FRASER INSTITUTE

2021

Canada-US Energy Sector Competitiveness Survey 2020

Jairo Yunis and Elmira Aliakbari

Contents

Executive Summary / 1

Introduction / 3

Survey Methodology / 4

Canada-US Results / 10

Results by Region / 12

Results by Category / 16

Overview / 44

Appendix 1: Additional Data / 46

Appendix 2: Previous Methodology and Additional Sub-Indices / 47

Appendix 3: Policy Perception Index 2019 versus 2020 / 49

Appendix 4: Weighted Median PPI Regional Scores / 50

References / 51

About the Authors / 53

Acknowledgements / 54

About the Fraser Institute / 54

Publishing Information / 55

Supporting the Fraser Institute / 56

Purpose, Funding, and Independence / 57

Editorial Advisory Board / 58

Executive Summary

This report presents the results of the Fraser Institute's 2020 *Canada–US Energy Sector Competitiveness Survey* regarding barriers to investment in oil and gas exploration and production facilities in each country. The survey responses have been tallied to rank Canadian and American jurisdictions according to the extent of such barriers. Those barriers, as assessed by the survey respondents, include high tax rates, costly regulatory obligations, uncertainty over environmental regulations, and the interpretation and administration of regulations governing the "upstream" petroleum industry, as well as concerns over political stability and security of personnel and equipment.

This year's survey of senior executives in the upstream oil and gas sector is consistent with the methodology used in previous editions of the *Global Petroleum Survey*. A total of 86 respondents participated in the survey this year, providing sufficient data to evaluate five Canadian provinces and 16 American states.

The jurisdictions that are evaluated are assigned scores on each of 16 questions pertaining to factors known to affect investment decisions. These scores are then used to generate a "Policy Perception Index" for each jurisdiction that reflects the perceived extent of the barriers to investment.

According to this year's survey, Oklahoma is the most attractive jurisdiction for oil and gas investment followed by Kansas (2nd), and Texas (3rd). Six other US jurisdictions also ranked in the top 10 this year: Arkansas (4th), Utah (5th), North Dakota (6th), Wyoming (7th), Mississippi (9th), and New Mexico (10th). Saskatchewan (8th) is the only Canadian jurisdiction featuring in the top 10 while British Columbia (20th) continues to pose the greatest barriers to investment among Canadian provinces. Alberta ranks 12th out of the 21 jurisdictions.

Investors pointed to the uncertainty concerning environmental regulations, the cost of regulatory compliance, and regulatory enforcement as major areas of concern in Canadian provinces compared to US states. In particular, in 2020, only 16 percent of respondents for Oklahoma and 24 percent for Texas indicated that uncertainty concerning environmental regulations was a deterrent to investment whereas the proportion who indicated it was an issue for Alberta and British Columbia was 64 and 80 percent, respectively. On average, 66 percent of respondents for Canada are deterred by environmental regulations, compared to 45 percent for the United States.

An Alberta/Texas comparison demonstrates how results vary by region: 47 percent of respondents identified regulatory enforcement as a deterrent to investment for Alberta compared to only 10 percent for Texas. Overall, investors expressed heightened concern over regulatory enforcement in Canada compared to the United States. The percentage of respondents indicating that this factor was deterring investment was, on average, 53 percent for Canada compared to 32 percent for the United States.

Another Alberta/Texas comparison shows that 65 percent of respondents identified the cost of regulatory compliance as a deterrent to investment for Alberta compared to only 24 percent for Texas. Overall, the cost of regulatory compliance is a significant concern for investors in Canada compared to the United States. The percentage of respondents for the Canadian provinces indicating that this factor was a deterrent to investment was, on average, 66 percent compared to only 45 percent for the United States.

Overall, our analysis of the 2020 survey results indicates that the extent of negative sentiments regarding key factors driving petroleum investment decisions is higher in many Canadian provinces than in competing American jurisdictions. In fact, the US performs better than Canada in 12 out of the 16 policy factors.

However, it is worth noting that all Canadian provinces improved their policy scores and ranking positions relative to last year's survey with the exception of British Columbia which, despite improving its score by almost 20 points, continues to be second to last in the overall ranking.

Introduction

This year's *2020 Canada–US Energy Sector Competitiveness Survey* builds on the Fraser Institute's previous work on competitiveness with the *Canada–US Energy Sector Competitiveness Survey 2019* (Stedman and Aliakbari, 2019) and the *Global Petroleum Survey 2018* (Stedman and Green, 2018a). This year we surveyed oil and gas executives to get an understanding of how investor perceptions vary between countries.

Results from this survey have enabled us to better understand how provinces and states perform in various policy and regulatory areas. This publication serves as a report card for policymakers. Jurisdictions that investors assess as relatively unattractive may use the findings of this publication to consider policy reforms that could improve their rankings either across the board, or in individual policy areas.

Recent reports suggest that Canada is falling behind the United States in attracting investment (Aliakbari, 2019). In particular, the percentage of capital investment in Canada's oil and gas sector as a share of total capital investment has plummeted, from 28 percent in 2014 to 12.4 percent in 2019 (Statistics Canada, 2020). In addition, between 2016 and 2018, the United States has enjoyed a 41 percent increase in investment in its upstream oil and gas sector compared to only a 15 percent increase in Canada (Globerman, 2019).

The *2020 Canada–US Energy Sector Competitiveness Survey* spotlights policies that affect investment attractiveness, including royalties, taxes, and regulations. This survey identifies policy areas in regions that require improvement, according to investors. The analysis offers a unique perspective on both the state of the investment climate for Canada's petroleum industry and how investor perceptions vary by region. This year's survey identifies potential reasons for the relative decline in investor perceptions of the energy sector in Canada compared to the United States.

Survey Methodology

Sample design

This survey of senior executives in the upstream oil and gas sector is consistent with that used in previous editions of the *Global Petroleum Survey* and the *2019 Canada–US Energy Sector Competitiveness Survey*. The survey is designed to identify provinces and states with the greatest barriers to investment in oil and gas exploration and production. Jurisdictions that investors assess as relatively unattractive may use the findings of the survey to consider policy reforms that could improve their rankings either across the board or in individual policy areas. Petroleum companies can also use the information to corroborate their own assessments and to identify jurisdictions where business conditions and the regulatory environment are most attractive for investment. The survey results are also a useful source of information for academics interested in international competitiveness in the oil and gas sector, or the media, as it provides independent evidence as to how particular jurisdictions compare.

The survey was distributed to managers and executives in the "upstream" petroleum industry. This industry includes companies exploring for oil and gas, those producing crude oil from conventional and non-conventional sources (such as bitumen from oil sands and shale formations), and those producing natural gas from both conventional sources and non-conventional sources, such as coal-bed methane and gas embedded in shale formations. It does not include companies that are refining, upgrading, or processing crude oil, bitumen, and raw natural gas, or those that are involved in the transportation and marketing of petroleum products, unless such companies are also directly involved in the upstream.

The names of potential respondents were taken from publicly available membership lists of trade associations and other sources. In addition, some industry associations and non-profit think tanks provided contact information and helped advertise the survey to their members.

The survey was conducted from May 14, 2020, until August 7, 2020. A total of 86 individuals responded to the survey in 2020. This year's response rate allowed for the inclusion of 5 Canadian provinces and 16 American states.[1]

As **figure 1** illustrates, almost 66 percent of respondents identified themselves as either a manager or holding a higher-level position. **Figure 2** shows that almost 64 percent of the firms participating in the survey are engaged

[1] Jurisdictions that received fewer than 5 responses were not included in the survey.

Figure 1: The position survey respondents hold in their company, 2020

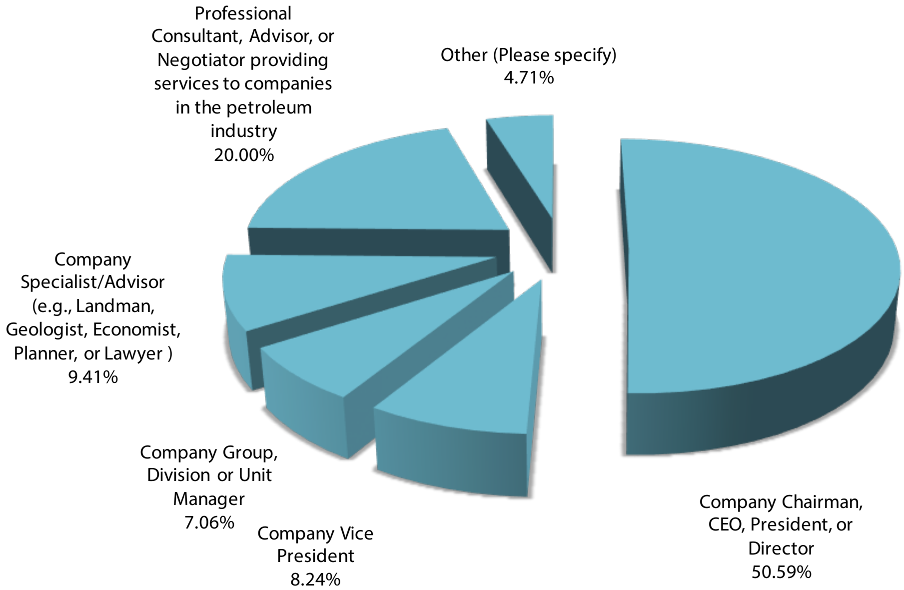


Figure 2: Activities performed by firms of survey respondents, 2020

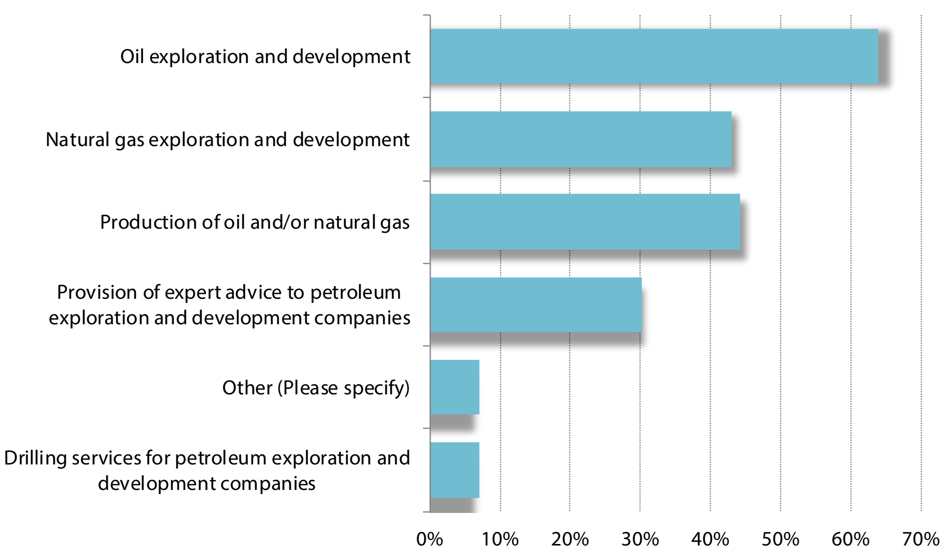
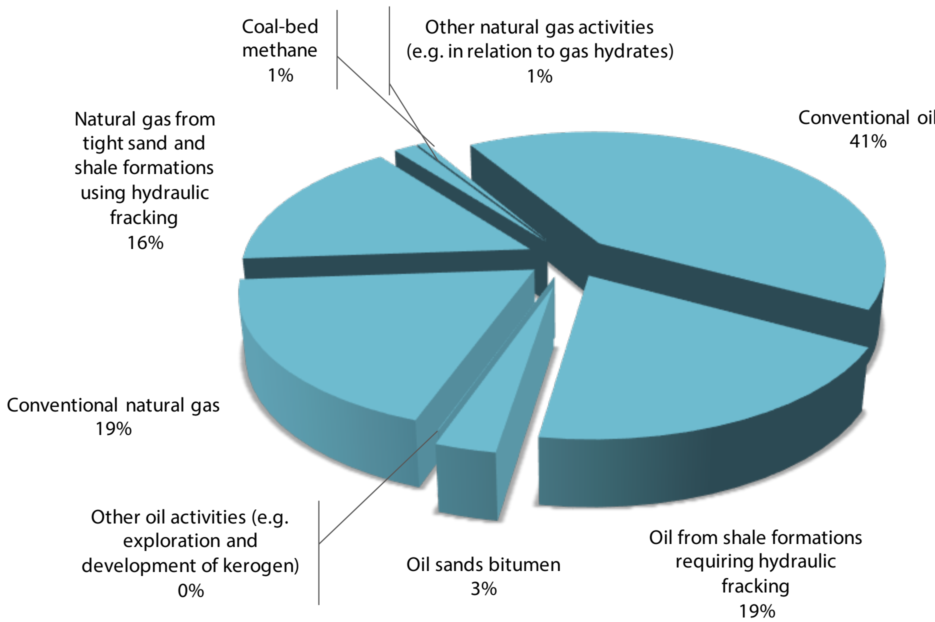


Figure 3: Company focus in petroleum exporation and development business, as indicated by respondents



in the exploration and development of oil, 43 percent are engaged in the exploration and development of natural gas, 44 percent are engaged in production of oil and/or natural gas, and 37 percent provide expert advice and/or drilling services.

Figure 3 shows the principal focus of the petroleum exploration and development activities of companies whose managers or other representatives participated in the survey. The focus of most of these companies (60 percent) is on finding and developing conventional oil and gas reserves. Unconventional oil and natural gas exploration and development represented 40 percent of the focus of companies in 2020.

Participants employed by petroleum firms reported that 22 percent of their upstream activity involves unconventional oil resources. The majority of this activity (87 percent) includes the recovery of oil from shale formations using hydraulic fracturing, 13 percent is focused on oil sands bitumen, and 0.13 percent on other oil activities, such as the exploration or development of oil from kerogen[2] found in shale rock.

[2] Kerogen is a naturally occurring, solid, insoluble organic matter that occurs in source rocks and can yield oil upon heating (Schlumberger, 2018).

Participants in the survey also reported that 18 percent of their upstream activity involves unconventional natural gas resources. The majority of this activity (89 percent) involves the recovery of natural gas from tight sand and shale formations using hydraulic fracturing. Three percent of the petroleum firms responding to the survey reported other unconventional natural gas activities (e.g., related to gas hydrates). Eight percent is focused on coal-bed methane.

Survey questionnaire

The survey was designed to capture the opinions of managers and executives about the level of investment barriers in jurisdictions with which they are familiar. Respondents were asked to indicate how each of the 16 factors listed below influence company decisions to invest in various jurisdictions. The factors were consistent with those in the 2018 *Global Petroleum Survey* and the 2019 Canada–US Energy Sector Competitiveness Survey.

1. **Fiscal terms**—including licenses, lease payments, royalties, other production taxes, and gross revenue charges, but not corporate and personal income taxes, capital gains taxes, or sales taxes.
2. **Taxation in general**—the tax burden including personal, corporate, payroll, and capital taxes, and the complexity of tax compliance, but excluding petroleum exploration and production licenses and fees, land lease fees, and royalties and other charges directly targeting petroleum production.
3. **Environmental regulations**—stability of regulations, consistency and timeliness of regulatory process, etc.
4. **Regulatory enforcement**—uncertainty regarding the administration, interpretation, stability, or enforcement of existing regulations.
5. **Cost of regulatory compliance**—related to filing permit applications, participating in hearings, etc.
6. **Protected areas**—uncertainty concerning what areas can be protected as wilderness or parks, marine life preserves, or archaeological sites.
7. **Trade barriers**—tariff and non-tariff barriers to trade and restrictions on profit repatriation, currency restrictions, etc.

8. **Labor regulations and employment agreements**—the impact of labor regulations, employment agreements, labor militancy or work disruptions, and local hiring requirements.
9. **Quality of infrastructure**—includes access to roads, power availability, etc.
10. **Quality of geological database**—includes quality, detail, and ease of access to geological information.
11. **Labor availability and skills**—the supply and quality of labor, and the mobility that workers have to relocate.
12. **Disputed land claims**—the uncertainty of unresolved claims made by aboriginals, other groups, or individuals.
13. **Political stability.**
14. **Security**—the physical safety of personnel and assets.
15. **Regulatory duplication and inconsistencies** (includes federal/provincial, federal/state, inter-departmental overlap, etc.)
16. **Legal system**—legal processes that are fair, transparent, non-corrupt, efficiently administered, etc.

For each of the 16 factors, respondents were asked to select one of the following five responses that best described each jurisdiction with which they were familiar:

1. Encourages investment
2. Is not a deterrent to investment
3. Is a mild deterrent to investment
4. Is a strong deterrent to investment
5. Would not invest due to this criterion

Scoring the survey responses — Policy Perception Index

This year we replicated the methodology used in 2016, which follows that used in the Fraser Institute's *Annual Survey of Mining Companies* (see Stedman and Green, 2018b). The methodology differs from that used prior to 2016[3] in that it is it is based on an average of the responses for all five possible response categories.[4] In previous years, the index was based only on the prevalence of responses in the "deters investment" categories. The measure also takes into consideration how far a jurisdiction's score is from the average in each of the policy areas. To calculate the Policy Perception Index (PPI), a score for each jurisdiction is estimated for all 16 factors addressed by the survey questions by calculating each jurisdiction's average response in relation to each survey question. We then standardize this score using a common technique, whereby the average response is subtracted from each jurisdiction's score on each of the policy factors and then divided by the standard deviation. A jurisdiction's scores on each of the 16 policy variables, as reflected by the responses to the survey questions, are then added to generate a final, standardized PPI score. That score is then normalized using the formula ((Vmax-Vi))/((Vmax-Vmin))×100.[5] The jurisdiction with the most attractive policies receives a score of 100 and the jurisdiction with the policies that pose the greatest barriers to investment receives a score of 0.

[3] See appendix 2 for an overview of the previous methodology.

[4] Encourages investment, not a deterrent to investment, mild deterrent to investment, strong deterrent to investment, and would not invest due to this factor.

[5] Where Vmax is the maximum value, Vmin is the minimum value, and Vi represents the summed score of a jurisdiction.

Canada-US Results

Policy Perception Index Rankings

Table 1 compares the scores and rankings on the Policy Perception Index (PPI) in 2020. The first set of columns shows the absolute scores for the jurisdictions, based on the methodology described above. The second set of columns shows the rankings. Readers are reminded that these rankings are driven purely by responses to the survey questions and do not account for the extent of any jurisdiction's proved oil and gas reserves. Hence, some jurisdictions with relatively small or even no reserves may rank more highly on the basis of the respondents' perceptions of business conditions, regulatory regimes, and other factors than some jurisdictions with significant reserve holdings.[6]

Table 1: Policy Perception Index 2020

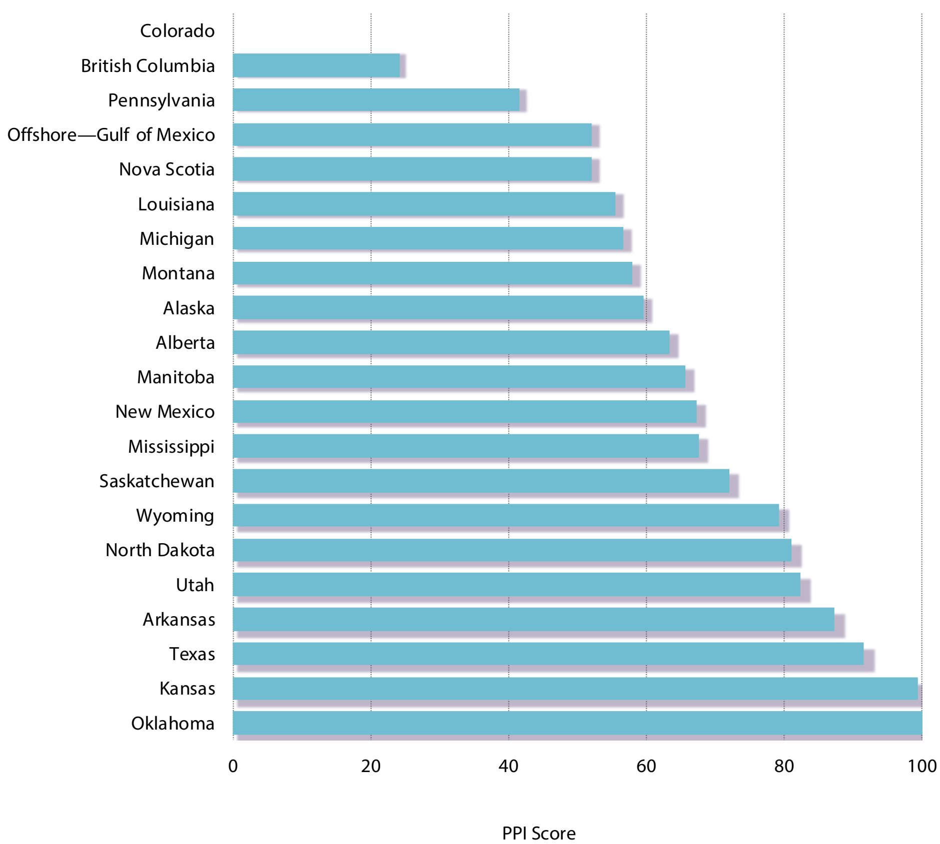
	Score	Rank
Oklahoma	100.00	1/21
Kansas	99.42	2/21
Texas	91.60	3/21
Arkansas	87.22	4/21
Utah	82.30	5/21
North Dakota	81.02	6/21
Wyoming	79.16	7/21
Saskatchewan	72.03	8/21
Mississippi	67.68	9/21
New Mexico	67.25	10/21
Manitoba	65.57	11/21
Alberta	63.34	12/21
Alaska	59.56	13/21
Montana	57.92	14/21
Michigan	56.69	15/21
Louisiana	55.54	16/21
Nova Scotia	52.01	17/21
Offshore–Gulf of Mexico	52.00	18/21
Pennsylvania	41.48	19/21
British Columbia	24.21	20/21
Colorado	0.00	21/21

[6] As the 2018 *Global Petroleum Survey* noted, comparing jurisdictions based on their reserve size is particularly useful given that jurisdictions with small resource endowments cannot be expected to attract nearly as much investment as those with relatively large undeveloped oil and gas reserves. Therefore, this analysis compares jurisdictions with similar proved reserve sizes.

Figure 4 presents the Policy Perception Index rankings for the 21 jurisdictions ranked this year. Respondents ranked the following 10 jurisdictions as the most attractive for investment in petroleum exploration and development:

1. Oklahoma
2. Kansas
3. Texas
4. Arkansas
5. Utah
6. North Dakota
7. Wyoming
8. Saskatchewan
9. Mississippi
10. New Mexico

Figure 4: Policy Perception Index



Results by Region

Canada

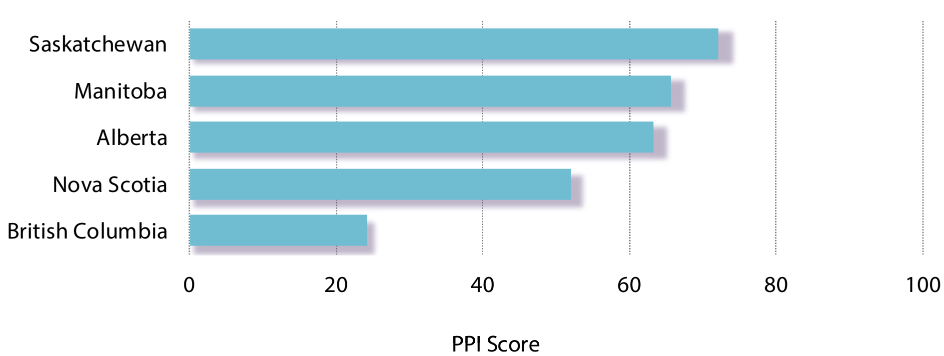
Figure 5 illustrates the relative performance of the Canadian jurisdictions in the 2020 survey. Compared to American jurisdictions, survey respondents awarded low (i.e., less favorable) overall scores to a number of Canadian jurisdictions this year, indicating that barriers to investment continue to be significant relative to the United States.

However, all Canadian jurisdictions improved their policy scores in 2020 with the exception of Nova Scotia, which was not included in last year's survey due to low response rates. More specifically, Manitoba improved its score by almost 40 points, Alberta by almost 27 points, Saskatchewan by 21 points, and British Columbia by almost 20 points.

Similarly, most Canadian jurisdictions improved their position in the overall ranking. Saskatchewan went from ranking 13th (out of 20 jurisdictions) in 2019 to 8th out of 21 this year. Manitoba and Alberta, which ranked 17th and 16th last year, respectively, now rank 11th and 12th in this year's survey. However, despite improving its score, British Columbia continues to be second to last in the overall ranking, the same position it held in last year's survey.

According to the Policy Perception Index measure, Saskatchewan is the most attractive Canadian jurisdiction for upstream petroleum investment. The second most attractive Canadian jurisdiction is Manitoba, followed

Figure 5: Policy Perception Index—Canada



by Alberta and Nova Scotia. British Columbia stands out as the Canadian jurisdiction posing the greatest barriers to investment. Due to low response rates, Newfoundland & Labrador was not included in this year's survey.

Comments from respondents about various Canadian provinces and territories ranged from complimentary to critical. The comments in the following section have been edited for length, grammar and spelling, to retain confidentiality, and to clarify meaning.

Canada—General

> "Ongoing federal issues like Bill C-48, the carbon tax, and pipeline constraints are creating a negative environment for oil and gas investment."

Alberta

> "Consulting with industry to expedite approval processes and creating a task force to reduce provincial red tape are encouraging signs for investment."

> "Alberta's corporate tax reduction is encouraging for investors."

British Columbia

> "The provincial government's adoption of the United Nations Declaration on the Rights of Indigenous People without knowing its practical implications scares away foreign investment."

> "The ongoing uncertainty about the validity of agreements with First Nations over pipeline rights continue to deter investment."

Nova Scotia

> "The availability of reliable geological data and analysis encourages investment in the province."

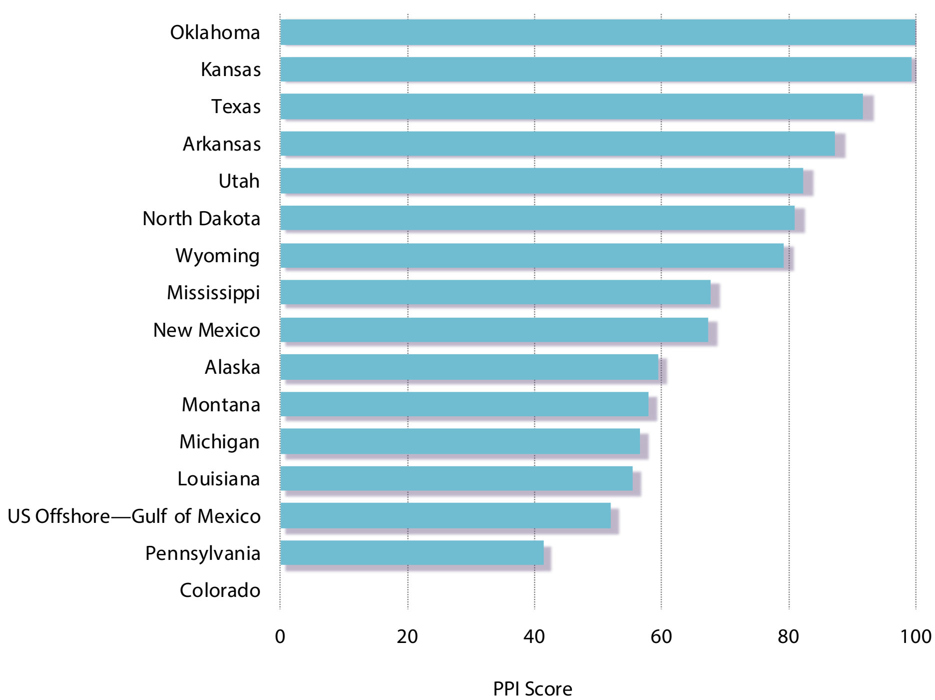
The United States

We received sufficient responses in 2020 to enable us to rank 16 US jurisdictions. Due to low response rates, California was not included in this year's survey.

Oklahoma is the most attractive jurisdiction in the United States—and the most attractive jurisdiction included in this analysis. Kansas is the second most attractive jurisdiction in the US and the second most attractive this year's survey. Seven other US jurisdictions also ranked in the top 10 this year: Texas (3rd), Arkansas (4th), Utah (5th), North Dakota (6th), Wyoming (7th), Mississippi (9th), and New Mexico (10th) (**figure 6**).

Compared to last year's survey, 7 out of the 16 US jurisdictions (Texas, Wyoming, New Mexico, Montana, Louisiana, the Offshore Gulf of Mexico, and Pennsylvania) experienced declines in their policy scores while only five of them (Oklahoma, Kansas, North Dakota, Mississippi, and Alaska) saw improvements. For instance, the Offshore Gulf of Mexico experienced a policy score decline of 26 points while Kansas saw its policy score improve almost 18 points. Colorado continues to be the worst performing jurisdiction, the same position it held in last year's survey.

Figure 6: Policy Perception Index—United States



Survey participants' comments on a number of American jurisdictions are presented below. Comments have been edited for length, grammar and spelling, to retain confidentiality, and to clarify meanings.

United States

> "The elimination of the excessive regulatory burden on Federal lands encourages investment in the US."

Alaska

> "Disputed land claims and uncertainty with land ownership continue to deter investment from Alaska."

Colorado

> "Policymakers are deliberately attempting to end all new oil and gas development."

> "Senate Bill 181 overhauled oil and gas regulation in the state, making it difficult to invest in Colorado."

Louisiana

> "Ongoing legacy lawsuits and the severance tax on oil and gas production make it difficult to pursue drilling in Louisiana."

Texas

> "Texas has stable regulations, royalties, and a stable government."

> "Consultations with industry before making any regulatory change provide much-needed certainty for investment decisions."

Wyoming

> "Idle well bonds provide investment certainty to government, taxpayers, and companies on the liability of wells."

Results by Category

The results of the survey have been broken into four areas: regulatory factors, commercial, geopolitical, and land-related risks.[7]

Regulatory factors

This year's respondents pointed to the cost of regulatory compliance, regulatory enforcement, and uncertainty concerning environmental regulations, as key areas of concern in Canada compared to the United States.

To assess how regulatory processes vary between jurisdictions, we asked survey respondents six questions about various regulatory factors. The analysis of the questions in this area are combined in this section.

Cost of regulatory compliance (table 2)

Canada

Many Canadian provinces receive poor results for the cost of regulatory compliance compared to their American competitors. British Columbia is the worst performing province on this factor with 89 percent of respondents indicating that the high cost of regulatory compliance was a deterrent to investment (up 9 percentage points from last year's survey). Manitoba also performs poorly, with 83 percent of respondents indicating that the cost of regulatory compliance was a deterrent to investment. The top performing Canadian jurisdiction on this measure was Nova Scotia, with 43 percent of respondents citing this factor as a deterrent to investment.

United States

In contrast, many US jurisdictions perform well on this factor, though there are some exceptions. Only 10 percent of respondents for Kansas—ranked 2nd in this year's survey—indicated that the cost of regulatory compliance was a deterrent to investment. In addition, 11 percent of respondents for Oklahoma and 24 percent for Texas—the other two jurisdictions in the top three—cited this factor as a deterrent to investment. The poorest performing US state was Colorado, where 84 percent of respondents were deterred by this factor.

[7] This section uses categories (based on Appendix 2 from Stedman and Green, 2018a) that focus on particular dimensions of policy to streamline the analysis.

Overall

Overall, respondents see the high cost of regulatory compliance as an area of serious concern in Canada compared to the United States. The percentage of respondents in Canadian provinces indicating that the cost of regulatory compliance deters investment was, on average, 66 percent (up 15 percentage points over last year's survey) compared to 40 percent for the United States.

Table 2: Cost of Regulatory Compliance

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

	Response	Percentages				
		1	2	3	4	5
CANADA	Alberta	3%	32%	44%	18%	3%
	British Columbia	0%	11%	50%	33%	6%
	Manitoba	0%	17%	50%	33%	0%
	Nova Scotia	0%	57%	0%	43%	0%
	Saskatchewan	0%	50%	39%	11%	0%
UNITED STATES	Alaska	18%	27%	36%	18%	0%
	Arkansas	25%	63%	13%	0%	0%
	Colorado	0%	16%	26%	37%	21%
	Kansas	50%	40%	10%	0%	0%
	Louisiana	15%	35%	30%	15%	5%
	Michigan	0%	50%	50%	0%	0%
	Mississippi	9%	55%	18%	18%	0%
	Montana	24%	24%	35%	18%	0%
	New Mexico	6%	61%	28%	0%	6%
	North Dakota	20%	60%	13%	7%	0%
	Oklahoma	28%	61%	11%	0%	0%
	Pennsylvania	0%	29%	57%	14%	0%
	Texas	24%	51%	20%	5%	0%
	Utah	25%	50%	25%	0%	0%
	Wyoming	24%	53%	18%	0%	6%
	US Offshore—Gulf of Mexico	8%	17%	67%	8%	0%

Note: Percentages may not add up to 100 due to rounding.

Regulatory enforcement (table 3)

Canada

To understand the uncertainty survey respondents have about existing regulations, the questionnaire asks them about the uncertainty regarding the administration, interpretation, stability, or enforcement of existing regulations. On this factor, Manitoba is the worst performing province: 67 percent of respondents indicated that regulatory enforcement was a deterrent to investment in that jurisdiction followed by British Columbia for which 63 percent of respondents indicated that that factor was a concern. The top performing Canadian jurisdiction on this measure was Nova Scotia, with 43 percent of respondents citing this factor as a deterrent to investment.

United States

None of the respondents for Arkansas or Kansas indicated that uncertainty concerning regulatory enforcement was a deterrent to investment in those states. Similarly, only 9 percent of respondents for Mississippi and 10 percent for Texas were deterred by uncertainty concerning existing regulations. The poorest performing US states were Colorado and Pennsylvania, where 84 and 72 percent of respondents, respectively, were deterred by this factor.

Overall

On average, many Canadian jurisdictions perform poorly relative to their US counterparts when analyzing uncertainty regarding the administration, interpretation, stability, or enforcement of existing regulations. The percentage of respondents for the Canadian provinces indicating that this factor was a deterrent to investment was, on average, 53 percent compared to 32 percent for the United States.

Table 3: Regulatory Enforcement

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

	Response	Percentages				
		1	2	3	4	5
CANADA	Alberta	15%	38%	35%	12%	0%
	British Columbia	0%	37%	26%	26%	11%
	Manitoba	17%	17%	50%	17%	0%
	Nova Scotia	14%	43%	0%	43%	0%
	Saskatchewan	11%	44%	33%	11%	0%
UNITED STATES	Alaska	18%	36%	36%	9%	0%
	Arkansas	25%	75%	0%	0%	0%
	Colorado	0%	16%	21%	47%	16%
	Kansas	40%	60%	0%	0%	0%
	Louisiana	15%	50%	20%	10%	5%
	Michigan	0%	50%	50%	0%	0%
	Mississippi	9%	82%	9%	0%	0%
	Montana	18%	47%	35%	0%	0%
	New Mexico	6%	44%	39%	6%	6%
	North Dakota	27%	60%	13%	0%	0%
	Oklahoma	44%	44%	11%	0%	0%
	Pennsylvania	0%	29%	43%	29%	0%
	Texas	34%	56%	7%	2%	0%
	Utah	25%	63%	13%	0%	0%
	Wyoming	28%	44%	11%	11%	6%
	US Offshore—Gulf of Mexico	8%	33%	50%	8%	0%

Note: Percentages may not add up to 100 due to rounding.

Environmental regulations (table 4)

Canada

To understand the uncertainty survey respondents have about environmental regulations, the questionnaire asks them about the stability of regulations, and the consistency and timeliness of environmental regulatory process. On this factor, many Canadian provinces perform poorly compared to their US competitors. In particular, 80 percent of respondents for British Columbia and 72 percent of respondents for Nova Scotia indicated that environmental regulations are a deterrent to investment.

Alberta improved its performance on this policy factor from last year's survey. This year, 64 percent of respondents indicated that environmental regulations were a deterrent to investment in that province whereas last year almost 80 percent of respondents cited it as a deterrent to investment. The top performing Canadian jurisdiction on this measure was Saskatchewan, with 47 percent of respondents citing this factor as a deterrent to investment.

United States

None of the respondents for Arkansas indicated that uncertainty concerning environmental regulations was a deterrent to investment. Only 16 percent of respondents for Oklahoma, 20 percent for Kansas, and 24 percent for Texas were deterred by uncertainty concerning environmental regulations. The poorest performing US state was Colorado, where every survey respondent was deterred by this factor.

Overall

On average, investors expressed heightened concern over uncertainty concerning environmental regulations in Canada compared to the United States. The percentage of respondents for the Canadian provinces indicating that this factor was a deterrent to investment was, on average, 66 percent, compared to 45 percent for the United States.

Table 4: Environmental Regulations

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	6%	31%	36%	25%	3%
	British Columbia	0%	20%	35%	35%	10%
	Manitoba	17%	17%	17%	50%	0%
	Nova Scotia	14%	14%	29%	43%	0%
	Saskatchewan	5%	47%	32%	16%	0%
UNITED STATES	Alaska	8%	33%	50%	8%	0%
	Arkansas	25%	75%	0%	0%	0%
	Colorado	0%	0%	30%	50%	20%
	Kansas	40%	40%	20%	0%	0%
	Louisiana	10%	38%	29%	14%	10%
	Michigan	0%	33%	67%	0%	0%
	Mississippi	9%	64%	27%	0%	0%
	Montana	17%	33%	33%	17%	0%
	New Mexico	0%	50%	28%	17%	6%
	North Dakota	13%	44%	38%	6%	0%
	Oklahoma	32%	53%	16%	0%	0%
	Pennsylvania	0%	50%	33%	17%	0%
	Texas	31%	45%	21%	2%	0%
	Utah	22%	33%	44%	0%	0%
	Wyoming	26%	32%	32%	11%	0%
	US Offshore—Gulf of Mexico	8%	23%	54%	15%	0%

Note: Percentages may not add up to 100 due to rounding.

Labor regulations and employment agreements (table 5)

Canada

Investors expressed concern over the impact of labor regulations, employment agreements, labor militancy or work disruptions, and local hiring requirements for many Canadian provinces. In particular, half of the respondents for Nova Scotia and 47 percent of respondents for British Columbia indicated that this factor was a deterrent to investment. Thirty percent of respondents for Alberta expressed concern over this area. The top performing jurisdiction on this measure (in both US and Canadian jurisdictions) was Manitoba, with none of the respondents for that province citing this factor as a deterrent to investment.

United States

Only 8 percent of respondents for Texas and 13 percent of respondents for Oklahoma and Utah cited labor regulations and employment agreements as a deterrent to investment. The poorest performing American states were Pennsylvania and Colorado where 67 percent and 56 percent of respondents, respectively, were deterred by this factor.

Overall

Labor regulations and employment agreements are slightly more of a concern for investors in Canada than in the United States. An average of 29 percent of respondents for the Canadian provinces indicated that this factor was a deterrent to investment, compared to an average of 26 percent for the United States.

Table 5: Labor Regulations and Employment Agreements

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	9%	61%	21%	6%	3%
	British Columbia	0%	53%	24%	18%	6%
	Manitoba	0%	100%	0%	0%	0%
	Nova Scotia	0%	50%	33%	17%	0%
	Saskatchewan	6%	75%	13%	6%	0%
UNITED STATES	Alaska	17%	50%	33%	0%	0%
	Arkansas	17%	67%	17%	0%	0%
	Colorado	17%	28%	39%	17%	0%
	Kansas	38%	38%	25%	0%	0%
	Louisiana	22%	50%	28%	0%	0%
	Michigan	0%	83%	17%	0%	0%
	Mississippi	9%	73%	18%	0%	0%
	Montana	27%	47%	20%	7%	0%
	New Mexico	33%	47%	20%	0%	0%
	North Dakota	43%	43%	7%	7%	0%
	Oklahoma	44%	44%	13%	0%	0%
	Pennsylvania	0%	33%	67%	0%	0%
	Texas	32%	60%	8%	0%	0%
	Utah	38%	50%	13%	0%	0%
	Wyoming	50%	36%	14%	0%	0%
	US Offshore—Gulf of Mexico	18%	27%	46%	9%	0%

Note: Percentages may not add up to 100 due to rounding.

Regulatory duplication and inconsistencies (table 6)

Canada

Investors expressed less concern over regulatory duplication and inconsistencies for Canadian provinces than they did last year. In British Columbia, for instance, 65 percent of respondents this year indicated that this factor was a deterrent to investment compared with 80 percent in 2019. In Alberta, 47 percent of respondents were concerned about this factor this year, compared with 65 percent in 2019. Manitoba was the best performing Canadian jurisdiction on this measure with 20 percent of respondents citing this factor as a deterrent.

United States

None of the respondents for Utah indicated that regulatory duplication and inconsistencies were a deterrent to investment. Similarly, only 7 percent of respondents for Oklahoma and 9 percent for Texas were deterred by regulatory duplication and inconsistencies. The worst performing US state was Pennsylvania, where 83 percent of respondents were deterred by this factor.

Overall

Regulatory duplication and inconsistencies concern investors to a similar degree in both Canada and the United States. On average, 38 percent of respondents for the Canadian provinces indicated that this factor was a deterrent to investment compared to 36 percent for the United States.

Table 6: Regulatory Duplication and Inconsistencies

1: Encourages investment 2: Not a deterrent to investment
3: Mild deterrent to investment 4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	3%	50%	28%	16%	3%
	British Columbia	6%	29%	29%	29%	6%
	Manitoba	0%	80%	20%	0%	0%
	Nova Scotia	17%	50%	17%	17%	0%
	Saskatchewan	0%	73%	20%	7%	0%
UNITED STATES	Alaska	27%	27%	36%	9%	0%
	Arkansas	0%	83%	17%	0%	0%
	Colorado	0%	19%	38%	31%	13%
	Kansas	33%	44%	22%	0%	0%
	Louisiana	13%	38%	50%	0%	0%
	Michigan	0%	50%	50%	0%	0%
	Mississippi	9%	64%	27%	0%	0%
	Montana	14%	43%	36%	7%	0%
	New Mexico	14%	43%	43%	0%	0%
	North Dakota	31%	54%	8%	8%	0%
	Oklahoma	27%	67%	7%	0%	0%
	Pennsylvania	0%	17%	67%	17%	0%
	Texas	32%	59%	9%	0%	0%
	Utah	29%	71%	0%	0%	0%
	Wyoming	31%	46%	23%	0%	0%
	US Offshore—Gulf of Mexico	10%	30%	50%	10%	0%

Note: Percentages may not add up to 100 due to rounding.

Legal system (table 7)

Canada

Investor perceptions of the legal system vary by province. Of note, 35 percent of respondents for British Columbia and 16 percent of respondents for Alberta indicated that this factor was a deterrent to investment. Nova Scotia was the best performing Canadian jurisdiction on this measure, with none of the respondents citing this factor as a deterrent, followed by Saskatchewan where only 7 percent found it to be a deterrent to investment.

United States

None of the respondents for five US jurisdictions (Alaska, Arkansas, Kansas, Michigan, and Oklahoma) indicated the legal system in those states was a deterrent to investment. Further, just 5 percent of respondents for Texas and 7 percent for North Dakota were deterred by this factor. The worst performing state was Louisiana, for which almost half of the survey respondents cited the legal system as a deterrent to investment.

Overall

The percentage of respondents deterred by the legal system is low and similar for both Canada and the United States. The percentage of respondents deterred by the legal system was, on average, 16 percent for Canada and 14 percent for the US.

Table 7: Legal System

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	44%	41%	13%	3%	0%
	British Columbia	24%	41%	24%	12%	0%
	Manitoba	40%	40%	20%	0%	0%
	Nova Scotia	33%	67%	0%	0%	0%
	Saskatchewan	33%	60%	7%	0%	0%
UNITED STATES	Alaska	36%	64%	0%	0%	0%
	Arkansas	50%	50%	0%	0%	0%
	Colorado	22%	39%	11%	22%	6%
	Kansas	60%	40%	0%	0%	0%
	Louisiana	21%	32%	21%	11%	16%
	Michigan	0%	100%	0%	0%	0%
	Mississippi	18%	73%	9%	0%	0%
	Montana	38%	38%	19%	6%	0%
	New Mexico	38%	50%	13%	0%	0%
	North Dakota	53%	40%	0%	7%	0%
	Oklahoma	53%	47%	0%	0%	0%
	Pennsylvania	14%	71%	14%	0%	0%
	Texas	38%	57%	3%	3%	0%
	Utah	50%	38%	13%	0%	0%
	Wyoming	40%	47%	13%	0%	0%
	US Offshore—Gulf of Mexico	42%	25%	25%	8%	0%

Note: Percentages may not add up to 100 due to rounding.

Commercial risks

Fiscal terms and taxation in general (tables 8 and 9)

Canada

Two policy areas that continue to hamper investor perceptions of many Canadian jurisdictions, despite some improvements from 2019's survey, are fiscal terms and taxation in general. Respondents expressed concern over fiscal terms and taxation in British Columbia, where the sum of negative responses for fiscal terms was 52 percent (down 15 percentage points from last year's survey) and 76 percent (down 12 percentage points) for taxation in general. In Alberta, 35 percent of respondents cited fiscal terms (down 10 percentage points from 2019) and taxation (47 percent, down 6 percentage points from 2019) as deterrents to investment.

Other Canadian provinces also perform poorly in this area: 57 percent of respondents for Manitoba indicated that fiscal terms were a deterrent and 72 percent cited taxation as a deterrent to investment. Forty-three percent of respondents for Nova Scotia cited fiscal terms and taxation as deterrents to investment. Saskatchewan was the best performing province on this measure with 21 percent and 35 percent of respondents, respectively, indicating that fiscal terms and taxation were a deterrent to investment.

United States

In contrast, only 5 percent of respondents for Oklahoma and 7 percent of respondents for Texas indicated that fiscal terms were a deterrent to investment. The proportion who indicated that taxation was a deterrent for Texas was 5 percent and for Oklahoma, 11 percent. None of the respondents for North Dakota were deterred by fiscal terms, though 27 percent were deterred by taxation. Eighteen percent of the respondents for Kansas were deterred by fiscal terms and 20 percent were deterred by taxation. Colorado was the worst performer on fiscal terms and taxation, with 87 percent and 82 percent of respondents saying they were deterred by these factors, respectively.

Overall

On average, investors continue to express much more concern over fiscal terms and taxation in Canada than in the United States. The percentage of respondents indicating that fiscal terms were deterring investment in the Canadian provinces was, on average, 42 percent, compared to 29 percent for the United States. Additionally, the percentage of respondents indicating that taxation in general was deterring investment was, on average, 55 percent for Canada compared to 39 percent for the United States.

Table 8: Fiscal Terms

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	41%	24%	22%	8%	5%
	British Columbia	14%	33%	33%	10%	10%
	Manitoba	29%	14%	57%	0%	0%
	Nova Scotia	14%	43%	43%	0%	0%
	Saskatchewan	42%	37%	21%	0%	0%
UNITED STATES	Alaska	29%	29%	21%	14%	7%
	Arkansas	33%	44%	11%	11%	0%
	Colorado	8%	4%	33%	33%	21%
	Kansas	36%	46%	18%	0%	0%
	Louisiana	25%	38%	17%	17%	4%
	Michigan	29%	43%	29%	0%	0%
	Mississippi	39%	31%	31%	0%	0%
	Montana	20%	45%	25%	5%	5%
	New Mexico	19%	43%	29%	5%	5%
	North Dakota	33%	67%	0%	0%	0%
	Oklahoma	62%	33%	5%	0%	0%
	Pennsylvania	22%	56%	22%	0%	0%
	Texas	61%	33%	7%	0%	0%
	Utah	30%	50%	20%	0%	0%
	Wyoming	38%	38%	10%	10%	5%
	US Offshore—Gulf of Mexico	31%	25%	25%	13%	6%

Note: Percentages may not add up to 100 due to rounding.

Table 9: Taxation in General

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	17%	36%	28%	17%	3%
	British Columbia	0%	24%	52%	19%	5%
	Manitoba	14%	14%	43%	29%	0%
	Nova Scotia	0%	57%	14%	29%	0%
	Saskatchewan	10%	55%	20%	15%	0%
UNITED STATES	Alaska	42%	0%	33%	17%	8%
	Arkansas	22%	56%	22%	0%	0%
	Colorado	5%	14%	36%	41%	5%
	Kansas	30%	50%	20%	0%	0%
	Louisiana	18%	36%	27%	14%	5%
	Michigan	13%	25%	63%	0%	0%
	Mississippi	8%	67%	25%	0%	0%
	Montana	17%	44%	28%	11%	0%
	New Mexico	11%	39%	50%	0%	0%
	North Dakota	20%	53%	20%	7%	0%
	Oklahoma	32%	58%	11%	0%	0%
	Pennsylvania	13%	25%	50%	13%	0%
	Texas	35%	61%	2%	2%	0%
	Utah	11%	67%	22%	0%	0%
	Wyoming	26%	42%	21%	11%	0%
	US Offshore—Gulf of Mexico	8%	31%	39%	15%	8%

Note: Percentages may not add up to 100 due to rounding.

Trade barriers (table 10)

Canada

Investor perceptions of trade barriers vary by province. In British Columbia, the worst performing jurisdiction among Canadian provinces, 30 percent of respondents were deterred by this factor. Twenty-four percent of respondents for Alberta and 17 percent in Nova Scotia indicated that this factor was a deterrent to investment. On the other hand, none of the respondents for Manitoba and only 6 percent for Saskatchewan cited trade barriers as a deterrent to investment.

United States

None of the respondents for Arkansas and Michigan cited trade barriers as a deterrent to investment. Only 7 percent of respondents for Oklahoma indicated that this factor was a deterrent to investment. Similarly, 8 percent of respondents for Wyoming and 9 percent for Texas were deterred by trade barriers. The worst performing US state was Colorado, where 35 percent of respondents were deterred by trade barriers.

Overall

The percentage of respondents deterred by trade barriers is low and comparable between Canada and the United States (15 percent on average for both countries). The percentage of respondents deterred by trade barriers in Canada was down 12 percentage points from last year's survey and down 4 percentage points in the US from last year.

Table 10: Trade Barriers

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	24%	52%	15%	9%	0%
	British Columbia	6%	65%	12%	6%	12%
	Manitoba	20%	80%	0%	0%	0%
	Nova Scotia	17%	67%	17%	0%	0%
	Saskatchewan	25%	69%	6%	0%	0%
UNITED STATES	Alaska	18%	73%	9%	0%	0%
	Arkansas	67%	33%	0%	0%	0%
	Colorado	18%	47%	12%	18%	6%
	Kansas	56%	33%	11%	0%	0%
	Louisiana	24%	53%	18%	0%	6%
	Michigan	17%	83%	0%	0%	0%
	Mississippi	20%	70%	10%	0%	0%
	Montana	23%	62%	8%	8%	0%
	New Mexico	29%	57%	14%	0%	0%
	North Dakota	25%	58%	8%	8%	0%
	Oklahoma	29%	64%	7%	0%	0%
	Pennsylvania	17%	50%	33%	0%	0%
	Texas	29%	63%	6%	3%	0%
	Utah	29%	57%	14%	0%	0%
	Wyoming	23%	69%	8%	0%	0%
	US Offshore—Gulf of Mexico	10%	60%	30%	0%	0%

Note: Percentages may not add up to 100 due to rounding.

Quality of infrastructure (table 11)

Canada

Investor perceptions of the quality of infrastructure have improved since last year's survey, though results vary by province. For example, 35 percent of respondents for British Columbia (down 19 percentage points) and 26 percent of respondents for Alberta (up 8 percentage points) indicated that this factor was a deterrent to investment. Nevertheless, none of the respondents for Manitoba (down 50 percentage points) or Nova Scotia cited this factor as a deterrent, and only 6 percent of respondents for Saskatchewan (down 13 percentage points from 2019) did so.

United States

None of the respondents for Kansas or Oklahoma indicated that the quality of infrastructure was a deterrent to investment in those jurisdictions and only 8 percent of respondents for Texas were deterred by this factor. The worst performing states were Alaska and Colorado, where 58 percent and 59 percent of respondents, respectively, were deterred by the quality of infrastructure.

Overall

Investors were more concerned about the quality of infrastructure in the Unites States than in Canada. The percentage of respondents deterred by the quality of infrastructure was, on average, only 14 percent for Canada and 24 percent for the United States.

Table 11: Quality of Infrastructure

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	47%	27%	24%	3%	0%
	British Columbia	18%	47%	24%	6%	6%
	Manitoba	60%	40%	0%	0%	0%
	Nova Scotia	17%	83%	0%	0%	0%
	Saskatchewan	38%	56%	6%	0%	0%
UNITED STATES	Alaska	8%	33%	50%	8%	0%
	Arkansas	33%	50%	17%	0%	0%
	Colorado	18%	24%	24%	29%	6%
	Kansas	60%	40%	0%	0%	0%
	Louisiana	28%	56%	17%	0%	0%
	Michigan	33%	50%	17%	0%	0%
	Mississippi	18%	64%	18%	0%	0%
	Montana	20%	47%	13%	20%	0%
	New Mexico	33%	47%	20%	0%	0%
	North Dakota	43%	36%	14%	7%	0%
	Oklahoma	63%	38%	0%	0%	0%
	Pennsylvania	14%	57%	29%	0%	0%
	Texas	47%	45%	8%	0%	0%
	Utah	29%	57%	14%	0%	0%
	Wyoming	27%	53%	20%	0%	0%
	US Offshore—Gulf of Mexico	18%	36%	18%	18%	9%

Note: Percentages may not add up to 100 due to rounding.

Labor availability and skills (table 12)

Canada

All Canadian jurisdictions perform well on labor availability and skills. None of the respondents for Manitoba and only 3 percent of the respondents for Alberta indicated that this factor was a deterrent to investment. Only 6 percent of respondents for British Columbia and Saskatchewan cited labor availability and skills as a deterrent to investment. The worst performer among Canadian jurisdictions was Nova Scotia, for which 17 percent of respondents indicated that this factor deterred investment.

United States

None of the respondents for Utah indicated that labor availability and skills was a deterrent to investment, and only 3 percent of respondents for Texas and 6 percent for Oklahoma cited that factor as a deterrent. Meanwhile, 40 percent of respondents for Mississippi and Montana were deterred from investing by labor availability and skills in those states. The worst performing state was Colorado, where 50 percent of respondents were deterred by this factor.

Overall

The percentage of respondents deterred by labor availability and skills is higher in the United States than in Canada, where it is very low. On average, 6 percent of the respondents for Canada and 23 percent of the respondents for the United States were deterred by labor availability and skills.

Table 12: Labor Availability and Skills

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	53%	44%	3%	0%	0%
	British Columbia	29%	65%	6%	0%	0%
	Manitoba	40%	60%	0%	0%	0%
	Nova Scotia	17%	67%	17%	0%	0%
	Saskatchewan	31%	63%	6%	0%	0%
UNITED STATES	Alaska	25%	42%	33%	0%	0%
	Arkansas	33%	33%	33%	0%	0%
	Colorado	17%	33%	28%	22%	0%
	Kansas	50%	30%	20%	0%	0%
	Louisiana	42%	37%	21%	0%	0%
	Michigan	17%	67%	17%	0%	0%
	Mississippi	10%	50%	40%	0%	0%
	Montana	27%	33%	27%	13%	0%
	New Mexico	31%	50%	19%	0%	0%
	North Dakota	50%	36%	7%	7%	0%
	Oklahoma	63%	31%	6%	0%	0%
	Pennsylvania	29%	43%	29%	0%	0%
	Texas	43%	54%	3%	0%	0%
	Utah	25%	75%	0%	0%	0%
	Wyoming	40%	40%	20%	0%	0%
	US Offshore—Gulf of Mexico	46%	36%	9%	9%	0%

Note: Percentages may not add up to 100 due to rounding.

Geopolitical risks

Political stability (table 13)

Canada

Investor concerns about political stability vary by province. Seventy-five percent of respondents for British Columbia (the worst performing province on this measure), and 28 percent of respondents for Alberta indicated that this factor was a deterrent to investment. Nova Scotia was the best performing Canadian jurisdiction on this measure, with 17 percent of the respondents citing this factor as a deterrent.

United States

None of the respondents for Arkansas, Kansas, or Utah indicated that political stability was a deterrent to investment in those states. Seven percent of respondents for North Dakota and Wyoming and 6 percent for New Mexico and Oklahoma were deterred by issues around political stability. The worst performing US state was Colorado, where 67 percent of respondents found political stability to be a deterrent to investment.

Overall

Investor concerns over political stability are higher for Canada than for the United States. The percentage of respondents deterred by concerns over political stability was, on average, 36 percent for Canada and 18 percent for the United States.

Table 13: Political Stability

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	28%	44%	25%	3%	0%
	British Columbia	13%	13%	25%	44%	6%
	Manitoba	0%	60%	40%	0%	0%
	Nova Scotia	50%	33%	17%	0%	0%
	Saskatchewan	20%	60%	20%	0%	0%
UNITED STATES	Alaska	42%	33%	17%	8%	0%
	Arkansas	50%	50%	0%	0%	0%
	Colorado	6%	28%	22%	22%	22%
	Kansas	50%	50%	0%	0%	0%
	Louisiana	32%	47%	5%	11%	5%
	Michigan	0%	83%	17%	0%	0%
	Mississippi	18%	73%	9%	0%	0%
	Montana	44%	25%	19%	13%	0%
	New Mexico	25%	69%	6%	0%	0%
	North Dakota	60%	33%	0%	7%	0%
	Oklahoma	65%	29%	6%	0%	0%
	Pennsylvania	14%	29%	57%	0%	0%
	Texas	54%	43%	3%	0%	0%
	Utah	38%	63%	0%	0%	0%
	Wyoming	40%	53%	7%	0%	0%
	US Offshore—Gulf of Mexico	25%	50%	8%	17%	0%

Note: Percentages may not add up to 100 due to rounding.

Security (table 14)

Canada

Canadian provinces generally perform well on the question of security. None of the respondents for Nova Scotia and only 7 percent of respondents for Saskatchewan cited security as a deterrent to investment. However, investors did indicate increased concerns for British Columbia with 25 percent of respondents indicating that this factor was a deterrent to investment compared to only 7 percent in last year's survey.

United States

None of the respondents for Arkansas, Kansas, Mississippi, Utah, or Wyoming indicated that security was a deterrent to investment. Similarly, only 6 percent of respondents for New Mexico and Oklahoma were deterred by security issues. The worst performing US state was Colorado where 39 percent of respondents were deterred by this factor.

Overall

The percentage of respondents deterred by security in either country is relatively low. However, compared to last year's survey, the US performed better than Canada. The percentage of respondents deterred by security was, on average, 12 percent for Canada compared to 10 percent for the United States.

Table 14: Security

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	56%	34%	9%	0%	0%
	British Columbia	50%	25%	19%	0%	6%
	Manitoba	80%	0%	20%	0%	0%
	Nova Scotia	33%	67%	0%	0%	0%
	Saskatchewan	60%	33%	7%	0%	0%
UNITED STATES	Alaska	58%	33%	8%	0%	0%
	Arkansas	33%	67%	0%	0%	0%
	Colorado	28%	33%	28%	6%	6%
	Kansas	50%	50%	0%	0%	0%
	Louisiana	32%	53%	16%	0%	0%
	Michigan	0%	83%	17%	0%	0%
	Mississippi	18%	82%	0%	0%	0%
	Montana	50%	31%	13%	6%	0%
	New Mexico	50%	44%	6%	0%	0%
	North Dakota	60%	27%	7%	7%	0%
	Oklahoma	53%	41%	6%	0%	0%
	Pennsylvania	14%	71%	14%	0%	0%
	Texas	38%	54%	8%	0%	0%
	Utah	38%	63%	0%	0%	0%
	Wyoming	47%	53%	0%	0%	0%
	US Offshore—Gulf of Mexico	50%	33%	17%	0%	0%

Note: Percentages may not add up to 100 due to rounding.

Land-related risks[8]

Uncertainty concerning disputed land claims and protected areas (tables 15 and 16)

Canada

Two policy areas that continue to hamper investor perceptions of many Canadian jurisdictions are uncertainty concerning disputed land claims and uncertainty over which areas will be protected. Investors expressed significant concern over these factors for British Columbia, where 82 percent and 76 percent of respondents, respectively, saw uncertainty surrounding disputed land claims and uncertainty over protected areas as a deterrent. In Alberta, 47 percent of respondents cited uncertainty concerning disputed land claims as a deterrent and 52 percent saw uncertainty over protected areas as a deterrent.

Saskatchewan is the top performing province on both of these factors, with 25 percent of respondents citing disputed land claims and protected areas as deterrents to investment.

United States

In 2020, only 6 percent of respondents (Texas) and 19 percent of respondents (Oklahoma) indicated that uncertainty concerning disputed land claims was a deterrent to investment. The proportion who indicated that uncertainty concerning protected areas was an issue was 20 percent for Texas and 21 percent for Oklahoma. None of the respondents for Arkansas were deterred by concerns over protected areas.

Alaska was the worst performer on uncertainty concerning disputed land claims with 58 percent of respondents saying they were deterred by this factor. Colorado was the worst performer in the United States on uncertainty concerning protected areas, with 95 percent of respondents saying they were deterred by this factor.

Overall

Overall, investors expressed greater concerns over disputed land claims and protected areas in Canada than the United States. The percentage of respondents for Canadian provinces indicating that uncertainty concerning disputed land claims was deterring investment was, on average, 46 percent

---

[8] This category was not included in the analysis discussed in Appendix 2. However, we did add it to this publication as investors in the Fraser Institute's mining and petroleum surveys (2018) consistently express concern over uncertainty about disputed land claims and protected areas.

compared to 27 percent for the United States. Further, the percentage of respondents for Canadian provinces indicating that uncertainty concerning protected areas was deterring investment was, on average, 52 percent compared to 47 percent for the United States.

Table 15: Disputed Land Claims

1: Encourages investment; 2: Not a deterrent to investment; 3: Mild deterrent to investment; 4: Strong deterrent to investment; 5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	9%	44%	35%	9%	3%
	British Columbia	12%	6%	12%	53%	18%
	Manitoba	40%	20%	40%	0%	0%
	Nova Scotia	0%	67%	33%	0%	0%
	Saskatchewan	13%	63%	25%	0%	0%
UNITED STATES	Alaska	0%	42%	58%	0%	0%
	Arkansas	50%	33%	17%	0%	0%
	Colorado	12%	35%	24%	24%	6%
	Kansas	22%	67%	11%	0%	0%
	Louisiana	12%	53%	18%	12%	6%
	Michigan	0%	83%	17%	0%	0%
	Mississippi	27%	46%	18%	9%	0%
	Montana	29%	36%	29%	7%	0%
	New Mexico	7%	50%	43%	0%	0%
	North Dakota	8%	69%	15%	8%	0%
	Oklahoma	13%	69%	19%	0%	0%
	Pennsylvania	0%	67%	33%	0%	0%
	Texas	25%	69%	6%	0%	0%
	Utah	14%	71%	14%	0%	0%
	Wyoming	21%	57%	21%	0%	0%
	US Offshore—Gulf of Mexico	20%	60%	10%	10%	0%

Note: Percentages may not add up to 100 due to rounding.

Table 16: Protected Areas

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

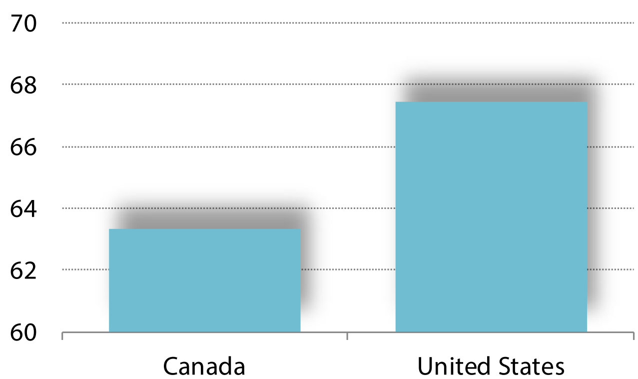
		Percentages				
		1	2	3	4	5
CANADA	Alberta	3%	46%	33%	15%	3%
	British Columbia	0%	24%	29%	29%	18%
	Manitoba	0%	60%	20%	20%	0%
	Nova Scotia	0%	33%	33%	33%	0%
	Saskatchewan	0%	75%	13%	6%	6%
UNITED STATES	Alaska	0%	27%	55%	18%	0%
	Arkansas	25%	75%	0%	0%	0%
	Colorado	5%	0%	37%	32%	26%
	Kansas	50%	30%	20%	0%	0%
	Louisiana	10%	50%	20%	20%	0%
	Michigan	0%	50%	50%	0%	0%
	Mississippi	9%	55%	36%	0%	0%
	Montana	24%	29%	29%	18%	0%
	New Mexico	5%	37%	42%	11%	5%
	North Dakota	20%	47%	27%	7%	0%
	Oklahoma	26%	53%	21%	0%	0%
	Pennsylvania	0%	29%	57%	14%	0%
	Texas	24%	56%	17%	2%	0%
	Utah	0%	33%	56%	11%	0%
	Wyoming	24%	12%	47%	18%	0%
	US Offshore—Gulf of Mexico	8%	42%	42%	8%	0%

Note: Percentages may not add up to 100 due to rounding.

Overview

Our analysis of the 2020 survey results indicates that, despite considerable improvement for most Canadian jurisdictions, the extent of negative sentiment regarding key factors driving petroleum investment decisions is higher in Canada than the United States. In fact, as **figure 7** illustrates, Canada's median PPI score is lower than that of the United States, demonstrating that the US has a competitive advantage over Canada in most policy areas. Canada's score is likely reflective of a number of regulatory and tax changes in recent years that have resulted in a less competitive environment than is the situation in many competing US jurisdictions.[9]

Figure 7: Canada-U.S. Oil and Gas Investment Attractiveness, Median PPI Scores by Country



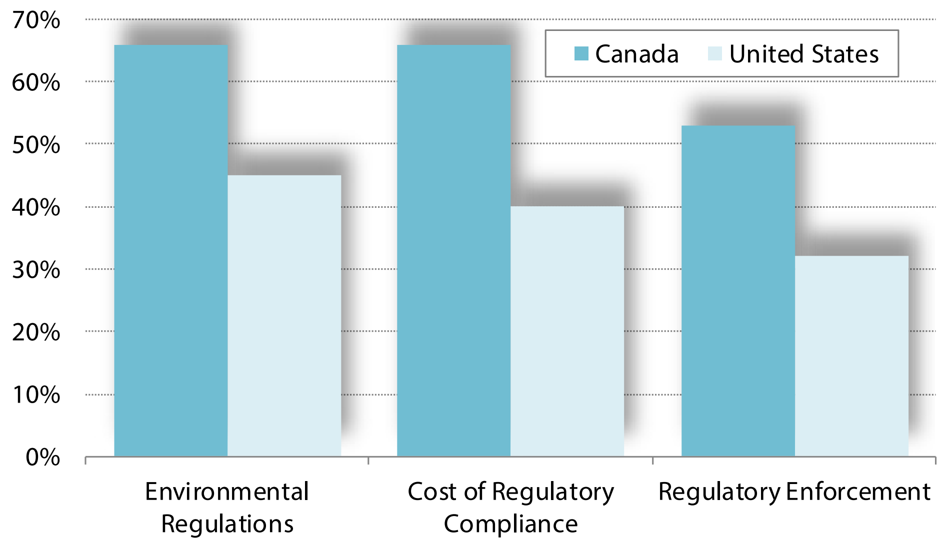
However, it is worth mentioning that the gap in median PPI scores between Canada and the US shrunk considerably this year. In last year's survey, Canada's median PPI score (36.49) was less than half that of the United States (72.94). This year, Canada's median PPI score (63.34) was only 4 points less than that of the US (67.47), mostly driven by investor perception of improvements in areas such as trade barriers, quality of infrastructure, and labor availability and skills.

Nonetheless, investors continue to see Canada's regulatory environment as onerous compared to many competing US jurisdictions. When comparing

[9] There are many potential reasons for investors to perceive Canada's investment attractiveness as declining. Some factors include insufficient pipeline capacity, the federal carbon tax, Bills C-69 and C-48, and onerous regulations. Canada's recent policy and regulatory changes have been particularly damaging given that deregulation and sweeping tax reforms in the United States have significantly improved the business environment in that country, particularly for the oil and gas sector. Aliakbari (2019) discusses recent policy decisions that have affected Canada's investment attractiveness.

the two countries based on the level of deterrence for each policy factor, investors cite Canada's uncertainty concerning environmental regulations, the cost of regulatory compliance, and regulatory enforcement in general as the top areas of concern (**figure 8**). On average, 66 percent of respondents for Canada are deterred by environmental regulations, compared to 45 percent for the United States, a difference of 21 percentage points between countries. The percentage of respondents deterred by the cost of regulatory compliance was, on average, 66 percent for Canada, compared to 40 percent for the United States, a difference of 26 percentage points. When considering regulatory enforcement, 53 percent of respondents for Canada, on average, are deterred by this factor compared to 32 percent for the United States, a difference of 21 percentage points between countries.

Figure 8: Top Areas of Concern for Canada Compared to the US, Average Deterrence by Factor



Appendix 1: Additional Data

What follows is additional data that was included in the calculation of PPI scores but was not discussed in the analysis section (Table 17).

Table 17: Quality of the Geological Database

1: Encourages investment
2: Not a deterrent to investment
3: Mild deterrent to investment
4: Strong deterrent to investment
5: Would not pursue investment due to this factor

		Percentages				
		1	2	3	4	5
CANADA	Alberta	73%	27%	0%	0%	0%
	British Columbia	65%	35%	0%	0%	0%
	Manitoba	60%	20%	20%	0%	0%
	Nova Scotia	17%	67%	17%	0%	0%
	Saskatchewan	50%	50%	0%	0%	0%
UNITED STATES	Alaska	58%	33%	8%	0%	0%
	Arkansas	67%	17%	0%	0%	17%
	Colorado	29%	59%	0%	12%	0%
	Kansas	70%	30%	0%	0%	0%
	Louisiana	58%	37%	5%	0%	0%
	Michigan	33%	50%	17%	0%	0%
	Mississippi	36%	64%	0%	0%	0%
	Montana	27%	60%	7%	7%	0%
	New Mexico	53%	47%	0%	0%	0%
	North Dakota	47%	47%	0%	7%	0%
	Oklahoma	71%	29%	0%	0%	0%
	Pennsylvania	29%	43%	29%	0%	0%
	Texas	50%	45%	3%	0%	3%
	Utah	50%	50%	0%	0%	0%
	Wyoming	47%	53%	0%	0%	0%
	US Offshore—Gulf of Mexico	67%	17%	17%	0%	0%

Note: Percentages may not add up to 100 due to rounding.

Appendix 2: Previous Methodology and Additional Sub-Indices

The methodology previously used to calculate the PPI in 2015 is as follows. For each jurisdiction, we calculated the percentage of negative scores for each of the 16 factors. We then developed an index for each factor by assigning the jurisdiction with the highest percentage of negative responses a value of 100, and correspondingly lower values to the other jurisdictions according to their scores. Upstream investors consider jurisdictions with the lowest index values the most attractive, and thus rank them above jurisdictions that scored higher as a consequence of having greater proportions of negative scores.

The Policy Perception Index value (referred to in surveys prior to 2013 as the All-Inclusive Composite Index) for each jurisdiction is derived from the equally-weighted scores achieved on all 16 factors. This index is the most comprehensive measure of the extent of policy-related investment barriers within each jurisdiction. Most of the discussion that follows is based on the jurisdictional scores and rankings obtained using this index. **A high score on this measure reflects considerable negative sentiment on the part of respondents and indicates that they regard the jurisdiction in question as relatively unattractive for investment.**

In previous surveys we also included three additional sub-indices that focused on particular dimensions of policy, such as the regulatory climate and perceptions of geopolitical risk. In order to streamline the report and in response to feedback from respondents, we did not calculate these separate indices last year or this year**.** However, below are descriptions of the indices and which measures would be used to calculate them. For those wishing to calculate these additional indices, all data from the survey is made publically available at www.fraserinstitute.org.

Commercial Environment Index

The Commercial Environment Index ranks jurisdictions on five factors that affect after-tax cash flow and the cost of undertaking petroleum exploration and development activities:

- fiscal terms
- taxation in general
- trade barriers
- quality of infrastructure
- labor availability and skills

The scores for the Commercial Environment Index for each jurisdiction were calculated by averaging the negative scores for each of these five factors. A high index value indicates that industry managers and executives consider that the business conditions reflected in this measure constitute significant barriers to investment.

Regulatory Climate Index

The Regulatory Climate Index reflects the scores assigned to jurisdictions for the following six factors:

- the cost of regulatory compliance
- regulatory enforcement
- environmental regulations
- labor regulations and employment agreements
- regulatory duplication and inconsistencies
- legal system

A relatively high value on the Regulatory Climate Index indicates that regulations, requirements, and agreements in a jurisdiction constitute a substantial barrier to investment, resulting in a relatively poor ranking.

Geopolitical Risk Index

The Geopolitical Risk Index represents scores for political stability and security. These factors are considered to be more difficult to overcome than either regulatory or commercial barriers, because for significant progress to be made on them, a change in the political landscape is usually required. A high score on the Geopolitical Risk Index indicates that investment in that jurisdiction is relatively unattractive because of political instability and/or security issues that threaten the physical safety of personnel or present risks to an investor's facilities.

Appendix 3: Policy Perception Index 2019 versus 2020

Policy Perception Index 2019 versus 2020

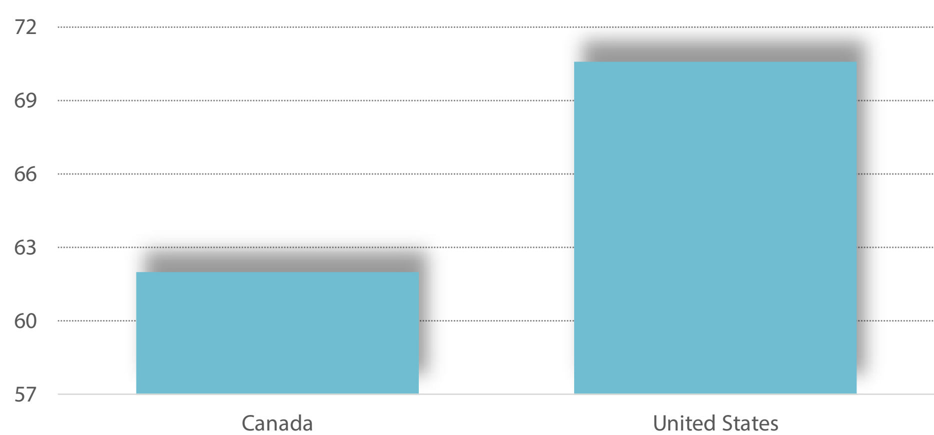
	Score 2020	Score 2019	Rank 2020	Rank 2019
Oklahoma	100.00	92.78	1/21	2/20
Kansas*	99.42	81.84	2/21	3/20
Texas	91.60	100.00	3/21	1/20
Arkansas*	87.22	—	4/21	—
Utah*	82.30	—	5/21	—
North Dakota	81.02	76.82	6/21	6/20
Wyoming	79.16	81.48	7/21	4/20
Saskatchewan	72.03	50.83	8/21	13/20
Mississippi	67.68	60.30	9/21	10/20
New Mexico	67.25	72.94	10/21	8/20
Manitoba*	65.57	25.85	11/21	17/20
Alberta	63.34	36.49	12/21	16/20
Alaska	59.56	58.24	13/21	11/20
Montana	57.92	65.86	14/21	9/20
Michigan*	56.69	—	15/21	—
Louisiana	55.54	57.61	16/21	12/20
Nova Scotia*	52.01	—	17/21	—
Offshore Gulf of Mexico	52.00	78.40	18/21	5/20
Pennsylvania*	41.48	46.40	19/21	14/20
British Columbia	24.21	4.26	20/21	19/20
Colorado	0.00	0.00	21/21	20/20

Appendix 4: Weighted Median PPI Regional Scores

Weighted Median PPI Regional Scores are calculated using standardized PPI scores and oil and gas reserves data for each jurisdiction. This calculation takes into account the importance of geological factors in investment attractiveness and decisions.

Oil and gas reserves data were taken from Canada Energy Regulator (2019), Canadian Association of Petroleum Producers (2020), and the United States Energy Information Administration (2019).

Canada-US Investment Attractiveness, Regional Median PPI Scores, Weighted by Oil and Gas Reserves



References

Aliakbari, Elmira (ed.) (2019). *Assessing Canada's Energy Sector Competitiveness: Collected Essays*. Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/assessing-canadas-energy-sector-competitiveness.pdf>, as of November 16, 2020.

BP (2019). *Statistical Review of World Energy: Approximate Conversion Factors*. BP. <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2019-approximate-conversion-factors.pdf>, as of November 16, 2020.

Canada Energy Regulator (2019). *Canada's Energy Future 2019: Energy Supply and Demand Projections to 2040 – Crude Oil Reserves*. Government of Canada. <https://apps.cer-rec.gc.ca/ftrppndc/dflt.aspx?GoCTemplateCulture=en-CA>, as of November 16, 2020.

Canadian Association of Petroleum Producers [CAPP] (2020). *Statistical Handbook: Table 02-9 Marketable Natural Gas by Province – Remaining Established Reserves in Canada at year end 1962-2019*. CAPP. <https://www.capp.ca/resources/statistics/>, as of November 16, 2020.

Globerman, Steven and Joel Emes (2019). *Investment in the Canadian and US Oil and Gas Sectors: A Tale of Diverging Fortunes*. Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/investment-in-canadian-and-us-oil-and-gas-sector.pdf>, as of November 16, 2020.

Schlumberger (2018). *Oilfield Glossary*. Schlumberger. <https://www.glossary.oilfield.slb.com/en/Terms/k/kerogen.aspx>, as of November 16, 2020.

Statistics Canada (2020). *Table 34-10-0035-01: Capital and Repair Expenditures, Non-residential Tangible Assets, by Industry and Geography (x 1,000,000)*. Statistics Canada. <https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3410003501>, as of November 16, 2020.

Stedman, Ashley, and Elmira Aliakbari (2019). *Canada-US Energy Sector Competitiveness Survey 2019*. The Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/2019-canada-us-competitiveness-survey.pdf>, as of November 16, 2020.

Stedman, Ashley, and Kenneth P. Green (2018a). *Global Petroleum Survey 2018*. The Fraser Institute. <https://www.fraserinstitute.org/studies/global-petroleum-survey-2018>, as of November 16, 2020.

Stedman, Ashley, and Kenneth P. Green (2018b). F*raser Institute Annual Survey of Mining Companies 2018*. The Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/annual-survey-of-mining-companies-2018.pdf>, as of November 16, 2020.

United States Energy Information Administration [US EIA] (2019). *U.S. Crude Oil and Natural Gas Proved Reserves, Year-End 2018.* <https://www.eia.gov/naturalgas/crudeoilreserves/pdf/usreserves.pdf>, as of November 16, 2020.

About the Authors

Jairo Yunis is a Policy Analyst at the Fraser Institute. He holds a Bachelor of Political Science and International Relations from the Pontifical Xaverian University of Colombia and a Master's degree in Public Policy from the University of Calgary. Mr. Yunis has previously worked for government in Colombia in policy issues related to local economic development and competitiveness. He specializes in energy policy, with a focus on carbon pricing and electricity markets.

Elmira Aliakbari is Associate Director of Natural Resource Studies at the Fraser Institute. She received a Ph.D. in Economics from the University of Guelph, and M.A. and B.S. degrees in Economics, both from the University of Tehran in Iran. She has studied public policy involving energy and the environment for nearly eight years. Prior to joining the Fraser Institute, Ms. Aliakbari was Director of Research, Energy, Ecology and Prosperity with the Frontier Center for Public Policy. She has presented her work at many academic conferences and has been published in the prestigious academic journal *Energy Economics*. Ms. Aliakbari's research has been discussed in prominent media outlets including *the Wall Street Journal*, and her commentaries have appeared in major Canadian and American newspapers such as the *Globe and Mail, Washington Times, National Post, and Financial Post*.

Acknowledgements

The authors wish to thank the anonymous reviewers for their comments, suggestions, and insights. Any remaining errors or oversights are the sole responsibility of the authors. As the researchers have worked independently, the views and conclusions expressed in this paper do not necessarily reflect those of the Board of Directors of the Fraser Institute, the staff, or supporters.

About the Fraser Institute

Our mission is to improve the quality of life for Canadians, their families, and future generations by studying, measuring, and broadly communicating the effects of government policies, entrepreneurship, and choice on their well-being.

Notre mission consiste à améliorer la qualité de vie des Canadiens et des générations à venir en étudiant, en mesurant et en diffusant les effets des politiques gouvernementales, de l'entrepreneuriat et des choix sur leur bien-être.

Peer review—validating the accuracy of our research

The Fraser Institute maintains a rigorous peer review process for its research. New research, major research projects, and substantively modified research conducted by the Fraser Institute are reviewed by experts with a recognized expertise in the topic area being addressed. Whenever possible, external review is a blind process. Updates to previously reviewed research or new editions of previously reviewed research are not reviewed unless the update includes substantive or material changes in the methodology.

The review process is overseen by the directors of the Institute's research departments who are responsible for ensuring all research published by the Institute passes through the appropriate peer review. If a dispute about the recommendations of the reviewers should arise during the Institute's peer review process, the Institute has an Editorial Advisory Board, a panel of scholars from Canada, the United States, and Europe to whom it can turn for help in resolving the dispute.

Publishing Information

Distribution

These publications are available from <http://www.fraserinstitute.org> in Portable Document Format (PDF) and can be read with Adobe Acrobat Pro® or Adobe Acrobat Reader®, versions 8/9 or later. Adobe Acrobat Reader DC®, the most recent version, is available free of charge from Adobe Systems Inc. at <http://get.adobe.com/reader/>. Readers having trouble viewing or printing our PDF files using applications from other manufacturers (e.g., Apple's Preview) should use Adobe Acrobat Reader or Adobe Acrobat Pro.

Ordering publications

To order printed publications from the Fraser Institute, please contact:

- e-mail: sales@fraserinstitute.org
- telephone: 604.688.0221 ext. 580 or, toll free, 1.800.665.3558 ext. 580
- fax: 604.688.8539

Media

For media enquiries, please contact our Communications Department:

- 604.714.4582
- e-mail: communications@fraserinstitute.org.

Date of issue

January 2021

ISBN

978-0-88975-630-4

Citation

Yunis, Jairo, and Elmira Aliakbari (2021). *Canada-US Energy Sector Competitiveness Survey 2020*. Fraser Institute. <http://www.fraserinstitute.org>.

Supporting the Fraser Institute

To learn how to support the Fraser Institute, please contact

- Development Department, Fraser Institute
  Fourth Floor, 1770 Burrard Street
  Vancouver, British Columbia, V6J 3G7 Canada
- telephone, toll-free: 1.800.665.3558 ext. 586
- e-mail: development@fraserinstitute.org

Purpose, Funding, and Independence

The Fraser Institute provides a useful public service. We report objective information about the economic and social effects of current public policies, and we offer evidence-based research and education about policy options that can improve the quality of life.

The Institute is a non-profit organization. Our activities are funded by charitable donations, unrestricted grants, ticket sales, and sponsorships from events, the licensing of products for public distribution, and the sale of publications.

All research is subject to rigorous review by external experts, and is conducted and published separately from the Institute's Board of Directors and its donors.

The opinions expressed by the author are his own, and do not necessarily reflect those of the Institute, its Board of Directors, its donors and supporters, or its staff. This publication in no way implies that the Fraser Institute, its trustees, or staff are in favour of, or oppose the passage of, any bill; or that they support or oppose any particular political party or candidate.

As a healthy part of public discussion among fellow citizens who desire to improve the lives of people through better public policy, the Institute welcomes evidence-focused scrutiny of the research we publish, including verification of data sources, replication of analytical methods, and intelligent debate about the practical effects of policy recommendations.

Editorial Advisory Board