laws on various economic variables. A landmark review is that by Moore (1998), while Eisenach (2015) provides a more recent review. Hicks and LaFaive (2013) also provide a relatively recent review, and apply it to the context of Michigan's RTW reform. In this section we provide an overview of some of the key findings.

First we can look at the “raw” outcomes in RTW and non-RTW states, as reported in Eisenach (2015). We will see that RTW states enjoy stronger economic performance on several fronts. To be sure, the following statistics demonstrate correlation, not necessarily causation, but we will follow them with studies that attempt to control for other factors. **Table 4** shows that from 2001 to 2013, the states that had right-to-work laws (as of 2001) enjoyed private-sector employment growth more than *double* the rate of non-RTW states. Similarly, table 4 shows that real (inflation-adjusted) private output rose by ten percentage points more in RTW states during this same period, while real manufacturing output was almost 16 percentage points higher. The growth of firms and real personal income was also higher in the RTW states.

Table 4: Key economic indicators for non-RTW states, the United States, and RTW states (as of 2001), 2001–2013

Indicator	Non-RTW	United States	RTW
Private non-farm employment growth	8.20%	11.70%	17.40%
Growth in real private-sector output	20.30%	23.80%	30.30%
Growth in real manufacturing output	19.50%	25.20%	35.40%
Change in number of firms (2001–2012)	–0.80%	1.60%	5.60%
Growth in real personal incomes	15.30%	19.60%	27.70%

Sources: Eisenach, 2015 (relying on BEA and Census Bureau data). Table adapted from Murphy, Emes, and Eisen, 2016: table 2.

In addition to the information we have reproduced in tabular form above, Eisenach (2015) also provides these further statistics comparing economic performance in RTW with that in non-RTW states:

- on average, from 2001 to 2014 the annual unemployment rate was 0.5 percentage points lower in RTW states;
- from 2001 to 2013, if we rank the top ten states by growth in per-capita real output, then four of the top five states are RTW, and seven of the top ten are RTW states.

In addition to the above statistics reported by Eisenach, we can also reproduce some of the “raw” correlations documented in the earlier survey of Hicks and LaFaive (2013). Besides results pertaining to employment and personal income gains (which we have already discussed), Hicks and LaFaive report:

- from 1990 to 2011, population in RTW states increased by 39.8% in contrast with 16.7% in non-RTW states;
- from 2000 to 2009, 4.9 million people moved from non-RTW states to RTW states.

To reiterate, the “raw” results we have summarized above do not necessarily demonstrate causality, or that right-to-work legislation by itself creates economic prosperity. Nonetheless, the results certainly support the claims made by proponents of RTW policy that it fosters more efficient labour markets and thus stimulates job and even income growth in the long run.

Yet even though the reported results above are consistent with the case for RTW laws, it is possible they mistake correlation for causation. It could be, for example, that there are other factors that influence US states both to pass RTW legislation and to enjoy economic prosperity. In the next section, we review some of the key studies in the academic literature that seek to control for this possibility.

Isolating the impact of RTW from confounding factors

As discussed in the previous section, US states that have enacted RTW laws enjoy better economic performance across a variety of dimensions. However, it is possible that this is a mere correlation. For example, states with citizens who are hostile to unions could both support RTW laws while also benefiting from more flexible labour markets. Or, with the rise of air conditioning, Southern and Western states would experience growth in population and employment relative to the Northeast, with the distribution of RTW status just coincidentally overlapping these climate-driven trends. Indeed, several academic econometric articles do conclude that RTW laws have little economic impact, once we control for other possible factors. For example, Moore (1980), Wessels (1981), and Garofalo and Malhotra (1992) all found that RTW laws either have a negligible or even negative impact on union and non-union wages. However, these studies can be quite sensitive to model specification, and they do not necessarily control for the fact that states with low wages might be more likely to adopt RTW laws.

Reed (2003) breaks with the earlier literature and finds very strong positive wage impacts from RTW. In the first place, he argues that much of the previous literature only focused narrowly on manufacturing production workers, which is overrepresented by union workers and therefore primarily captures the impact of RTW on union wages, rather than wages in general. As of his 2003 review, Reed claimed that only two studies—Moore (1980) and Farber (1984)—truly estimated the impact of RTW on average wages. Admittedly, both of them found a negative relationship, but only Farber was statistically significant. Reed goes on to include a set of “initial economic conditions” for states as of 1945 (before most of them had adopted RTW laws), such as per-capita personal income, educational levels, and manufacturing share of total output. After adding these factors, Reed runs several model specifications. His overall “best estimate” is that, once we control for initial starting conditions in 1945, states in 2000 could enjoy average wages that were 6.7% higher due to RTW (Reed, 2003: 13).

If the literature on wage impacts is still indecisive, there is more consensus regarding the effect of state-level policy on employment, particularly manufacturing employment. For example, Newman (1983) and Schmenner, Huber, and Cook (1987) find that RTW has a significant positive impact on industrial growth. In addition to these more standard econometric studies, Holmes (1998) adopts a novel technique. His paper sought

to avoid the problems of spurious correlation by examining contiguous counties that fell on opposite sides of a state border. He found there was an abrupt and large change at state borders: “[M]anufacturing employment in a county as a percentage of total employment ... *increases, on average, by approximately one-third when one crosses the border into the probusiness side*” (Holmes, 1998: 671, emphasis added). [7]

It is important to note that, strictly speaking, some studies on the location of manufacturing are not capturing the effect of RTW laws specifically, but of “business-friendly” state-based policies in general; they typically take RTW as a proxy for a pro-business climate. It could be, for example, that states that enact RTW laws also tend to maintain low business taxes and do not impose minimum wages higher than the federal level, and perhaps these other policies are the ones spurring growth. Nonetheless, the literature is clear that state policies designed to attract business—of which RTW is an obvious example—do appear to have a strong impact.

Conclusion on the RTW literature review

On balance, the academic literature suggests that RTW laws in the United States have reduced unionization and promoted economic development, particularly in traditionally unionized sectors such as manufacturing. However, when it comes to RTW’s effect on wages, although some studies have found additional (and positive) impacts, here the literature has no strong consensus. To be sure, RTW is *correlated* with faster income growth, but scholars do not agree on whether there is a causal link here or just a coincidence based on other factors.

As far as the more recent additions of RTW states, the case of Michigan is instructive: Murphy, Emes, and Eisen (2016) present evidence that Michigan’s adoption of RTW legislation (passed in late 2012 and effective in 2013), along with other pro-growth reforms, went hand in hand with a significant turnaround in the state’s economic fortunes. More recently, supporters of Kentucky’s early 2017 RTW legislation have credited the policy with a surge in business investment, and anecdotally the CEO of Braidy Industries cited Kentucky’s move as a reason for opening a new manufacturing facility in the state (Adkisson and Goode, 2017). However, notwithstanding these points, the data show, if anything, a slowdown in Kentucky employment growth in 2017 and thus far in 2018, relative to the prior few years.

[7] To be clear, Holmes is not arguing that an entire state will benefit from such a large increase in manufacturing employment. Rather, he is showing that there is a marked increase when one crosses a border into a RTW state. This is consistent with his underlying model that there are costs of business migration, and so (other things equal) a relocating firm will be more likely to settle just on the other side of a border, if it is moving because of state policies.

4 Increases in the Minimum Wage

In the preceding section, we showed that a number of American states have in recent years adopted “right to work” legislation, and that there is evidence suggesting these studies can help drive positive labour-market outcomes and attract investment. Alberta has not adopted a similar regulatory approach; to the contrary, Alberta has tightened labour market regulation in a number of ways that have increased the cost of hiring for employers without generating offsetting productivity gains from employing additional workers. [8]

In addition to increased regulatory activity, the provincial government in Alberta has substantially increased the minimum wage despite elevated unemployment levels. Indeed, Alberta’s minimum wage has increased every year since 2015 and by 2018 was \$15 per hour, the highest rate in the country and much higher than American energy jurisdictions. The increase to Alberta’s minimum wage has been dramatic and has made Alberta an outlier among energy jurisdictions in Canada and the United States.

In the spring of 2015, Alberta’s minimum wage stood at \$10.20 per hour. This put Alberta relatively close to the prevailing minimum wage in other energy jurisdictions across North America. Since then, Alberta has increased its wage floor every year by a total of nearly 50%, reaching \$15 per hour in 2018. This is sharply at odds with developments in other energy jurisdictions in North America, many of which experienced substantial labour market shocks in 2014/15, and none of which chose to embark upon a schedule of minimum wage increases remotely comparable to Alberta’s in the face of elevated unemployment and a disrupted labour market.

Comparisons within Canada to other energy intensive provinces are illustrative: Saskatchewan’s minimum wage has also increased in recent years, but these increases have been moderate and directly tied by a formula to labour market developments in the province. In October 2018, Saskatchewan’s minimum wage reached \$11.35. Similarly, Newfoundland & Labrador has enacted moderate increases in its minimum wage closely linked to the rate of wage growth in the province. This spring, its minimum wage rose to \$11.15 per hour—far below the \$15 minimum in Alberta.

A comparison of Alberta’s newly elevated minimum wage to U.S. energy jurisdictions similarly shows Alberta to be an outlier in this area. In **table 5** we show the minimum wage (quoted in USD) at the federal level in the United States, as well as in those states that produced at least 50 million barrels of oil in 2017. Out of the nine states that produced at least 50 million barrels of oil in 2017, five of them—including the top two producers, Texas and North Dakota—had a minimum wage equal to the federally mandated floor, while a sixth, New Mexico, had a state minimum only 25¢ above the federal level. Even among the remaining three states that had minimum wages significantly above the US

[8] For an overview of recent regulatory changes to labour policy in Alberta, please see Lammam and MacIntyre, 2017.

Table 5: Minimum wage (US\$) per hour in top US oil-producing states [1] and Alberta, as of July 1, 2018

	Minimum wage per hour		Minimum wage per hour
United States	\$7.25	Oklahoma	\$7.25
Texas	\$7.25	Colorado	\$10.20
North Dakota	\$7.25	Wyoming	\$7.25
Alaska	\$9.84	Louisiana	\$7.25
California [2]	\$10.50 / \$11.00	Alberta [3]	\$11.40
New Mexico	\$7.50		

Notes: [1] These are the states that produced more than 50 million barrels in 2017. [2] For firms employing 26 or more employees in California, the minimum wage is \$11/hour. [3] As November 2018, Alberta's minimum wage was CA\$15. Using the average monthly exchange rate from the Bank of Canada, this equals US\$11.40.

Sources: Bank of Canada, 2018; US Department of Labor, 2018; calculations by authors.

federal floor, their thresholds were nowhere near as high as Alberta's. Specifically, the highest wage floor among the top US oil-producing states was California's, at US\$10.50 per hour, which is well below Alberta's new floor of CA\$15 per hour, even taking into account current exchange rates. [9]

In short, the rapid escalation of Alberta's minimum wage differentiates its policy from that of other energy jurisdictions in North America. Although it is difficult, given all of the other political and economic factors at play, to assess the causal link between this unique feature of policy development in Alberta and the weak labour-market outcomes described above, the research literature provides ample reason to worry that this policy has been a contributing factor to Alberta's labour market performance.

The theory and evidence on minimum wage impacts

In terms of standard economic theory, the problem with aggressively hiking the minimum wage is quite intuitive: by raising the price of labour, minimum wage hikes tend to reduce the amount of employment offered to young and/or unskilled workers. Simply put, if a worker in Alberta only has the productivity to generate, say, \$13 worth of extra output per hour for his employer, then a minimum wage floor of \$15 per hour renders that worker unprofitable. The employer would be throwing away money by hiring such a worker, and so it is more sensible to seek more experienced workers (who have a higher productivity) and/or to invest in machinery to get the job done with fewer employees.

Although the textbook logic of the problems with aggressive minimum wage hikes is straightforward, the *quantitative* impact on employment is the subject of a long and rich analysis in the literature. We cannot summarize such a large topic here—for a fuller discussion see Murphy, Lammam, and MacIntyre, 2016—but we can highlight a few key

[9] As of November 2018, Alberta's CA\$15-per-hour minimum wage would translate into roughly US\$11.40. We should also note that the three states with relatively high minimum wages—California, Alaska, and Colorado—also have automatic annual increases built into their existing structure.

articles to convey the contours of the debate among academic economists. In particular, we will explain that the uncertainty over minimum wage impacts in US labour markets does *not* carry over to the Canadian context, where the research much more consistently finds that large minimum-wage hikes measurably reduce employment among teenagers and other low-skill individuals.

As late as the 1980s, there was a genuine consensus among US economists, regardless of ideology or political affiliation, that a 10% increase in the minimum wage would reduce employment of teenagers by 1% to 3%. This consensus was built on numerous empirical studies that had been conducted over large time spans (see, *e.g.*, Brown, Gilroy, and Kohen, 1982). However, this consensus among US researchers was challenged by “case studies”—the most famous of which was Card and Krueger’s (1994) analysis of New Jersey—where a minimum wage hike did not seem to carry dire employment consequences. The particular case-study approach was eventually generalized in analyses covering the entire country over long stretches, making use of clever econometric techniques (*e.g.*, Dube, Lester, and Reich, 2010) to construct proper “control groups” against which to assess the impact of minimum wage hikes on employment. Although there is still much dispute, many economists who focus on labour markets in the US states now believe it is an open question whether moderate minimum wage hikes reduce employment growth for teens and other low-skilled workers.

The situation among *Canadian* researchers is different. Here, they typically find *stronger* evidence of the harm of minimum wage hikes, even compared to the older US consensus. For example, Godin and Veldhuis (2009) reviewed 12 Canadian studies that each examined the impact of minimum wage hikes on teen and young-adult employment. Godin and Veldhuis summarized this research as finding that a 10% hike in the minimum wage will reduce employment from 3% to 6%. To relay the specifics of just one example: Sen, Rybczynski, and Van De Waal (2011) looked at the changing minimum-wage levels among the provinces from 1981 to 2004. They found the statistically significant results that a 10% increase in the minimum wage was associated with a 3%-to-5% drop in teen employment, and also with a 4%-to-6% increase in the number of families below Low-Income Cut-Off (LICO) thresholds.

The more robust findings by Canadian researchers is perhaps due to the fact that historically there was more variation in the levels of minimum wages across the Canadian provinces than across US states, making it easier for econometric techniques to detect the “signal” (if any) provided by the minimum wage hike and, in particular, to distinguish it from the general economic fortunes of the country as a whole. For a recent Fraser Institute publication devoted entirely to the numerous drawbacks of raising the minimum wage in Alberta as a vehicle for fighting poverty, see Lammam, MacIntyre, and Sorge, 2018. The authors also provide a list of 20 academic articles studying the employment impacts of the minimum wage in Canada.

5 Conclusion—Lessons for Alberta

Alberta's economy has still not fully recovered from the terrible recession that was precipitated by the fall in global oil prices in 2014. Specifically, current provincial labour market indicators still show scars from the recent recession. Although economic growth has returned to the province, unemployment remains elevated, real wages are down, and the number of people receiving employment insurance is still elevated.

Meanwhile, policy changes in Alberta as well as in peer jurisdictions with whom the province competes for investment have gone in opposite directions in important respects. Specifically, a number of American states have in recent years embraced right-to-work laws, which the balance of evidence suggests boosts employment and personal income growth by enhancing flexibility in labour markets. At the same time, labour policy direction in Alberta has created challenges for employers in sectors that employ lower-skilled and less-experienced workers by substantially increasing the province's minimum wage to an extent unmatched in any other energy jurisdiction in either Canada or the United States.

While issues surrounding tax competitiveness (deservedly) receive substantial attention, these developments in the realm of labour policy that have compromised Alberta's ability to compete for investment should also be recognized and addressed. Any comprehensive policy strategy broadly aimed at restoring Alberta's competitiveness should therefore include an assessment of labour market policy, with a specific consideration of right-to-work legislation and arresting the upward trajectory of the minimum wage. By designing a business environment that fosters job creation and investment, policy makers can provide durable assistance to Alberta's struggling workforce.

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About the Author

Robert P. Murphy

Robert P. Murphy is a Senior Fellow at the Fraser Institute, Research Assistant Professor with the Free Market Institute at Texas Tech University, Research Fellow at the Independent Institute, and author of the widely acclaimed book, *Choice: Cooperation, Enterprise, and Human Action*. He is also Senior Economist for the Institute for Energy Research and a Senior Fellow with the Mises Institute. Murphy received his Ph.D. in economics from New York University. Previous positions include Visiting Assistant Professor of Economics at Hillsdale College, Visiting Scholar at New York University, Research Analyst at Laffer Associates, and Senior Fellow in Business and Economic Studies at the Pacific Research Institute. He runs the blog, *Free Advice*, and is also the author of *The Politically Incorrect Guide to Capitalism*, *The Politically Incorrect Guide to the Great Depression and the New Deal*, *The Study Guide to Man, Economy, and State with Power and Market*, *The Human Action Study Guide*, *The Study Guide to The Theory of Money & Credit* by Ludwig von Mises, and *Lessons for the Young Economist*. He has also written hundreds of economics articles for the layperson, has given numerous radio and television interviews on such outlets as *Fox Business* and *CNBC*, and is active on Twitter (@BobMurphyEcon).



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