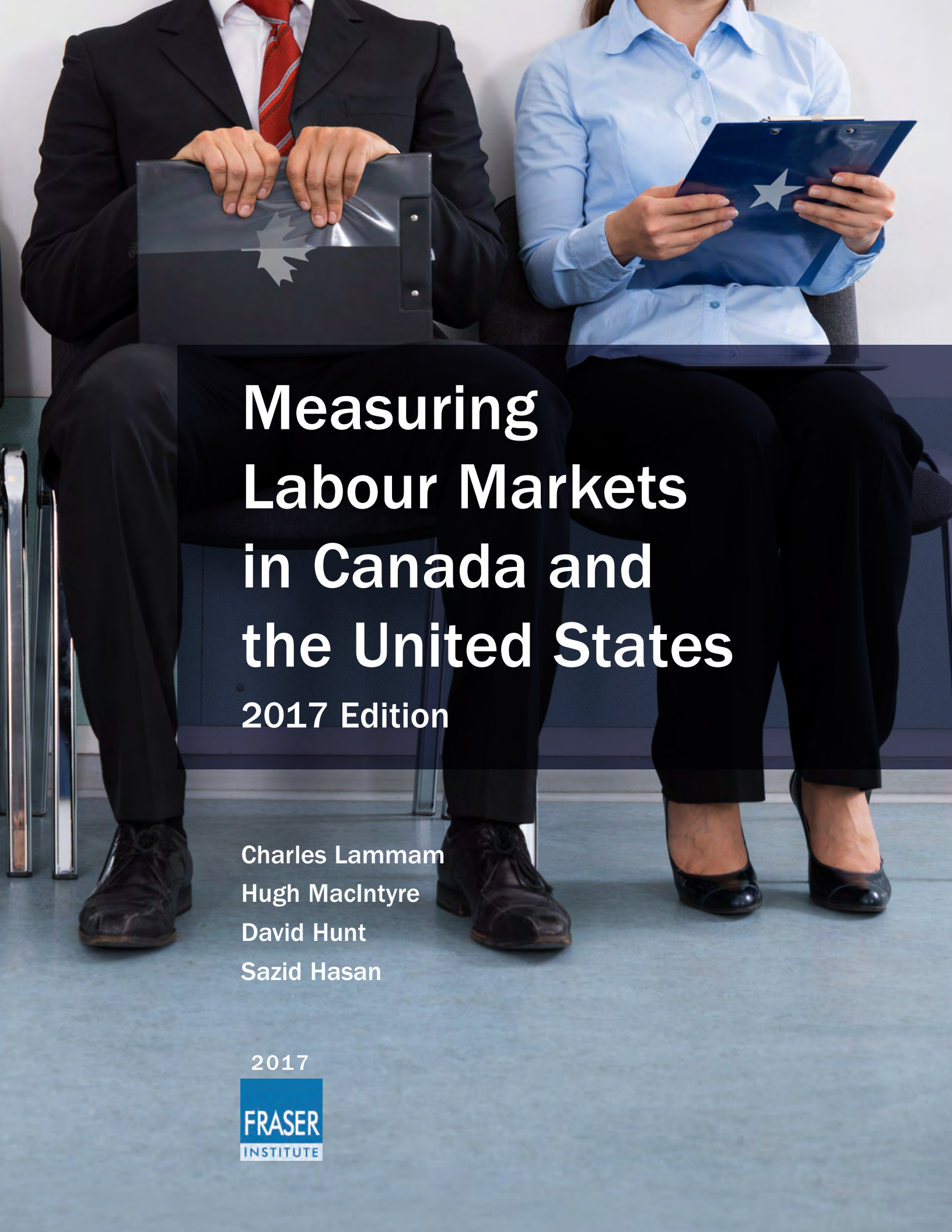

Measuring Labour Markets in Canada and the United States

2017 Edition

Charles Lammam
Hugh MacIntyre
David Hunt
Sazid Hasan

2017

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David Hunt, and Sazid Hasan

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Contents

Executive Summary

Labour markets are one of the most important components of an economy. They are the mechanism through which we allocate one of our most valuable and productive resources: human work, effort, creativity, and ingenuity. Labour markets match human skills, supplied by individuals seeking to earn a living, with the demand for labour by firms, governments, and households.

Because labour markets are important, the public is often inundated with news stories, usually about changes in employment levels or unemployment rates. However, such stories do not generally provide a clear picture of how a jurisdiction's labour market is performing. There is a need to measure the performance of labour markets to provide comparisons, the first step toward understanding differences in labour market conditions and addressing possible problems.

Measuring Labour Markets in Canada and the United States: 2017 Edition is the latest installment in ongoing research to assess the performance of labour markets. Indicators such as job creation, unemployment, and labour output are used to assess the performance of labour markets in the Canadian provinces and US states over the three-year period from 2014 to 2016.

The study calculates an Index of Labour Market Performance, which is a composite measure of labour market performance based on five equally weighted indicators: [1] average total employment growth, [2] average private-sector employment growth, [3] average unemployment rate, [4] average long-term unemployment, and [5] average output per worker. The index scores range from zero to 100. A higher index score means a jurisdiction has a stronger performing labour market while a lower index score indicates a labour market with weaker performance.

Overall, Canada performed poorly on the Index of Labour Market Performance. All but two Canadian provinces are ranked in the bottom half of the 60 jurisdictions, including the traditional economic engines of Canada, Alberta (ranked 31st, with an index score of 52.9 out of 100) and Ontario (ranked 44th, with a score of 47.7 out of 100).

Saskatchewan (score of 59.8, ranked 15th) and British Columbia (58.9, 17th) are the highest performing Canadian provinces, but neither is in the top 10 on the overall index. Six out of 10 Canadian provinces are in the bottom third (lowest 20 out of 60) of the index and four of the five lowest-ranked jurisdictions are Canadian provinces: Prince Edward Island (score of 32.5, ranked 56th), New Brunswick (31.4, 57th), Nova Scotia (31.3, 58th), and Newfoundland & Labrador (30.3, 59th). West Virginia tied with Newfoundland & Labrador for the lowest score on the Index of Labour Market Performance.

The results for Canada's four most populous provinces (Ontario, Quebec, Alberta, and British Columbia) are not encouraging. Ontario and Quebec both ranked in the bottom half of jurisdictions on all indicators with the exception of average long-term unemployment. British Columbia fared better, ranking in the top half of jurisdictions on each indicator but never ranking in the top 10. A notable result for Alberta is its low private-sector employment growth: Alberta ranked 55th out of 60 jurisdictions on this measure with average annual private-sector employment growth of negative 0.3%.

Delaware topped the list of Canadian provinces and US states for overall labour market performance over the three-year period. The state's strong performance in total employment growth (2nd out of 60 jurisdictions), employment growth in the private sector (tied for 2nd), and average output per worker (3rd) enabled it to achieve the highest overall index score of 77.5 out of 100. The US states in the West dominated the top of the rankings. Seven states from the West—Oregon, Utah, Idaho, Hawaii, Colorado, Arizona, and Washington—are among the top 10. All of the top 10 performing jurisdictions are US states.

Introduction

Labour markets are one of the most important components of an economy. They are the mechanism through which we allocate one of our most valuable and productive resources: human work, effort, creativity, and ingenuity. Labour markets match human skills, supplied by individuals seeking to earn a living, with the demand for labour by firms, governments, and households.

Because of its importance, the public is often inundated with news stories about the labour market, usually in the form of changes in unemployment rates or job creation numbers. However, such stories do not generally provide a clear picture of how a jurisdiction's labour market is performing. There is a need for a comprehensive measure of the performance of labour markets to allow comparisons, which is the first step toward understanding differences in labour market conditions and addressing possible problems.

This study is the latest edition of *Measuring Labour Markets in Canada and the United States*, which provides an overview of labour market conditions in the two countries over the three-year period from 2014 to 2016. [1] The next section of the report presents the results for the 10 Canadian provinces and 50 US states on the overall Index of Labour Market Performance. This is followed by a presentation and discussion of the results on the five specific indicators that make up the index. Appendix A provides methodological details and Appendix B examines indicators of labour market performance not included in the Index.

[1] The most recent previous edition is Karabegović, Gabler, and Veldhuis, 2012.

Index of Labour Market Performance

The Index of Labour Market Performance is a comprehensive measure of labour market performance in Canada and the United States (figure 1). It is based on the following five key indicators: [1] average total employment growth, [2] average private-sector employment growth, [3] average unemployment rate, [4] average long-term unemployment, and [5] average output per worker (or average labour productivity). It is important to consider all five indicators for a complete perspective on the state of labour market performance in any of the 60 jurisdictions included in the index. Examining any one indicator in isolation can lead to incomplete conclusions.

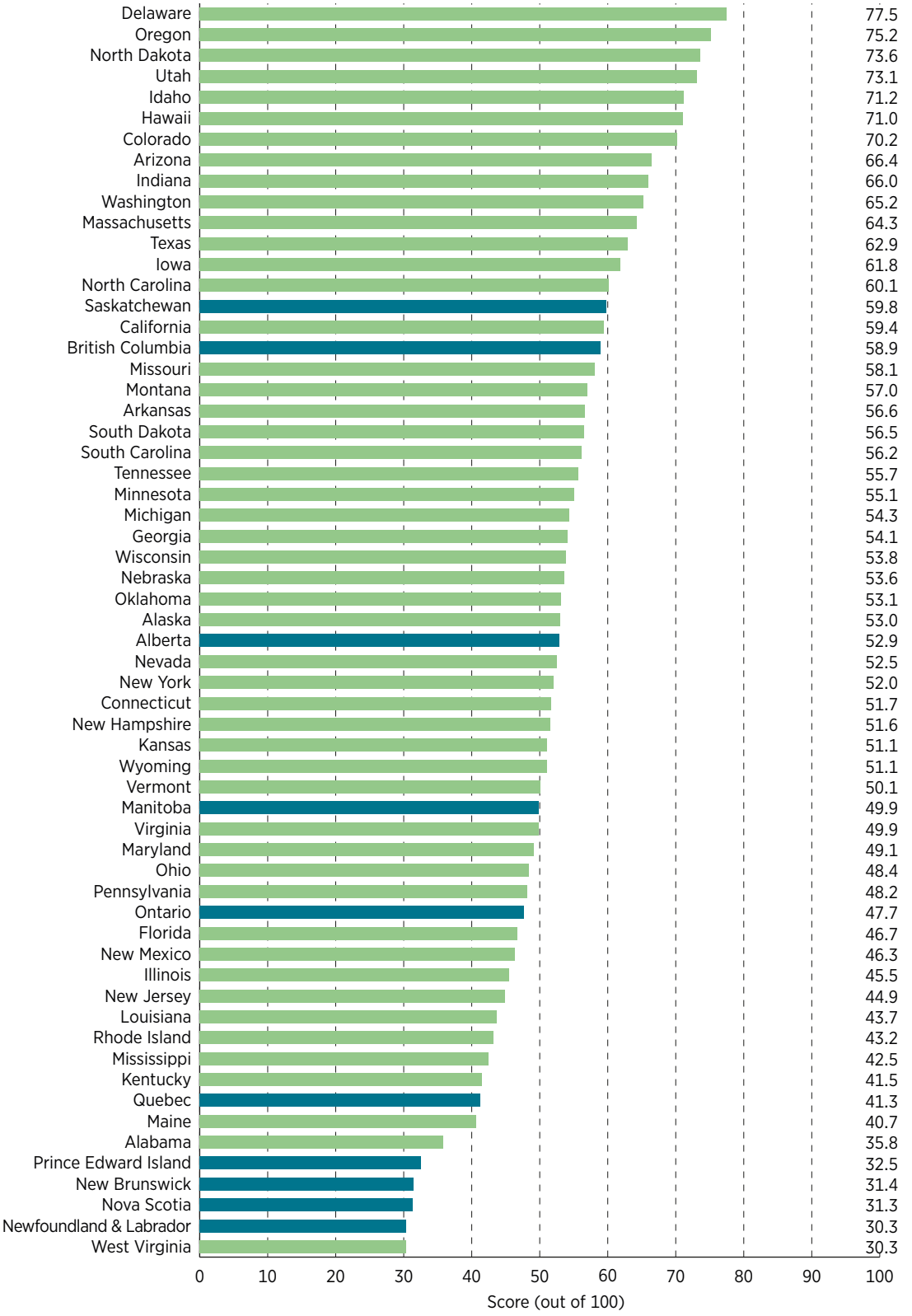
A comprehensive index is also valuable for comparisons among jurisdictions, as it allows us to rank the overall performance of jurisdictions based on a scoring system with values ranging from zero to 100. For each indicator, the lowest possible score is zero, which signals weak performance, and the highest possible score is 100, which signals strong performance. The scores of the five indicators are averaged, with all five indicators receiving equal weight, to obtain an overall index score. The jurisdictions are then ranked according to their final score. For a more detailed explanation of the methodology, see Appendix A. [2]

The data for the individual indicators are calculated using a three-year average (2014–2016) to measure current performance—minimizing recent anomalous data, while avoiding reliance on information that no longer reflects the performance of a given jurisdiction. [3]

[2] For each indicator, mean sample estimates were provided by Statistics Canada and the US Bureau of Labor Statistics, from their respective labour force and current population surveys.

[3] Previous editions of this report calculated the Index of Labour Market Performance using five-year averages instead of three-year averages. However, as a result of marked changes in the labour markets of certain jurisdictions (namely jurisdictions dependent upon production of energy, whose economies and labour markets struggled as commodity prices dropped), five-year averages do not provide an accurate picture of current performance. For example, using five-year averages would result in Alberta ranking 5th out of 60 jurisdictions though this does not reflect the current troubled state of Alberta's labour market. In fact, Alberta would rank second last (59th) if only 2016 data is used to calculate the Index. Using three-year averages balances the trade-offs between five-year averages and analysis based on data from a single year, which could be driven by anomalous data.

Figure 1: Index of Labour Market Performance (score out of 100), 2014–2016



Sources: see Indicators 1, 2, 3, 4, 5.

Observations

Overall, Canadian provinces performed poorly on the Index of Labour Market Performance (figure 1). All but two Canadian provinces are ranked in the bottom half of the 60 jurisdictions, including the traditional economic engines of Canada, Alberta (ranked 31st, with an index score of 52.9 out of 100) and Ontario (ranked 44th, with a score of 47.7) (table 1). Saskatchewan, with a score of 59.8, ranked 15th, and British Columbia, with a score of 58.9, ranked 17th; they are the highest performing Canadian provinces, but neither is in the top 10 on the overall index. Six out of 10 Canadian provinces are in the bottom third (lowest 20 out of 60) of the index and four of the five lowest ranked jurisdictions are Canadian provinces: Prince Edward Island (scoring 32.5 and ranked 56th), New Brunswick (31.4, 57th), Nova Scotia (31.3, 58th), and Newfoundland & Labrador (30.3, 59th). Newfoundland & Labrador tied West Virginia for the lowest score on the Index of Labour Market Performance.

All of the top performing jurisdictions are from the United States. Delaware ranked first overall with a score of 77.5 out of 100. It showed strong performance on total employment growth (ranked 2nd out of 60 jurisdictions), employment growth in the private sector (2nd), and output per worker (3rd). Delaware is the only state from the South in the top 10. [4] The Midwest had two, North Dakota (3rd overall, with a score of 73.6) and Indiana (9th, scoring 66.0). The Northeast had none. And the West dominated, with seven states ranking in the top 10—Oregon (2nd, 75.2), Utah (4th, 73.1), Idaho (5th, 71.2), Hawaii (6th, 71.0), Colorado (7th, 70.2), Arizona (8th, 66.4), and Washington (10th, 65.2). [5]

[4] Throughout this study, US states are often grouped into geographical regions. Definitions for these geographical regions come from the United States Census Bureau's *Geographic Areas Reference Manual* (US, Dep't of Commerce, Bureau of the Census, 1994). In this manual, the United States is divided into four major regions: West, Midwest, Northeast, and South. Each of these regions is further subdivided. The West consists of the Pacific region (Alaska, Hawaii, Washington, Oregon, and California) and the Mountain region (Idaho, Montana, Wyoming, Nevada, Utah, Colorado, Arizona, and New Mexico). The Midwest consists of the West North Central region (North Dakota, South Dakota, Minnesota, Nebraska, Iowa, Kansas, and Missouri) and the East North Central region (Wisconsin, Illinois, Indiana, Ohio, and Michigan). The East North Central group of states is often referred to as the Industrial Belt; the two terms are used interchangeably throughout the study. The Northeast region consists of the New England region (Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island) and the Middle Atlantic region (New York, New Jersey, and Pennsylvania). The South consists of the West South Central region (Oklahoma, Texas, Arkansas, and Louisiana), the East South Central region (Kentucky, Tennessee, Mississippi, and Alabama), and the South Atlantic region (Maryland, Delaware, West Virginia, Virginia, North Carolina, South Carolina, Georgia, and Florida).

[5] Although the Midwest did not have as many top performing jurisdictions as the West, there were significant improvements worth highlighting, in Indiana and Michigan. In previous editions of *Measuring Labour Markets in Canada and the United States*, Indiana had always been near the bottom of the rankings (for instance, in the 2012 edition, Indiana ranked 52nd). That has changed in the current edition, with Indiana improving dramatically to a rank of 9th. Michigan also experienced notable progress. After ranking

Table 1: Summary of provincial and state rankings (out of 60), labour market performance

	Index of Labour Market Performance, 2016		Average total employment growth, 2014–2016		Average private employment growth, 2014–2016		Average unemployment rate, 2014–2016		Average long-term unemployment, 2014–2016		Average output per worker, 2013–2015	
	Rank	Score	Rank	%	Rank	%	Rank	%	Rank	%	Rank	CA$2015
Alberta	31	52.9	40	0.6	55	−0.3	30	5.4	7	16.5	17	145,214
British Columbia	17	58.9	20	1.7	15	2.4	25	5.1	13	18.9	55	105,987
Manitoba	40	49.9	45	0.4	47	0.2	21	4.8	4	14.8	56	102,610
New Brunswick	57	31.4	54	−0.3	57	−0.5	58	8.4	10	17.5	58	92,188
Newfoundland	59	30.3	60	−1.4	47	0.2	60	10.9	8	16.7	38	127,991
Nova Scotia	58	31.3	57	−0.5	58	−0.7	57	7.4	11	18.1	59	88,681
Ontario	44	47.7	33	0.9	32	1.1	43	6.0	20	20.9	52	108,271
Prince Edward Is.	56	32.5	59	−1.2	46	0.4	59	8.7	2	12.7	60	82,715
Quebec	53	41.3	40	0.6	43	0.5	50	6.4	19	20.2	57	92,387
Saskatchewan	15	59.8	48	0.2	43	0.5	10	4.1	1	12.4	23	139,427
Alabama	55	35.8	45	0.4	47	0.2	46	6.3	52	31.6	45	121,979
Alaska	30	53.0	54	−0.3	56	−0.4	53	6.6	14	19.3	2	195,967
Arizona	8	66.4	2	3.1	3	4.1	43	6.0	29	24.5	43	123,138
Arkansas	20	56.6	16	2.1	21	2.0	25	5.1	29	24.5	47	118,423
California	16	59.4	16	2.1	17	2.2	50	6.4	44	29.7	7	170,865
Colorado	7	70.2	5	2.6	7	3.2	10	4.1	26	23.7	21	140,900
Connecticut	34	51.7	23	1.4	30	1.2	39	5.8	56	34.6	4	178,588
Delaware	1	77.5	2	3.1	2	4.2	23	5.0	45	30.0	3	193,015
Florida	45	46.7	13	2.2	18	2.1	31	5.5	59	36.7	46	118,491
Georgia	26	54.1	13	2.2	4	3.7	45	6.2	57	36.1	26	136,611
Hawaii	6	71.0	9	2.5	9	3.1	7	3.7	35	26.0	13	154,470
Idaho	5	71.2	5	2.6	4	3.7	12	4.3	9	16.9	54	106,599
Illinois	47	45.5	28	1.1	25	1.6	46	6.3	58	36.2	11	156,460
Indiana	9	66.0	5	2.6	13	2.6	23	5.0	21	21.8	27	134,593
Iowa	13	61.8	37	0.8	32	1.1	8	3.9	4	14.8	33	130,959
Kansas	36	51.1	47	0.3	35	1.0	12	4.3	26	23.7	35	129,909
Kentucky	52	41.5	51	0.0	47	0.2	34	5.6	34	25.7	41	125,566
Louisiana	49	43.7	44	0.5	51	−0.1	46	6.3	35	26.0	16	145,973
Maine	54	40.7	48	0.2	51	−0.1	15	4.6	32	24.8	53	106,810
Maryland	41	49.1	25	1.3	29	1.3	25	5.1	55	34.3	14	151,073
Massachusetts	11	64.3	18	1.8	12	2.7	21	4.8	48	30.2	5	175,509
Michigan	25	54.3	13	2.2	18	2.1	42	5.9	42	28.4	36	129,322

Table 1 (con't): Summary of provincial and state rankings (out of 60), labour market performance

	Index of Labour Market Performance, 2016		Average total employment growth, 2014–2016		Average private employment growth, 2014–2016		Average unemployment rate, 2014–2016		Average long-term unemployment, 2014–2016		Average output per worker, 2013–2015	
	Rank	Score	Rank	%	Rank	%	Rank	%	Rank	%	Rank	CA$2015
Minnesota	24	55.1	33	0.9	53	−0.2	8	3.9	15	19.5	22	140,303
Mississippi	51	42.5	25	1.3	24	1.7	53	6.6	50	30.9	50	112,580
Missouri	18	58.1	20	1.7	13	2.6	28	5.2	31	24.7	42	124,674
Montana	19	57.0	23	1.4	26	1.5	12	4.3	17	19.8	49	113,064
Nebraska	28	53.6	51	0.0	53	−0.2	3	3.2	15	19.5	20	141,666
Nevada	32	52.5	9	2.5	18	2.1	56	6.8	46	30.1	30	132,375
New Hampshire	35	51.6	28	1.1	41	0.6	4	3.5	37	26.7	39	126,985
New Jersey	48	44.9	28	1.1	36	0.9	39	5.8	60	37.0	9	164,069
New Mexico	46	46.3	48	0.2	7	3.2	55	6.7	51	31.3	32	131,399
New York	33	52.0	33	0.9	41	0.6	31	5.5	54	34.1	1	196,667
North Carolina	14	60.1	11	2.4	6	3.4	36	5.7	48	30.2	25	137,362
North Dakota	3	73.6	39	0.7	26	1.5	1	2.9	3	13.2	6	172,456
Ohio	42	48.4	33	0.9	39	0.8	28	5.2	39	27.7	24	138,219
Oklahoma	29	53.1	40	0.6	32	1.1	15	4.6	23	21.9	34	130,635
Oregon	2	75.2	1	3.6	1	4.3	39	5.8	24	22.5	18	143,180
Pennsylvania	43	48.2	37	0.8	36	0.9	31	5.5	40	28.0	19	142,248
Rhode Island	50	43.2	28	1.1	30	1.2	46	6.3	53	32.4	29	133,051
South Carolina	22	56.2	5	2.6	10	2.9	36	5.7	43	29.2	48	116,822
South Dakota	21	56.5	32	1.0	43	0.5	2	3.1	21	21.8	31	132,133
Tennessee	23	55.7	18	1.8	16	2.3	34	5.6	38	27.1	28	133,759
Texas	12	62.9	22	1.6	23	1.9	19	4.7	28	23.8	12	155,769
Utah	4	73.1	4	2.8	11	2.8	5	3.6	12	18.4	37	128,954
Vermont	38	50.1	53	−0.2	36	0.9	5	3.6	18	19.9	51	111,448
Virginia	39	49.9	40	0.6	39	0.8	15	4.6	41	28.3	15	146,215
Washington	10	65.2	12	2.3	21	2.0	36	5.7	25	23.3	10	163,811
West Virginia	59	30.3	54	−0.3	58	−0.7	52	6.5	46	30.1	44	122,643
Wisconsin	27	53.8	25	1.3	28	1.4	19	4.7	33	24.9	40	126,449
Wyoming	36	51.1	58	−0.6	60	−1.4	15	4.6	6	15.4	8	166,497
Canada (10 provinces)				0.7		0.8		5.9		19.4		109,190
United States (50 states)				1.6		1.8		5.4		29.1		147,397

Sources: see figure 1, Indicators 1,2, 3, 4, 5.

Indicator 1: Average total employment growth

Indicator 1 measures the average growth rate of total employment for each jurisdiction from 2014 to 2016. Total employment includes full-time and part-time employment in the private (business and non-profit), self-employment, and public (government) sectors of the economy. [6] Data on the average total employment growth for all 60 jurisdictions is summarised in the figure below. [7]

Observations

Only one Canadian province ranked in the top 20 on this indicator. British "Columbia, the highest ranked province, ranked 20th with an average total employment growth rate of 1.7%. [8] The rate of growth in all the other provinces fell below 1%. With a meagre average total employment growth rate of 0.9%, Ontario ranked 33rd and is the second best performing Canadian province on this indicator. Four provinces had negative average total employment growth, including three of the bottom four ranking jurisdictions—Newfoundland & Labrador (ranked 60th at –1.4%), Prince Edward Island (59th, –1.2%), Nova Scotia (57th, –0.5%), and New Brunswick (54th, –0.3%). Three other provinces also ranked in the bottom 20. Manitoba ranked 45th (0.4%), while Alberta and Quebec tied at 40th (0.6%).

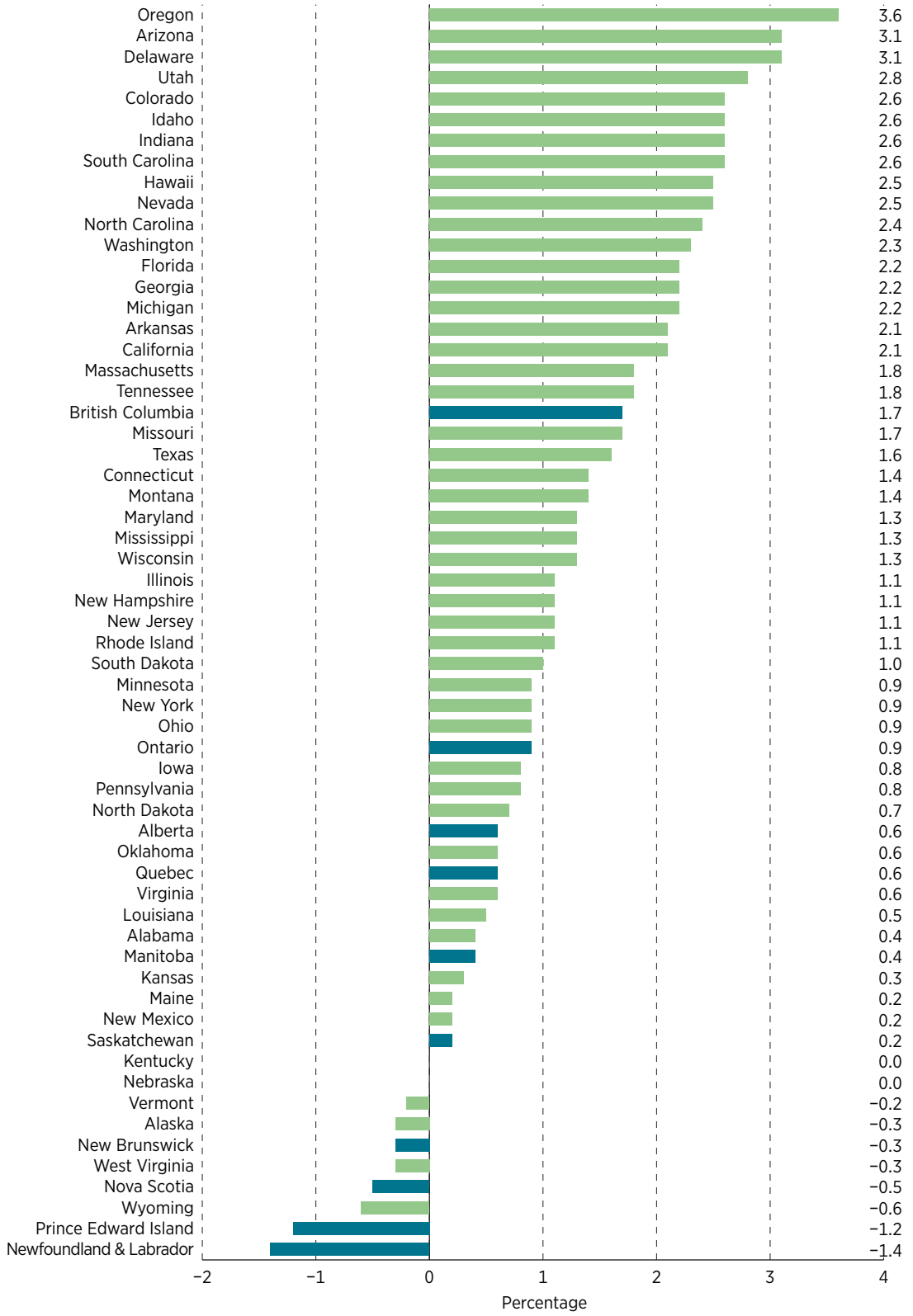
last (60th) in the 2012 edition, Michigan ranked in the top half (25th) in 2017. Notably, both Indiana and Michigan introduced right-to-work legislation in 2012, which likely had a positive effect on labour market performance. Although a complete analysis is outside the scope of the current study, one can note that, for the years of data covered by the current edition (2014–2016), 17 (over ⅔) of the 25 states with right-to-work legislation were in the top half of the rankings. At the time of writing, West Virginia, Kentucky, and Missouri were in the process of adopting right-to-work laws.

[6] There is a small difference between the Canadian and US definitions of "employable": Canada tabulates employment data for those of age 15 and above while the United States compiles employment data for those age 16 and above.

[7] One aspect of the labour market that is not reflected in the Index of Labour Market Performance is how labour market conditions can differ for different individuals depending on age and skill-set. For example, employment rates for youths (aged 15 to 24) tend to be lower and unemployment rates, higher than the general population. There is an interesting contrast between the trend of the employment rate for youths in Canada and the United States. In Canada, the youth employment rate fell from 59.5% in 2008 to 55.3% in 2009 and then remained largely flat for the subsequent years (Statistics Canada, 2017d). In the United States, youth employment rates fell over a longer period from 59.7% in 2000 to 45% in 2010—with about two fifths of the overall decline taking place from 2008 to 2010. However, unlike Canada's, the US youth employment rate has begun to recover, rising to 49.4% in 2016 (US, Dep't of Labor, Bureau of Labor Statistics, 2017d).

[8] Throughout this study, rankings of individual indicators are based on rounded numbers but the index scores are derived from unrounded numbers.

Indicator 1: Average total employment growth (%), 2014–2016



Sources: Statistics Canada, 2017b; US, Dep't of Labor, Bureau of Labor Statistics, 2017b; calculations by authors.

All of the top 10 jurisdictions for average total employment growth rate are from the United States. The top three are Oregon (with 3.6% growth) and Delaware and Arizona (both with 3.1% average total employment growth). Including Oregon and Arizona, seven of the top 10 jurisdictions are states from the West—Utah (2.8%), Idaho (2.6%), Colorado (2.6%), Nevada (2.5%), and Hawaii (2.5%). In addition to Delaware, one other state is from the South (South Carolina, 2.6%), and one is from the Midwest (Indiana, 2.6%). None are from the Northeast. No US region stood out in the bottom 10, as all four census regions are represented.

Indicator 2: Average private-sector employment growth

An important aspect is missing from the first indicator of labour market performance: the nature of employment growth. Total employment growth does not reveal whether employment growth was driven by growth in the public or the private sector. Strong employment growth that is largely fuelled by the public sector can have harmful economic consequences (Clemens, Karabegović, and Veldhuis, 2003; Karabegović, Gabler, and Veldhuis, 2012; and Di Matteo, 2015). The second indicator of labour market performance measures the average growth in private-sector employment for each jurisdiction from 2014 to 2016; growth is defined as new full-time and part-time private-sector employment. [9] The average private-sector employment growth for all 60 jurisdictions is summarised in the figure below.

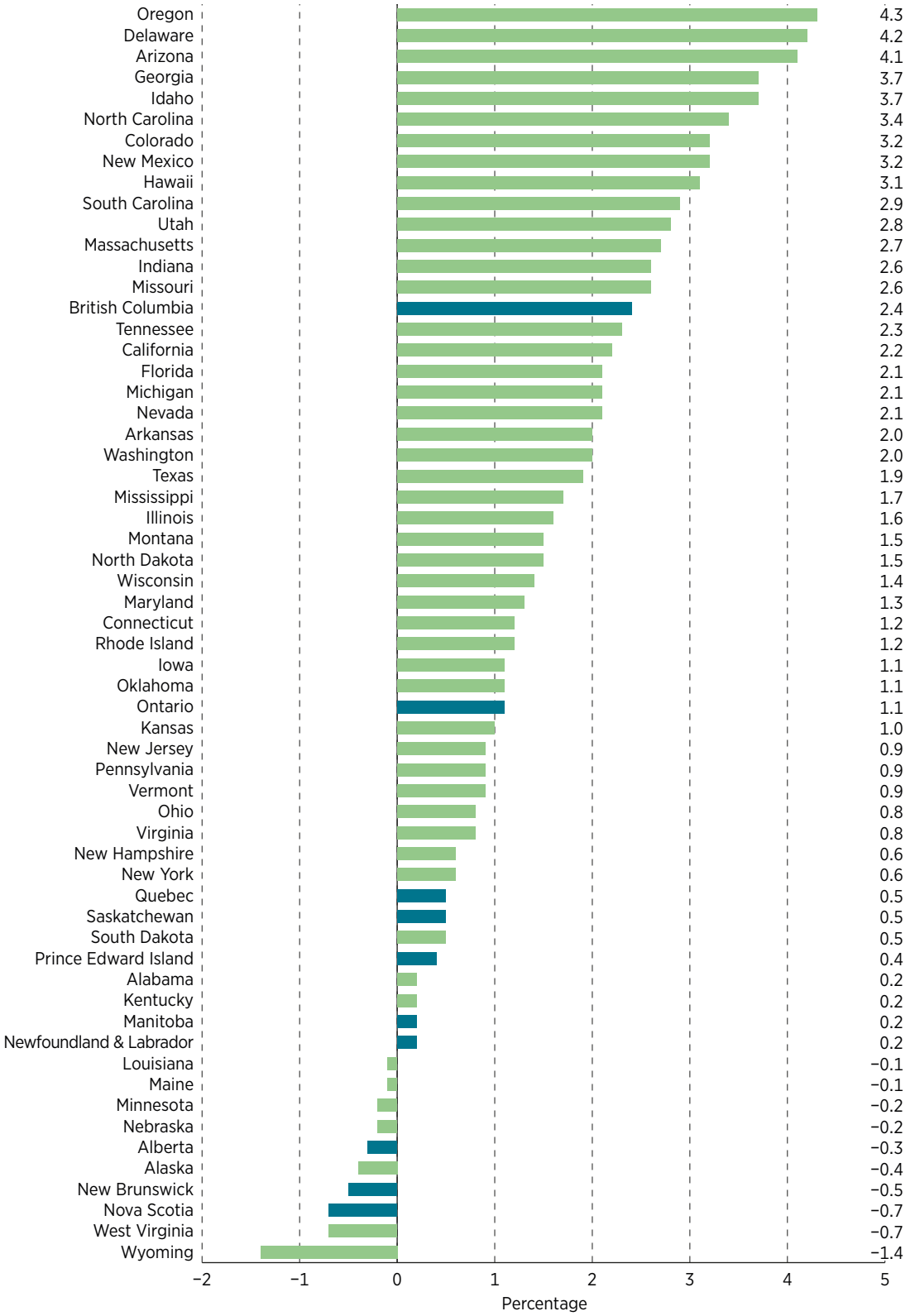
Observations

No Canadian provinces are in the top 10 on the rankings for average private-sector employment growth. British Columbia, with a growth rate of 2.4%, is the only province to rank in the top 20 (15th). Ontario, the next highest ranked province (32nd), had average private-sector employment growth of 1.1%, half British Columbia's rate. The remaining eight Canadian provinces are ranked among the bottom 20 jurisdictions. Three provinces experienced an average decline in private-sector employment: Alberta (55th, –0.3%), New Brunswick (57th, –0.5%), and Nova Scotia (58th, –0.7%). Alberta's near-bottom ranking is noteworthy, as it has historically ranked near the top on this indicator in past editions of the index.

As on the first indicator, Oregon led all jurisdictions with an average growth rate of 4.3% in private-sector employment over the three-year period. Delaware is next at 4.2%,

[9] In this instance as well, Canada tabulates employment data for those of age 15 and above while the United States compiles employment data for those age 16 and above.

Indicator 2. Average private-sector employment growth (%), 2014–2016



Sources: Statistics Canada, 2017b; US, Dep't of Labor, Bureau of Labor Statistics, 2017d; calculations by authors.

followed by Arizona (4.1%), Idaho (3.8%), and Georgia (3.8%). The top 10 rankings comprised two census regions of the United States: six are from the West—Oregon (1st), Arizona (3rd), Idaho (tied for 4th), New Mexico and Colorado (tied for 7th), and Hawaii (9th). Four are from the South—Delaware (2nd), Georgia (tied for 4th), North Carolina (6th), and South Carolina (10th). None are from the Northeast or Midwest.

Each of the jurisdictions ranked in the bottom 10 experienced an average decrease in private-sector employment, ranging from –0.1% (in Maine and Louisiana) to –1.4% (in Wyoming), over the three-year period. All four US census regions are represented in the bottom 10: two from the South (Louisiana and West Virginia), two from the West (Alaska and Wyoming), two from the Midwest (Nebraska and Minnesota), and one from the Northeast (Maine).

Total and private-sector employment growth compared

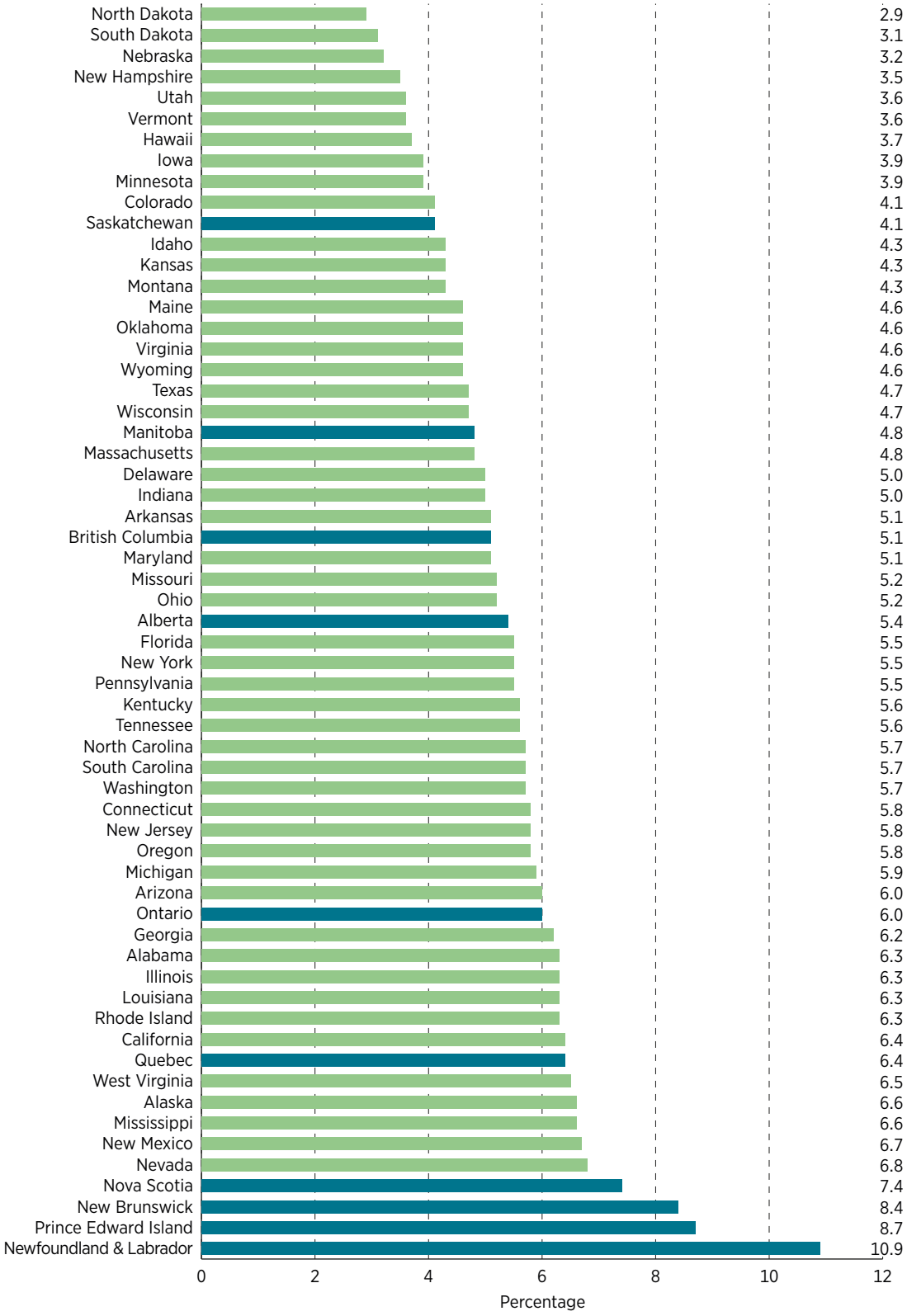
The relationship between the results on the first indicator of labour market performance—average total employment growth—and the second indicator—average private-sector employment growth—is noteworthy. Several jurisdictions were in the midst of altering the size of their public sector during the period analyzed. There is, therefore, a stark contrast between the two indicators for those jurisdictions. For example, Alberta's average total employment growth was 0.6% but its private-sector employment growth declined by negative 0.3%, indicating an increase in the province's public-sector employment. Prince Edward Island and Newfoundland & Labrador show the opposite: significant total employment declines in spite of modest private-sector gains, indicating a reduction in the public sector.

Indicator 3: Average unemployment rate

Indicator 3 reflects the first two indicators in that an economy that is unable to generate employment growth will also, to a certain extent, have a higher unemployment rate, assuming a steady flow of new entrants to the labour force. Indicator 3 measures the three-year (2014–2016) average percentage of citizens who, though actively seeking work, were unable to find it. [10]

[10] The R3 unemployment rate was used for the Canadian provinces, instead of a traditional (that is, official) unemployment rate. R3 alters the official Canadian rates to make them comparable to the US unemployment rates. Even though the R3 unemployment rates are slightly lower than the official unemployment rate, the difference is less than one percentage point, on average, for Canada.

Indicator 3. Average unemployment rate (%), 2014–2016



Sources: Statistics Canada, 2017d; US, Dep't of Labor, Bureau of Labor Statistics, 2017b; calculations by authors.

An important limitation of this measure is that a reduction in unemployment could occur for two reasons. First, it could be that individuals are moving from being unemployed to being employed. Second, it could be that individuals are abandoning an active search for work and leaving the labour force altogether (see the discussion of labour force participation in the next section). An individual may leave the labour force as a result of age (that is, retire), because they have suffered some calamity that leaves them too injured or sick to work, as a result of a change in lifestyle chosen (for instance, staying home with young children), because they feel discouraged from the lack of job opportunities, or for some other reason. In any case, the unemployment rate by itself can only reveal part of what is happening in a labour market. This is one reason that an index that uses multiple measures, such as employment growth, is used to capture labour market conditions across jurisdictions. Average unemployment rates for all 60 jurisdictions are summarised in the figure below.

Observations

Canada, again, performed poorly on this indicator. The Atlantic Provinces had the four highest average unemployment rates of all 60 jurisdictions (Newfoundland & Labrador at 10.9%, Prince Edward Island at 8.7%, New Brunswick at 8.4%, and Nova Scotia at 7.4%) and therefore ranked the lowest. Canada's two most populous provinces, Ontario and Quebec, also underperformed. Ontario ranked in the bottom 20 (43rd) with an average unemployment rate of 6.0%. Quebec fared even worse, ranking in the bottom 10 (50th) with an average unemployment rate of 6.4%. Saskatchewan is the highest-ranking Canadian province on this indicator, placing 11th overall with an average unemployment rate of 4.1%, followed by Manitoba (ranked 21st at 4.8%). Alberta, which for over a decade had one of the lowest unemployment rates of any jurisdiction, ranked 30th with an average unemployment rate of 5.4%.

With the exception of Alberta, jurisdictions in the Prairies performed strongly not only in Canada but in the United States too. The four Great Plain states of the Midwest had exceptionally low unemployment rates—North Dakota ranked 1st with the lowest average unemployment rate (2.9%), followed by South Dakota (2nd at 3.1%) and Nebraska (3rd at 3.2%). Kansas ranked slightly outside the top 10 at 12th (4.3%). A total of five Midwest states are in the top 10, along with three West and two Northeast states. None are from the South, although all jurisdictions that ranked in the top 10 are from the United States.

Notably, Newfoundland & Labrador's average unemployment rate of 10.9% is over two and a half times greater than the rate of the top-ranked Canadian province, Saskatchewan, and more than three and a half times higher than the rate of the

top-ranked US state, North Dakota. And, in stark contrast, the two Northeast states bordering eastern Canada—New Hampshire (3.5%) and Vermont (3.6%)—are in the top 10, with less than half the unemployment rate of any Atlantic province.

Indicator 4. Average long-term unemployment

The fourth indicator of labour market performance is the average percentage of the unemployed who have been out of work for 27 weeks. It is an adjunct to the previous measure and is intended to indicate the severity (or long-term nature) of unemployment, as the labour market of two jurisdictions with similar unemployment rates may face different problems if the extent of long-term unemployment in one or the other is drastically different. This indicator measures the percentage of the unemployed experiencing unemployment for 27 weeks or longer from 2014 to 2016. The result for all 60 jurisdictions are summarised in the figure below.

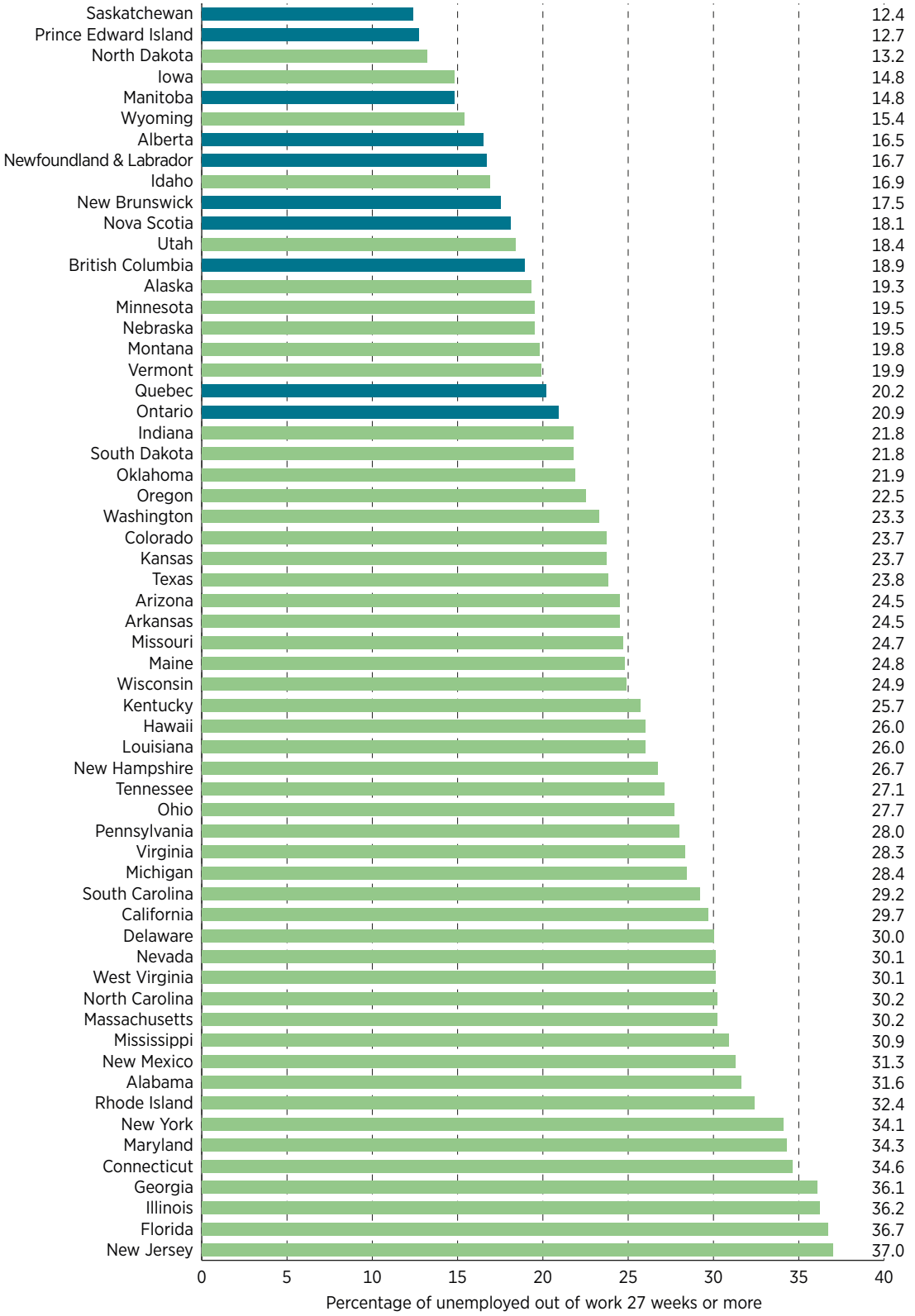
Observations

Saskatchewan ranked first, with the lowest percentage of its unemployed (12.4%) being out of work for 27 weeks or longer. Following were Prince Edward Island (12.7%) and North Dakota (13.2%). Overall, Canadian jurisdictions performed better on the severity of long-term unemployment than on the unemployment rate. Six provinces ranked among the top 10—Saskatchewan (1st), Prince Edward Island (2nd), Manitoba (4th), Alberta (7th), Newfoundland & Labrador (8th), New Brunswick (10th). The remaining four provinces all ranked in the top 20—Nova Scotia (11th), British Columbia (13th), Quebec (19th), Ontario (20th). [11]

Only four US states are in the top 10: two Midwest—North Dakota (3rd), Iowa (4th)—and two West states—Wyoming (6th), Idaho (9th). The bottom 30 jurisdictions are all US states—13 from the South, eight Northeast, five Midwest, and four West. New Jersey ranked last, with 37.0% of its unemployed out of work for 27 weeks or longer, and the situation in Florida was nearly as bad, at 36.7%.

[11] Nova Scotia, New Brunswick, Prince Edward Island, and Newfoundland & Labrador have the highest unemployment rates among Canadian provinces and US states, yet periods of unemployment in those jurisdictions are of relatively short duration. This could be explained by the presence of seasonal workers, such as those in the fishing industry, who are unemployed for a significant portion of the year but not more than the 27-week threshold of this measure. Needless to say, more detailed analysis is required to support this hypothesis.

Indicator 4: Average long-term unemployment as a percentage of total unemployed, 2014–2016



Sources: Statistics Canada, 2017c; US, Dep't of Labor, Bureau of Labor Statistics, 2017d; calculations by authors.

Indicator 5. Average output per worker

A final indicator of a well-functioning labour market is high and growing labour productivity. The ability to produce more with the same amount of labour translates into higher compensation for workers (including wages, salaries, and other benefits). A common measure of labour productivity is output per hour of labour work. [12] However, data on the number of hours worked is not available for all US states (although it is available for the Canadian provinces). In place of this preferred measure, the final indicator of labour market performance measures the average real gross domestic product (GDP) per worker from 2013 to 2015, adjusted for purchasing power parity (PPP). [13] This indicator reveals the average total value of goods and services produced per worker over the three-year period. Average output per worker for all 60 jurisdictions is summarised in the figure below.

Observations

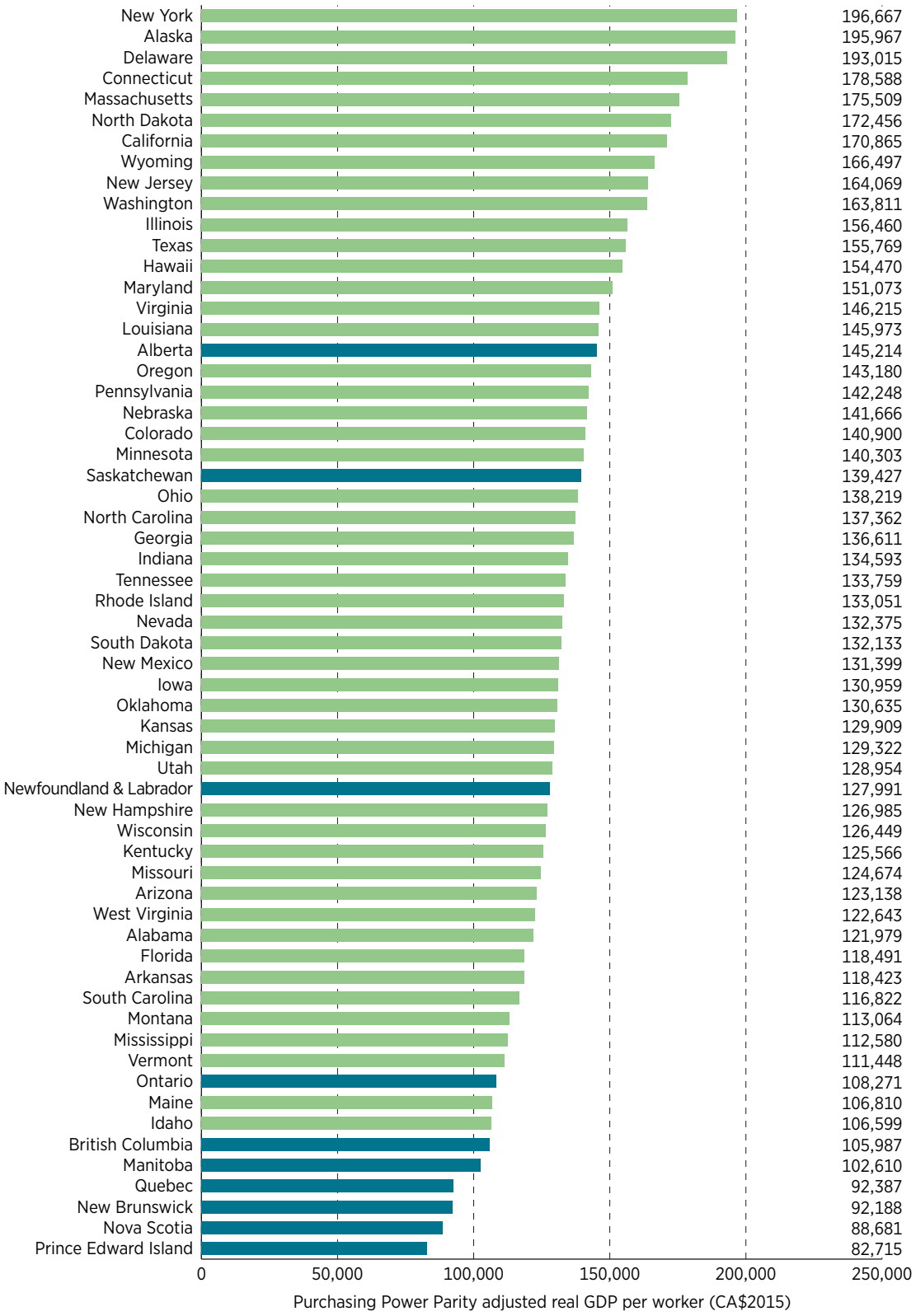
The six least productive jurisdictions are all Canadian provinces—Prince Edward Island (ranked 60th), Nova Scotia (59th), New Brunswick (58th), Quebec (57th), Manitoba (56th), and British Columbia (55th). Quebec and the three Maritime provinces had an average GDP per worker of less than half the top ranked jurisdiction, New York ($196,667). Ontario ranked 52nd on this indicator. Seven of the 10 lowest ranked jurisdictions are Canadian. Alberta, in 17th place, was the top-ranked Canadian province, with an average GDP per worker of $145,214. Saskatchewan is the only other Canadian province in the top half of the rankings, with an average GDP per worker of $139,427.

The Northeast US states are the most productive per worker, followed by states in the West. These two regions each had four states in the top 10—New York ($196,667), Connecticut ($178,588), Massachusetts ($175,509), and New Jersey ($164,069) from the Northeast, and Alaska ($195,967), California ($170,865), Wyoming ($166,497), and Washington ($163,811) from the West. However, the two least productive states are also from the West and Northeast: Idaho (ranked 54th) had an average GDP per worker of $106,599 and Maine (53rd) had $106,810 per worker. Overall, US states significantly out-performed Canadian provinces, with the 50 states averaging $147,397 GDP per worker compared to an average of $109,190 for the 10 Canadian provinces.

[12] Research shows that, on a national level, Canada trails the United States on this measure (see Baldwin, Leung, and Rispoli, 2014).

[13] An average for 2013–2015 was used because data on provincial GDP was not available for 2016. The other four indicators of labour market performance use averages for 2014–2016.

Indicator 5. Average output per worker (adjusted GDP, CA$2015), 2013–2015



Sources: OECD, 2017; Statistics Canada, 2016c, 2017b; US, Dep't of Commerce, Bureau of Economic Analysis, 2017; US, Dep't of Labor, Bureau of Labor Statistics, 2017b; calculations by authors.

Conclusion

The Index of Labour Market Performance shows that labour markets in Canadian provinces have generally under-performed compared to those in many US states. Indeed, Canadian provinces generally rank poorly on four out of the five indicators used in the index. Given the importance of labour markets for the economy and general prosperity, this is a worrisome result for Canadians. The next step for research is to better understand what is holding back Canada's labour markets and, in particular, the extent to which the cause is external factors such as changes in commodity prices or counter-productive government policies.

Appendix A. Methodology

Computing the Index of Labour Market Performance

The Index of Labour Market Performance assesses the performance of labour markets in the 10 Canadian provinces and 50 US states across five indicators:

1. average total employment growth (2014–2016)
2. average private-sector employment growth (2014–2016)
3. average unemployment rate (2014–2016)
4. average long-term unemployment (2014–2016)
5. average output per worker (2013–2015). [1]

Each indicator is standardized so that the lowest possible score is zero and the highest possible score is 100. The scores of the five indicators are then averaged, with all five indicators given equal weighting, to obtain an overall score ranging from zero to 100. The jurisdictions are then ranked according to their final score.

Depending on whether higher values are indicative of better or worse performance of the labour market, alternative formulas are used to transform the five indicators to a zero-to-100 scale. When higher values are indicative of better labour market performance, the formula used to derive the zero-to-100 ratings is:

$$(V_i - V_{min}) / (V_{max} - V_{min}) \times 100.$$

V_i is the jurisdiction's actual value for the indicator, V_{max} is the maximum value among all of the jurisdictions, and V_{min} is the minimum value among all of the jurisdictions. A jurisdiction's rating will be 100 when its value for the indicator is the highest among all jurisdictions and zero when it is the lowest among all the jurisdictions.

When higher values are indicative of worse labour market performance, the formula used to derive the zero-to-100 ratings is:

$$(V_{max} - V_i) / (V_{max} - V_{min}) \times 100.$$

[1] The GDP data for the Canadian provinces are not available for 2016 at this time and thus the data for the period 2013 to 2015 had to be used.

Appendix B. Other Important Labour Market Performance Indicators

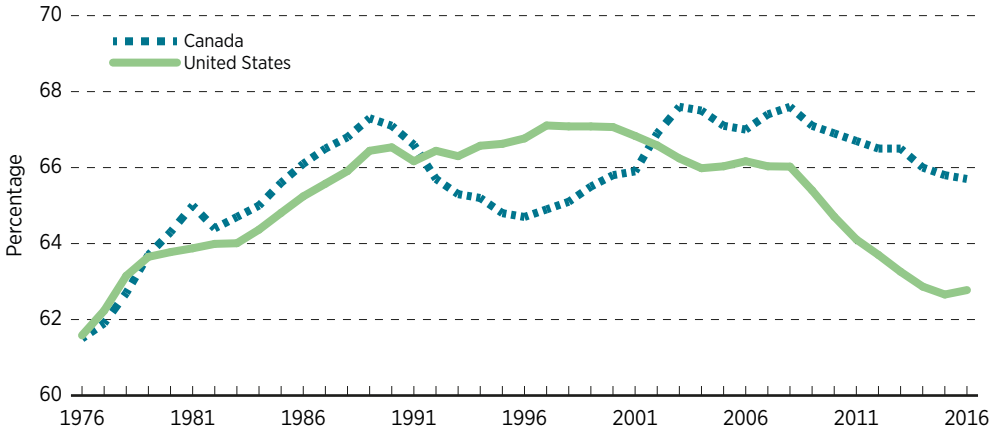
There are three other indicators of labour market performance that are noteworthy but not included in the Index of Labour Market Performance: [1] participation rate, [2] migration, and [3] time lost due to labour disputes. The latter two are not part of the index because the data for Canadian provinces and US states are either not comparable or lack sufficient detail to draw accurate conclusions. Nevertheless, migration and time lost due to labour disputes are important indicators of labour market performance, so they are examined here, along with the participation rate.

1. Participation rate

The labour force participation rate is the number of people in the labour force as a percentage of the working age population. The labour force comprises individuals who are employed or unemployed but looking for work. In other words, the participation rate is the percentage of those old enough to work that either have a job or want one. The labour force participation rate is important for understanding changes in the unemployment rate. While a declining unemployment rate can be driven by a greater proportion of individuals finding work, it can also be driven by people leaving the labour force. Examining trends in the participation rate can help clarify why the unemployment rate is changing.

It is possible for the participation rate to drop following an economic recession if workers get discouraged and stop looking for employment. The rate can also drop for structural reasons such a demographic shift in the population. For instance, a structural drop in the participation rate is likely to occur as a result of baby boomers entering retirement (Fields, Uppal, and LaRochelle-Côté, 2017). While it is beyond the scope of this study to examine the causes of shifts in the participation rate, it is notable that in recent years the overall participation rate has declined in both Canada and the United States. Figure B1 displays the labour participation rate in both countries from 1976 to 2016. It shows a downward trend in the overall labour force participation rate since 2008. In Canada, the overall participation rate fell from 67.6% in 2008 to 65.7%

Figure BI: Labour force participation rate (%, ages 15+) in Canada and the United States, 1976–2016

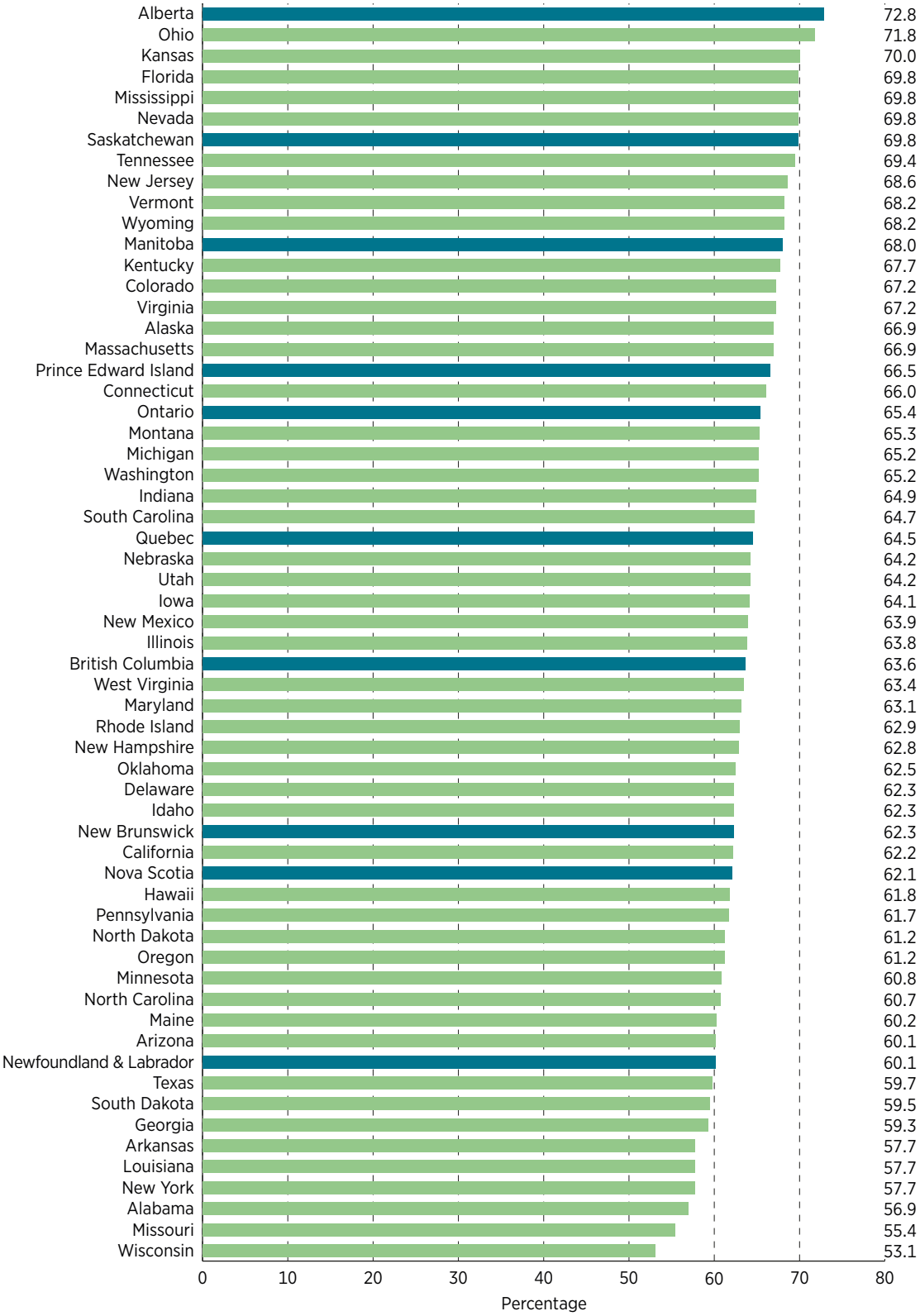


Note: The labour force participation rate in Canada is measured for ages 15 and up while in the United States it is measured for ages 16 and up.
Sources: Statistics Canada, 2017a; US, Dep't of Labor, Bureau of Labor Statistics, 2017c.

in 2016. Over the same time period, the US participation rate dropped from 66.0% to 62.8%. The decline in the United States has been more pronounced, where the 3.2 percentage-point decline amounts to a 4.8% drop, compared to the 1.9 point decline in Canada, the equivalent of a 2.8% reduction. It is also notable that, unlike the situtation in Canada, the labour force participation rate in the United States fell over the period from 2000 to 2004 (67.1% to 66.0%) and then remained flat until 2008. In other words, the labour force participation rate in the United States has dropped by a total of 4.3 percentage points since 2000. Partly as a result of this, since 2002 the labour force participation rate in Canada has been higher than in the United States.

However, the countrywide data masks important differences between jurisdictions within both countries; some Canadian provinces perform better, while others perform worse, than US states. Figure B2 presents the average labour force participation rate from 2014 to 2016 in the 10 Canadian provinces and 50 US states. At 72.8%, Alberta had the highest rate. The other Prairie provinces—Saskatchewan, ranking 4th (69.8%) and Manitoba, 12th (68.0%)—also performed well. Two other provinces finished in the top 20—Prince Edward Island (ranked 18th, 66.5%) and Ontario (20th, 65.4%). Four Canadian provinces are ranked in the bottom half—British Columbia (32nd, 63.6%) and the three Atlantic provinces of New Brunswick (38th, 62.3%), Nova Scotia (42nd, 62.1%), and Newfoundland & Labrador (50th, 60.1%). Newfoundland & Labrador is the only Canadian province that ranks in the bottom 10.

Figure B2: Average labour force participation rate (%), 2014–2016



Note: The three-year average labour force participation rate is calculated for ages 16 and up for both Canada and the United States.
Sources: Statistics Canada, 2017e; US, Dep't of Labor, Bureau of Labor Statistics, 2017c; calculations by authors.

In the United States, the South has the most representation in the top 10 of any census region, with Florida and Mississippi tied for 4th (69.8%), along with 8th-ranked Tennessee (69.4%). The Midwest also performed well, having the two top-ranked US states—Ohio (2nd, 71.8%) and Kansas (3rd, 70.0%). The West and Northeast also had two each in the top 10: Nevada (69.8%) and Wyoming (68.2%) in the West and New Jersey (68.6%) and Vermont (68.2%) in the Northeast.

The bottom two jurisdictions are Midwest states—Wisconsin (53.1%) and Missouri (55.4%). A third Midwest state is also in the bottom 10—South Dakota (59.5%), along with five southern states—Alabama (56.9%), Louisiana (57.7%), Arkansas (57.7%), Georgia (59.3%), and Texas (59.7%). The West and Northeast each have one state ranked in the bottom 10: Arizona (60.1%) in the West and New York (57.7%) in the Northeast.

2. Migration

The flow of workers into and out of jurisdictions is an important indicator of the performance of labour markets and of economic performance generally. These flows can often be explained by a lack of labour opportunities in the worker's home province or state. For example, using data from 1982 to 1995, Finnie found that interprovincial migration is generally "the route to better labour market opportunities for men, particularly for those coming from the lower income provinces and moving to higher income ones, and [is] especially the case in younger men" (1999: 259). Thus, the net addition or subtraction of workers can be an important indicator of larger economic successes or challenges.

The following section presents information on the net flow of citizens from one Canadian province to another and from one US state to another, and compares these flows with the labour market performance of these jurisdictions. The data in this section comes from census information from both countries. The measure used, net migration, is the difference between the number of people migrating out of a particular jurisdiction and the number of people migrating into the same jurisdiction. The figures throughout this section refer exclusively to domestic migration; foreign migration is excluded.

Canada

Table B1 contains migration data for the Canadian provinces from 2013/14 to 2015/16. Alberta had both the highest positive number of net migrants and the highest percentage of net migration: 54,099 people or 1.3% of Alberta's population, slightly ahead of

Table B1: Net interprovincial migration by province, 2013/14–2015/16

	2013/14	2014/15	2015/16	Total	As % of 2016 population
Alberta	35,382	21,594	−2,877	54,099	1.27%
British Columbia	9,475	20,379	23,260	53,114	1.12%
Manitoba	−6,851	−6,678	−5,900	−19,429	−1.47%
New Brunswick	−3,517	−2,790	−2,280	−8,587	−1.13%
Newfoundland & Labrador	234	161	271	666	0.13%
Nova Scotia	−2,571	−2,311	−1,034	−5,916	−0.62%
Ontario	−14,564	−8,695	6,154	−17,105	−0.12%
Prince Edward Island	−941	−682	−729	−2,352	−1.58%
Quebec	−14,312	−16,142	−12,069	−42,523	−0.51%
Saskatchewan	−1,839	−4,528	−3,716	−10,083	−0.88%

Notes: [1] Net interprovincial migration is defined as the difference between the number of incoming and outgoing migrants. The figures refer exclusively to domestic migration; foreign migration is excluded. [2] Period from July 1 to June 30.

Sources: Statistics Canada 2016a, 2016b; calculations by authors.

British Columbia (53,114 or 1.1%). However, it is worth noting that British Columbia's net migration steadily increased over this period, while Alberta's steadily declined and in 2015/16 was actually negative, with 2,877 leaving the province. Newfoundland & Labrador was the only other province to have positive net migration during the time period considered, with a net inflow of 666 people, equalling 0.1% of its population. Quebec (42,523 leaving) and Manitoba (19,429 leaving) had the highest negative net migration. And Manitoba (–1.5%) trailed only Prince Edward Island (–1.6%) for the highest negative net migration as a percentage of population.

United States

Nevada ranked first for positive net migration rates. It attracted 86,157 net migrants over the past three years (2013/14 to 2015/16), or 2.9% of its population (Table B2). Florida (548,211 net migrants) and South Carolina (131,280) followed closely, attracting about 2.7% of their population. On the other hand, Alaska had the greatest negative net migration rate in the United States, –3.0%. The second and third most negative net migration rates belong to New York (–2.6%, 503,280 people) and Illinois (–2.5%, 314,317).

Table B2: Net domestic migration by state, 2013/14–2015/16

	2013/14	2014/15	2015/16	Total	As % of 2016 population
Alabama	2,034	−2,268	−864	−1,098	−0.02%
Alaska	−10,137	−7,678	−4,587	−22,402	−3.02%
Arizona	41,975	45,934	61,544	149,453	2.16%
Arkansas	−3,890	−1,212	195	−4,907	−0.16%
California	−32,090	−77,219	−109,023	−218,332	−0.56%
Colorado	40,318	54,459	50,216	144,993	2.63%
Connecticut	−26,216	−27,619	−29,880	−83,715	−2.34%
Delaware	4,790	4,225	3,027	12,042	1.26%
Florida	138,546	202,510	207,155	548,211	2.66%
Georgia	22,106	34,013	36,781	92,900	0.90%
Hawaii	−5,141	−7,026	−10,021	−22,188	−1.55%
Idaho	7,694	6,880	17,143	31,717	1.88%
Illinois	−94,956	−105,217	−114,144	−314,317	−2.46%
Indiana	−7,849	−14,881	−12,135	−34,865	−0.53%
Iowa	−810	−3,949	−3,392	−8,151	−0.26%
Kansas	−13,804	−13,030	−18,595	−45,429	−1.56%
Kentucky	−3,785	−7,441	−3,429	−14,655	−0.33%
Louisiana	−6,085	−7,358	−12,243	−25,686	−0.55%
Maine	531	−1,718	2,169	982	−0.07%
Maryland	−15,295	−24,738	−26,232	−66,265	−1.10%
Massachusetts	−16,354	−21,805	−25,606	−63,765	−0.94%
Michigan	−28,679	−38,911	−27,839	−95,429	−0.96%
Minnesota	−6,696	−12,242	−1,762	−20,700	−0.38%
Mississippi	−9,382	−12,230	−9,690	−31,302	−1.05%
Missouri	−8,074	−8,744	−6,250	−23,068	−0.38%
Montana	4,550	5,268	6,853	16,671	1.60%

Table B2: Net domestic migration by state, 2013/14–2015/16

	2013/14	2014/15	2015/16	Total	As % of 2016 population
Nebraska	−2,551	−2,775	−2,144	−7,470	−0.39%
Nevada	23,623	27,959	34,575	86,157	2.93%
New Hampshire	1,117	−1,167	2,187	2,137	0.16%
New Jersey	−55,469	−65,254	−66,791	−187,514	−2.10%
New Mexico	−14,154	−13,352	−9,748	−37,254	−1.79%
New York	−153,921	−157,992	−191,367	−503,280	−2.55%
North Carolina	36,257	38,197	59,584	134,038	1.32%
North Dakota	8,974	9,966	−6,259	12,681	1.67%
Ohio	−18,243	−31,297	−27,558	−77,098	−0.66%
Oklahoma	4,377	8,199	−3,822	8,754	0.22%
Oregon	22,670	34,824	50,038	107,532	2.63%
Pennsylvania	−31,448	−41,607	−45,565	−118,620	−0.93%
Rhode Island	−3,387	−4,693	−3,784	−11,864	−1.12%
South Carolina	38,614	45,582	47,084	131,280	2.65%
South Dakota	562	−1,780	941	−277	−0.03%
Tennessee	24,511	21,425	30,519	76,455	1.15%
Texas	154,467	170,103	125,703	450,273	1.62%
Utah	−1,235	9,303	19,778	27,846	0.91%
Vermont	−1,549	−2,223	−2,865	−6,637	−1.06%
Virginia	−20,400	−23,813	−25,343	−69,556	−0.83%
Washington	28,063	40,799	67,571	136,433	1.87%
West Virginia	−2,749	−4,685	−7,659	−15,093	−0.82%
Wisconsin	−9,931	−15,568	−12,395	−37,894	−0.66%
Wyoming	−2,672	−1,885	−4,347	−8,904	−1.52%

Notes: [1] This data is collected from July to July. [2] A negative value for net migration is indicative of net out-migration, meaning that more migrants left an area than entered it. Positive values reflect net in-migration to an area.. The figures refer exclusively to domestic migration; foreign migration is excluded.

Sources: US, Dep't of Commerce, Bureau of the Census, 2016; calculations by authors.

3. Working days lost as a result of labour disputes

Labour disputes [2] are an indicator of labour market performance as they help to explain differences in employment opportunities for workers. Labour disputes affect employment opportunities adversely by decreasing investment and business activity. [3] They also discourage investment and negatively affect business activity because labour disputes can cause profits and market share to decline. Investment and business activity are critical to workers as they have a positive effect on high and growing wages and, ultimately, on living standards.

Research shows that the primary way in which labour disputes discourage investment and business activity is by lowering the value of firms. They do so because they tend to reduce the rate of return to potential investors. A study by Robert Hanrahan and his colleagues (1997) in the *Review of Financial Economics* examined the impact of labour disputes on the expected profitability of Canadian firms listed on the Toronto Stock Exchange. The authors found that disputes during collective bargaining decreased returns by 4.5%. [4] Moreover, the main findings suggest that the longer the dispute, the greater the harmful impact on returns. There is similar evidence from the United States. A study in *Industrial Relations* by Jonathan Kramer and Thomas Hyclak (2002) examined the reaction of the stock market to labour disputes in US manufacturing industries from January 1982 to July 1999. They found that strikes had negative effects on the cumulative stock-market returns of firms involved in those strikes: such firms saw their returns decrease by –0.7% to –0.8%. [5]

Lower rates of return caused by labour disputes have been shown to discourage investors. A study by Morris Kleiner and Hwikwon Ham (2002) examined the impact of

[2] Labour disputes include strikes and lock-outs. In a strike, employees cease working in an attempt to compel the employer to accept certain working conditions. In a lock-out, an employer closes the place of employment, suspends work, or refuses to continue to employ a number of his employees in an attempt to compel workers to accept certain employment conditions (Craig, 1990).

[3] Several factors explain why some jurisdictions have more labour disputes than others. See Gunderson and Melino, 1990; Gunderson, Kervin, and Reid, 1989; Cramton, Gunderson, and Tracy, 1999; Dachis and Hebdon, 2010; and Campolieti, Hebdon, and Dachis, 2014.

[4] Becker and Olson (1986) found similar results. Using data from 1962 to 1982, they found that strikes substantially affected shareholder equity: the average strike involving 1,000 or more workers resulted in a 4.1% drop in shareholder equity.

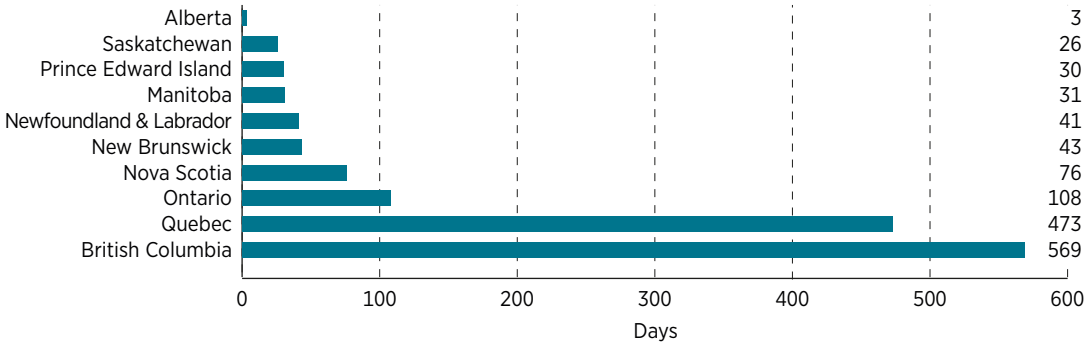
[5] Strikes affect not only the value of struck firms; they can also affect the value of third-party firms. For instance, Obeua Persons (1995) used stock-market data for the years 1965 to 1990 to estimate the effects of strikes against US automobile producers on the stock value of their steel suppliers. She found that steel suppliers had returns ranging from –1.6% to –2.5% upon announcements of automobile strikes.

national levels of unionization, strike levels, public policies toward labour, and the structure of collective bargaining within a nation on a country's foreign direct investment (FDI). Examining 20 OECD nations from 1985 to 1995 and all US states from 1990 to 1999, the authors found that strikes indeed have a direct effect on FDI: jurisdictions with more days lost from strikes (per 1,000 employees, per year) are associated with lower levels of FDI. A study by Paroma Sanyal and Nidhiya Menon (2005), using data on investment and business activity (defined as the place where an employer chooses to conduct business) from India for the period from 1997 to 1999, found that jurisdictions that suffer frequent labour disputes have less investment and less business activity than jurisdictions with fewer work stoppages.

Canada

Figure B3 displays the number of working days lost per 1,000 workers due to labour disputes in Canada from 2014 to 2016. British Columbia (569 days) and Quebec (473 days) had the most working days lost per 1,000 workers. Ontario is in distant third with 108 days lost per 1,000 workers. Alberta has the fewest days lost per 1,000 workers (only three) among all the provinces.

Figure B3: Working days lost per 1,000 workers as a result of labour disputes in Canada, 2014–2016

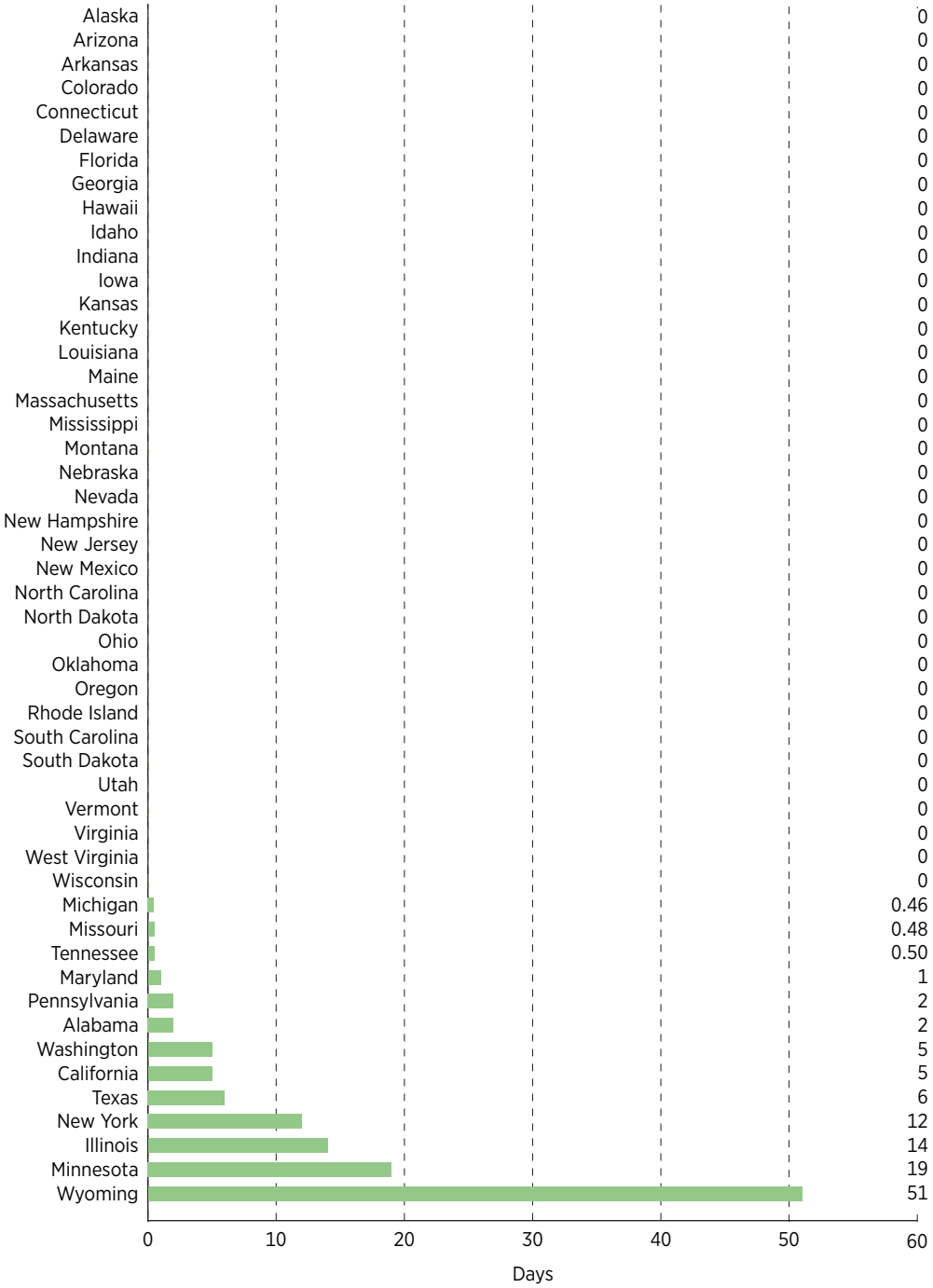


Sources: Canada, Employment and Social Development, 2017; Statistics Canada 2017b; calculations by authors.

United States

Figure B4 displays the results using a similar measure for the United States. However, figures B3 and B4 are not directly comparable because data is only readily available in the United States for strikes involving 1,000 or more workers. In figure B4, 39 states did not have a strike that involved 1,000 workers or more, which likely explains why they had zero work days lost. Wyoming stands out as having the most work days lost, with 51 days lost per 1,000 workers. Minnesota has the second most days lost per 1,000 workers (19 days).

Figure B4: Working days lost per 1,000 workers as a result of labour disputes in the United States, 2014–2016



Note: Figures B3 and B4 are not directly comparable because data is only readily available in the United States for strikes involving 1,000 or more workers.
Sources: US, Dep't of Labor, Bureau of Labor Statistics, 2017b, 2017e; calculations by authors.

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