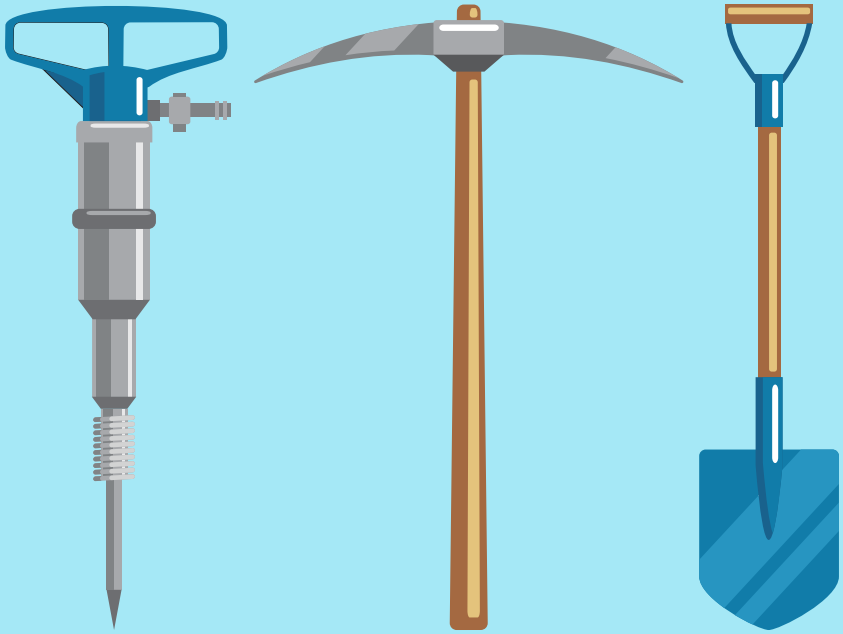
Fraser Institute Annual

SURVEY OF MINING COMPANIES 2018



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Survey information

The Fraser Institute Annual Survey of Mining Companies was sent to approximately 2,600 individuals in exploration, development, and other mining-related companies around the world. The survey was conducted from August 21st to November 9th, 2018. This year the results from the 2018 *Permit Times for Mining Exploration* publication are included in a separate section at the end of the survey.

2018 Mining Survey—Executive Summary

This report presents the results of the Fraser Institute's 2018 annual survey of mining and exploration companies. The survey is an attempt to assess how mineral endowments and public policy factors such as taxation and regulatory uncertainty affect exploration investment. The survey was circulated electronically to approximately 2,600 individuals between August 21st and November 9th, 2018. Survey responses have been tallied to rank provinces, states, and countries according to the extent that public policy factors encourage or discourage mining investment.

We received a total of 291 responses for the survey, providing sufficient data to evaluate 83 jurisdictions. By way of comparison, 91 jurisdictions were evaluated in 2017, 104 in 2016, 109 in 2015, and 122 in 2014. The number of jurisdictions that can be included in the study tends to wax and wane as the mining sector grows or shrinks due to commodity prices and sectoral factors.

This year's survey includes an analysis of permit times, which was previously evaluated in a separate publication.

The Investment Attractiveness Index takes both mineral and policy perception into consideration

An overall Investment Attractiveness Index is constructed by combining the Best Practices Mineral Potential index, which rates regions based on their geologic attractiveness, and the Policy Perception Index, a composite index that measures the effects of government policy on attitudes toward exploration investment. While it is useful to measure the attractiveness of a jurisdiction based on policy factors such as onerous regulations, taxation levels, the quality of infrastructure, and the other policy related questions that respondents answered, the Policy Perception Index alone does not recognize the fact that investment decisions are often sizably based on the pure mineral potential of a jurisdiction. Indeed, as discussed below, respondents consistently indicate that approximately 40 percent of their investment decision is determined by policy factors.

The top

The top jurisdiction in the world for investment based on the Investment Attractiveness Index is Nevada, which moved up from 3rd place in 2017. Western Australia moved into 2nd place after

ranking 5th in the previous year. Saskatchewan moved down one spot from 2nd in 2017 to 3rd in 2018. Quebec ranked 4th this year, and Alaska improved from 10th in 2017 to 5th in 2018. Rounding out the top 10 are Chile, Utah, Arizona, Yukon, and Northwest Territories.

The bottom

When considering both policy and mineral potential in the Investment Attractiveness Index, Venezuela ranks as the least attractive jurisdiction in the world for investment. This year, Venezuela replaced the Guatemala as the least attractive jurisdiction in the world. Also in the bottom 10 (beginning with the worst) are Neuquen, Nicaragua, Guatemala, Panama, China, Ethiopia, Dominican Republic, La Rioja, and Bolivia.

Policy Perception Index: A "report card" to governments on the attractiveness of their mining policies

While geologic and economic considerations are important factors in mineral exploration, a region's policy climate is also an important investment consideration. The Policy Perception Index (PPI), is a composite index that measures the overall policy attractiveness of the 83 jurisdictions in the survey. The index is composed of survey responses to policy factors that affect investment decisions. Policy factors examined include uncertainty concerning the administration of current regulations, environmental regulations, regulatory duplication, the legal system and taxation regime, uncertainty concerning protected areas and disputed land claims, infrastructure, socioeconomic and community development conditions, trade barriers, political stability, labor regulations, quality of the geological database, security, and labor and skills availability.

The top

Saskatchewan displaced Ireland from the top spot this year, and had the highest PPI score of 100. Saskatchewan was followed by Nevada in second, which moved up from 5th in the previous year. Along with Saskatchewan and Nevada the top 10 ranked jurisdictions are Finland, Ireland, Western Australia, Northern Ireland, Sweden, Utah, New Brunswick, and Quebec.

The bottom

The 10 least attractive jurisdictions for investment based on the PPI rankings are (starting with the worst) Venezuela, Democratic Republic of Congo (DRC), Neuquen, Chubut, Philippines, Guatemala, La Rioja, Zimbabwe, Bolivia, and China. Venezuela, Democratic Republic of Congo, Chubut, Philippines, Guatemala, Zimbabwe, Bolivia, and China were all in the bottom 10 jurisdictions last year.

Survey Methodology

Survey background

The mining industry is an important contributor both to Canada's economy and to economies around the world. It provides not only materials essential for all sectors of the economy, but also employment and government revenues. Mining contributes to economic growth worldwide and Canadian mining companies operate in jurisdictions around the world. While mineral potential is obviously a very important consideration in encouraging or dissuading mining investment, the impact of government policies can also be significant in encouraging or discouraging investment in this important area of economic activity. Moreover, many regions around the world have attractive geology and competitive policies, allowing exploration investment to be shifted away from jurisdictions with unattractive policies.

Since 1997, the Fraser Institute has conducted an annual survey of people in mining and exploration companies to assess how mineral endowments and public policy factors such as taxation and regulation affect exploration investment. Our purpose is to create a "report card" that governments can use to improve their mining-related public policy in order to attract investment in their mining sector to better their economic productivity and employment. Others in the mining sector, investment sector, academia, and the media also may find the survey useful for evaluating potential investment decisions, or for assessing various risk factors in jurisdictions of interest.[1]

This year the survey includes 83 jurisdictions from all continents except Antarctica. The 2018 questionnaire included a number of jurisdictions that had insufficient responses to enable them to be included in the report. The minimum threshold for inclusion this year was five responses. Jurisdictions with between 5 and 9 responses were included, but have been noted accordingly. Any jurisdiction with fewer than 5 responses was dropped. This year's dropped jurisdictions include Afghanistan, Albania, Angola, Argentina:Rio Negro, Armenia, Belarus, Bulgaria, Burkina Faso, Burundi, Cambodia, Central African Republic, Cyprus, Egypt, Eritrea, Estonia, France, Gabon, Greece, Guinea (Conakry), Honduras, Hungary, India, Iraq, Israel, Ivory Coast, Jordan, Kazakhstan,

[1] While we would prefer to directly measure the impacts of specific mining policy changes on investment in the sector, there are many barriers to doing so. The effects of policy on deterring exploration investment may not be immediately apparent due to the lag time between when policy changes are implemented and when economic activity is impeded and job losses occur.

Kenya, Kyrgyzstan, Laos, Lesotho, Liberia, Madagascar, Malawi, Malaysia, Mauritania, Mongolia, Morocco, Mozambique, Myanmar, New Caledonia, Niger, Nigeria, Oman, Pakistan, Republic of the Congo (Brazzaville), Romania, Saudi Arabia, Senegal, Serbia, Sierra Leone, Slovakia, Solomon Islands, South Sudan, Sudan, Swaziland, Tajikistan, Thailand, Tunisia, Uganda, Uruguay, and Vietnam.

Jurisdictions are added to the survey based on interest from survey respondents, and their inclusion fluctuates based on a variety of factors such as industry turnover, industry downturns, and the movement of mining investment into jurisdictions seen as more attractive. This survey is published annually and the results are available and accessible to an increasingly global audience. In the past, detailed tables were included in an appendix showing the breakdown of scores on each question for each individual jurisdiction. Those tables are now available online at https://www.fraserinstitute.org/categories/mining.

The Fraser Institute's mining survey is an informal survey that attempts to assess the perceptions of mining company executives about various optimal and sub-optimal public policies that might affect the hospitality of a jurisdiction to mining investment. Given the survey's very broad circulation, its extensive press coverage, and the positive feedback we receive from miners, investors, and policymakers about its usefulness, we believe that the survey broadly captures the perceptions of those involved in both mining and the regulation of mining for the jurisdictions included.

Sample design

The survey is designed to identify the provinces, states, and countries that have the most attractive policies for encouraging investment in mining exploration. Jurisdictions that investors assess as relatively unattractive may therefore be prompted to consider reforms that would improve their ranking. Presumably mining companies use the information provided to corroborate their own assessments and to identify jurisdictions where the business conditions and regulatory environment are most attractive for investment. The survey results are also a useful source of information for the media, providing independent information as to how particular jurisdictions compare.

The 2018 survey was distributed to approximately 2,600 managers and executives around the world in companies involved in mining exploration, development, and other related activities. The names of potential respondents were compiled from commercially available lists, publicly available membership lists of trade associations, and other sources. Several mining associations also helped publicize the survey.

The survey was conducted from August 21st to November 9th, 2018. We received a total of 291 responses from individuals, of whom 266 completed the full survey and 25 completed part of the

Figure 1: The Position Survey Respondents Hold in Their Company, 2018

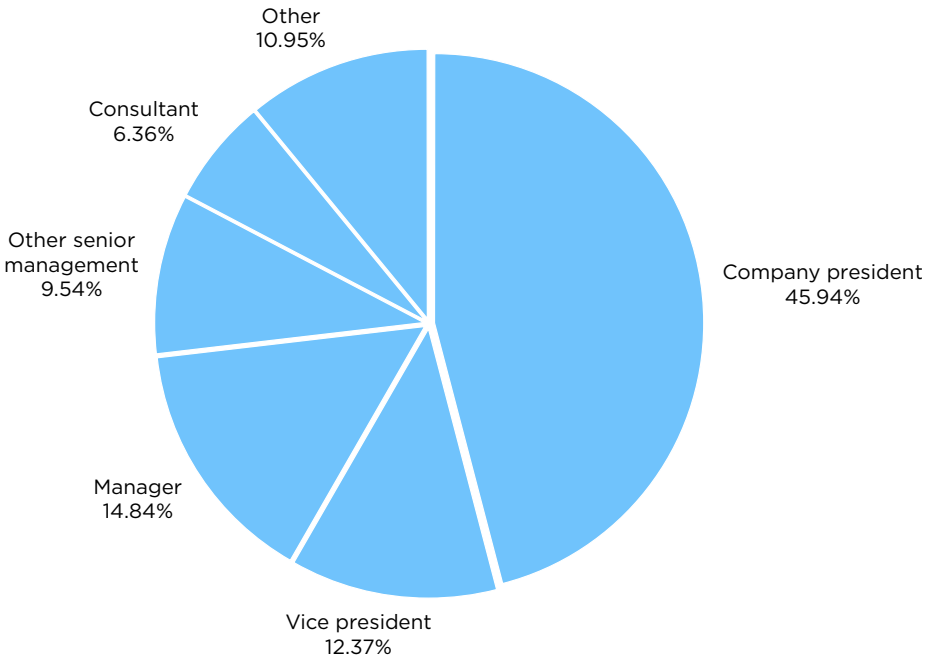
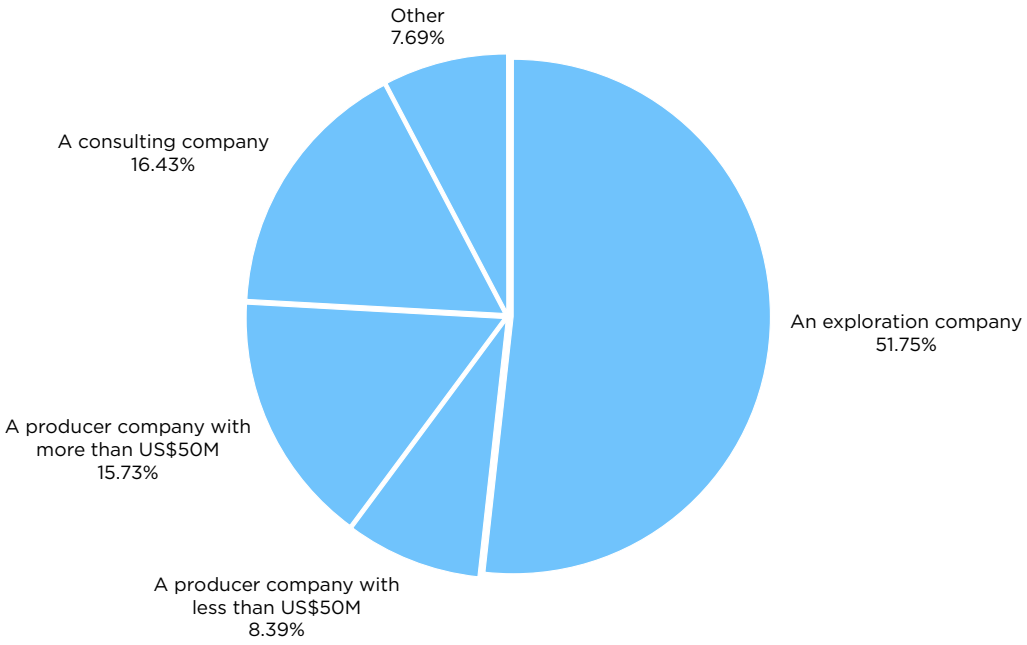


Figure 2: Company Focus as Indicated by Respondents, 2018



survey. As figure 1 illustrates, well over half of the respondents (58 percent) are either the company president or vice-president, and 24 percent are either managers or senior managers.[2]

Figure 2 shows that over half of the 2018 survey respondents represent an exploration company. Twenty-four percent of the respondents represent producer companies, and the final 24 percent is made up of consulting and other companies.

Survey questionnaire

The survey is designed to capture the opinions of managers and executives about the level of investment barriers in jurisdictions with which their companies are familiar. Respondents are asked to indicate how each of the 15 policy factors below influenced company decisions to invest in various jurisdictions.

1. Uncertainty concerning the administration, interpretation, or enforcement of existing regulations;
2. Uncertainty concerning environmental regulations (stability of regulations, consistency and timeliness of regulatory process, regulations not based on science);
3. Regulatory duplication and inconsistencies (includes federal/provincial, federal/state, inter-departmental overlap, etc.);
4. Legal system (legal processes that are fair, transparent, non-corrupt, timely, efficiently administered, etc.)
5. Taxation regime (includes personal, corporate, payroll, capital, and other taxes, and complexity of tax compliance);
6. Uncertainty concerning disputed land claims;
7. Uncertainty concerning what areas will be protected as wilderness, parks, or archeological sites, etc.;
8. Infrastructure (includes access to roads, power availability, etc.);
9. Socioeconomic agreements/community development conditions (includes local purchasing or processing requirements, or supplying social infrastructure such as schools or hospitals, etc.);
10. Trade barriers (tariff and non-tariff barriers, restrictions on profit repatriation, currency restrictions, etc.);
11. Political stability;

[2] Exploration spending numbers are not included in this year's survey due to a data collection issue related to date ranges.

12 Labor regulations/employment agreements and labor militancy/work disruptions;

13 Quality of the geological database (includes quality and scale of maps, ease of access to information, etc.);

14 Level of security (includes physical security due to the threat of attack by terrorists, criminals, guerrilla groups, etc.);

15 Availability of labor/skills.

Respondents were asked to score only jurisdictions with which they were familiar and only on those policy factors with which they were familiar. The 15 policy questions were unchanged from the 2013 survey. However, two questions that had been included—on the level of corruption (or honesty) and on growing (or lessening) uncertainty in mining policy and implementation—were dropped in 2013 in response to complaints from previous years' respondents that the survey had become onerously lengthy. Also, those questions were seen to be redundant, or overlap heavily with other questions. For each of the 15 factors, respondents were asked to select one of the following five responses that best described each jurisdiction with which they were familiar:

1 Encourages exploration investment

2 Not a deterrent to exploration investment

3 Is a mild deterrent to exploration investment

4 Is a strong deterrent to exploration investment

5 Would not pursue exploration investment in this region due to this factor

The survey also included questions about the respondents and the type of company they represented, regulatory "horror stories," examples of "exemplary policy," mineral potential assuming current regulation and land use restrictions, mineral potential assuming a "best practices" regulatory environment, the weighting of mineral versus policy factors in investment decisions, and investment spending.

Summary Indicies

Investment Attractiveness Index

The Investment Attractiveness Index (table 1and figure 3) is a composite index that combines both the Policy Perception Index (PPI) and results from the Best Practices Mineral Potential Index.[3] While it is useful to measure the attractiveness of a jurisdiction based on policy factors such as onerous regulations, taxation levels, the quality of infrastructure, and the other policy related questions that respondents answered, the Policy Perception Index alone does not recognize the fact that investment decisions are often sizably based on the pure mineral potential of a jurisdiction. Indeed, as will be discussed below, respondents consistently indicate that while 40 percent of their investment decision is determined by policy factors, 60 percent is based on their assessment of a jurisdiction's mineral potential. To get a true sense of which global jurisdictions are attracting investment, both mineral potential and policy perception must be considered.

This year, as in other years, the index was weighted 40 percent by policy and 60 percent by mineral potential. These ratios are determined from a survey question that asks respondents to rate the relative importance of each factor. In most years, the split is nearly exactly 60 percent mineral and 40 percent policy. This year, the answer was 58.92 percent mineral potential and 41.08 percent policy. We maintain a 60/40 ratio in calculating this index to allow comparability with other years.

The PPI (table 2 and figure 4) provides the data on policy perception (see below for explanation on how the index is calculated), while the rankings from the Best Practices Mineral Index (table 3 and figure 5), based on the percentage of responses for "Encourages Investment" and a half-weighting of the responses for "Not a Deterrent to Investment," provides the data on mineral potential. Table 1 details the relative trends observed over the last five years for the performance of each of the jurisdictions on the Investment Attractiveness Index.

One limitation of this index is that it may not provide an accurate measure of the investment attractiveness of a jurisdiction at extremes, or where the 60/40 weighting is unlikely to be stable. For example, extremely bad policy that would virtually confiscate all potential profits, or an environment that would expose workers and managers to high personal risk, would discourage mining activity

[3] A best practice environment is one which contains a world class regulatory environment, highly competitive taxation, no political risk or uncertainty, and a fully stable mining regime.

Figure 3: Investment Attractiveness Index

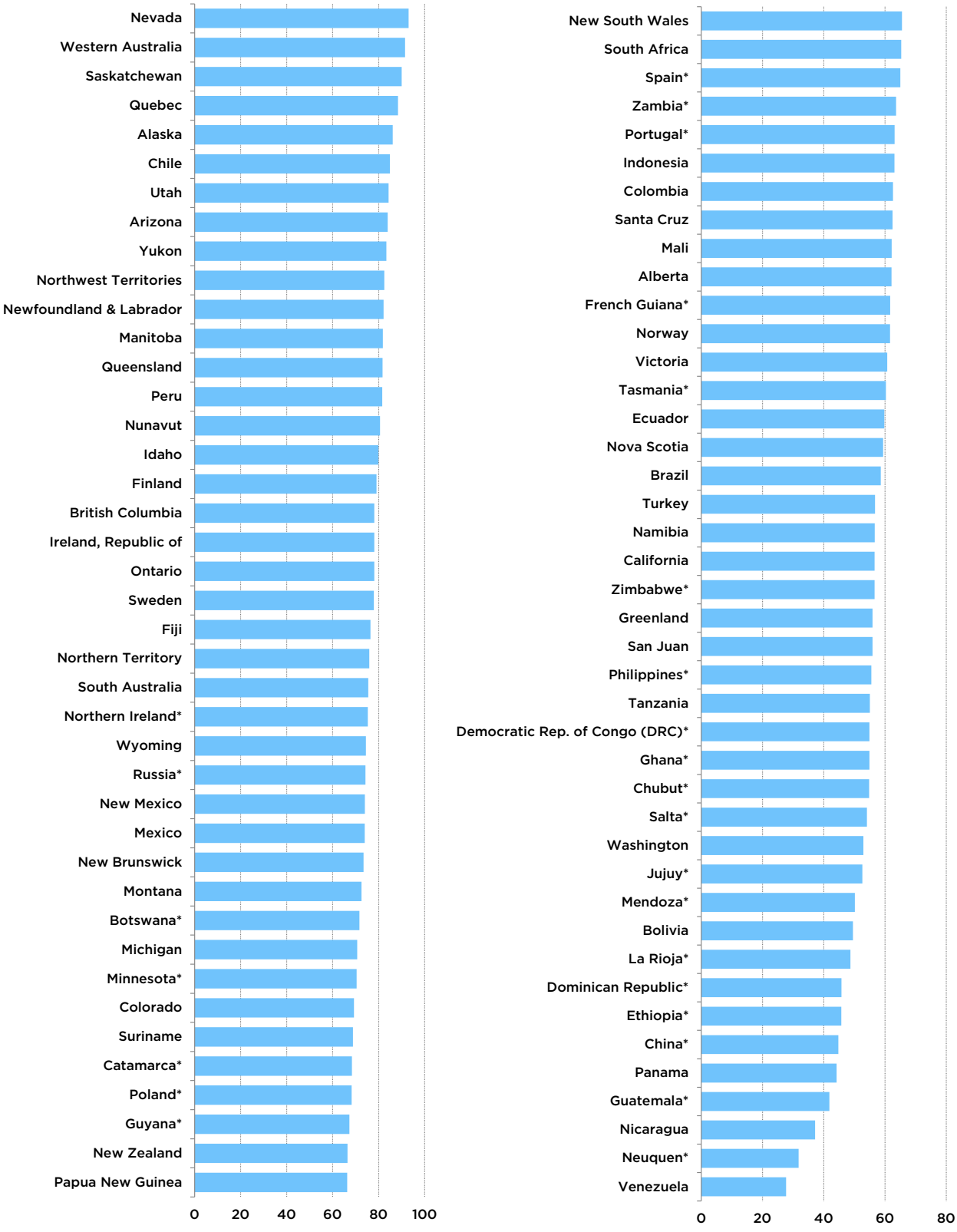


Table 1: Investment Attractiveness Index

		Score					Rank				
		2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Canada	Alberta	62.12	61.77	68.55	69.71	74.78	51/83	49/91	47/104	34/109	28/122
	British Columbia	78.09	74.01	74.15	75.71	74.27	18/83	20/91	27/104	18/109	29/122
	Manitoba	81.78	74.50	89.05	75.27	84.14	12/83	18/91	2/104	19/109	5/122
	New Brunswick	73.42	68.87	69.45	66.51	77.34	30/83	30/91	40/104	45/109	19/122
	Newfoundland & Labrador	82.14	80.58	78.94	73.55	83.27	11/83	11/91	16/104	25/109	8/122
	Northwest Territories	82.46	73.20	75.77	69.48	79.73	10/83	21/91	21/104	35/109	15/122
	Nova Scotia	59.38	60.41	66.80	59.51	66.27	57/83	56/91	52/104	59/109	49/122
	Nunavut	80.59	70.58	72.52	74.37	73.23	15/83	26/91	31/104	23/109	34/122
	Ontario	78.07	82.15	78.65	78.02	76.05	20/83	7/91	18/104	15/109	23/122
	Quebec	88.38	83.08	85.02	80.80	81.51	4/83	6/91	6/104	8/109	10/122
	Saskatchewan	90.00	87.18	89.91	85.73	86.27	3/83	2/91	1/104	2/109	2/122
	Yukon	83.35	79.67	79.61	79.16	83.68	9/83	13/91	15/104	12/109	6/122
United States	Alaska	86.08	80.74	80.27	83.96	81.28	5/83	10/91	14/104	6/109	12/122
	Arizona	83.94	81.11	84.91	76.33	80.59	8/83	9/91	7/104	17/109	13/122
	California	56.59	56.84	67.81	59.26	61.95	61/83	62/91	49/104	61/109	57/122
	Colorado	69.28	71.38	68.85	72.28	71.43	35/83	23/91	46/104	28/109	39/122
	Idaho	79.89	70.12	81.34	64.44	81.33	16/83	28/91	12/104	50/109	11/122
	Michigan	70.70	75.67	74.38	73.10	72.44	33/83	17/91	25/104	27/109	37/122
	Minnesota*	70.41	68.89	74.18	74.46	76.69	34/83	29/91	26/104	21/109	20/122
	Montana	72.50	65.90	71.16	68.27	73.25	31/83	38/91	35/104	40/109	33/122
	Nevada	92.99	85.45	87.48	85.39	88.38	1/83	3/91	4/104	3/109	1/122
	New Mexico	73.98	66.38	75.03	60.95	72.50	28/83	37/91	24/104	58/109	36/122
	Utah	84.29	78.19	81.39	80.31	79.68	7/83	15/91	11/104	9/109	18/122
	Washington	52.93	49.88	48.58	66.13	55.57	71/83	76/91	84/104	46/109	79/122
	Wyoming	74.45	58.35	75.26	78.07	83.54	26/83	60/91	23/104	14/109	7/122
Australia	New South Wales	65.56	62.31	61.84	68.83	62.40	42/83	46/91	62/104	38/109	55/122
	Northern Territory	75.93	70.47	77.61	81.90	73.89	23/83	27/91	20/104	7/109	31/122
	Queensland	81.67	80.53	81.40	77.79	76.24	13/83	12/91	10/104	16/109	22/122
	South Australia	75.46	79.30	81.03	79.83	79.71	24/83	14/91	13/104	10/109	16/122
	Tasmania*	60.31	61.69	64.27	71.34	66.43	55/83	50/91	56/104	30/109	46/122
	Victoria	60.74	51.82	63.96	59.16	58.04	54/83	71/91	57/104	62/109	69/122
	Western Australia	91.47	83.56	88.88	87.35	84.33	2/83	5/91	3/104	1/109	4/122
Oceania	Fiji	76.42	64.23	69.43	53.87	65.70	22/83	39/91	41/104	79/109	50/122
	Indonesia	63.10	66.84	50.16	65.16	55.24	47/83	35/91	78/104	49/109	81/122
	New Zealand	66.47	60.51	57.47	66.73	66.38	40/83	55/91	67/104	44/109	48/122
	Papua New Guinea	66.32	63.91	63.48	67.15	61.92	41/83	40/91	59/104	43/109	58/122
	Philippines*	55.55	50.32	58.97	56.59	48.78	65/83	75/91	66/104	72/109	95/122

Table 1 continued

		Score					Rank				
		2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Africa	Botswana*	71.66	63.14	77.62	68.32	75.10	32/83	43/91	19/104	39/109	27/122
	Democratic Republic of Congo (DRC)*	54.92	61.51	72.80	59.37	58.38	67/83	51/91	29/104	60/109	67/122
	Ethiopia*	45.73	44.35	57.32	64.11	50.76	77/83	81/91	68/104	51/109	89/122
	Ghana*	54.91	72.13	75.56	71.27	67.17	68/83	22/91	22/104	31/109	44/122
	Mali	62.18	70.74	69.32	50.84	64.70	50/83	25/91	42/104	83/109	51/122
	Namibia	56.66	60.67	66.11	69.78	76.37	60/83	54/91	53/104	33/109	21/122
	South Africa	65.30	62.06	53.62	58.04	56.49	43/83	48/91	74/104	66/109	74/122
	Tanzania	55.04	46.79	60.45	57.46	63.82	66/83	79/91	64/104	69/109	52/122
	Zambia*	63.60	59.34	72.78	57.48	75.71	45/83	58/91	30/104	68/109	25/122
	Zimbabwe*	56.57	54.32	41.84	41.45	39.07	62/83	66/91	96/104	98/109	112/122
Argentina	Catamarca*	68.39	53.91	50.38	42.29	69.14	37/83	67/91	77/104	96/109	41/122
	Chubut*	54.83	30.54	31.47	37.75	49.94	69/83	88/91	101/104	104/109	92/122
	Jujuy*	52.61	58.57	24.83	49.57	58.92	72/83	59/91	104/104	86/109	65/122
	La Rioja*	48.70	46.06	33.94	28.86	41.96	75/83	80/91	99/104	109/109	107/122
	Mendoza*	50.15	29.29	35.51	38.51	38.09	73/83	89/91	98/104	101/109	114/122
	Neuquen*	31.77	60.00	26.13	45.17	52.02	82/83	57/91	103/104	93/109	86/122
	Salta*	54.09	62.51	69.25	56.69	73.71	70/83	45/91	43/104	71/109	32/122
	San Juan	55.90	63.21	63.69	54.97	72.78	64/83	42/91	58/104	75/109	35/122
	Santa Cruz	62.46	60.98	54.80	42.59	55.81	49/83	52/91	72/104	95/109	77/122
Latin America and the Caribbean Basin	Bolivia	49.53	33.68	48.74	44.56	44.74	74/83	86/91	83/104	94/109	99/122
	Brazil	58.63	55.12	62.51	61.45	69.27	58/83	65/91	61/104	56/109	40/122
	Chile	84.90	81.51	69.66	79.81	81.86	6/83	8/91	39/104	11/109	9/122
	Colombia	62.58	56.10	59.52	62.75	61.29	48/83	64/91	65/104	55/109	61/122
	Dominican Republic*	45.77	51.33	42.82	52.89	50.40	76/83	72/91	92/104	81/109	91/122
	Ecuador	59.79	52.09	50.38	45.36	46.94	56/83	70/91	76/104	92/109	97/122
	French Guiana*	61.71	50.84	66.86	46.67	53.51	52/83	73/91	51/104	89/109	83/122
	Guatemala*	41.84	26.96	46.24	41.77	38.32	80/83	91/91	88/104	97/109	113/122
	Guyana*	67.27	50.42	68.97	50.91	66.38	39/83	74/91	45/104	82/109	47/122
	Mexico	73.91	63.03	67.06	68.93	75.96	29/83	44/91	50/104	37/109	24/122
	Nicaragua	37.19	43.10	55.02	58.38	63.28	81/83	82/91	71/104	65/109	54/122
	Panama	44.21	49.66	45.20	55.09	61.13	79/83	77/91	90/104	74/109	62/122
	Peru	81.55	74.26	73.47	69.26	75.35	14/83	19/91	28/104	36/109	26/122
	Suriname	68.81	57.43	**	**	57.26	36/83	61/91	**	**	71/122
	Venezuela	27.69	36.43	27.86	31.88	31.80	83/83	85/91	102/104	108/109	122/122

Table 1 continued

		Score					Rank				
		2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Asia	China*	44.75	41.65	65.13	58.49	48.89	78/83	83/91	54/104	64/109	94/122
Europe	Finland	79.04	89.04	85.56	84.00	85.70	17/83	1/91	5/104	5/109	3/122
	Greenland	55.93	66.97	64.63	73.43	68.58	63/83	34/91	55/104	26/109	42/122
	Ireland, Republic of	78.07	84.40	83.13	85.00	80.20	19/83	4/91	9/104	4/109	14/122
	Northern Ireland*	75.28	62.29	72.41	**	**	25/83	47/91	32/104	**	**
	Norway	61.65	63.24	70.59	70.68	67.99	53/83	41/91	37/104	32/109	43/122
	Poland*	68.27	**	71.34	61.37	58.03	38/83	**	34/104	57/109	70/122
	Portugal*	63.12	67.80	70.86	74.40	71.51	46/83	32/91	36/104	22/109	38/122
	Russia*	74.23	67.51	69.02	65.86	60.14	27/83	33/91	44/104	47/109	64/122
	Spain*	64.99	66.69	70.39	65.41	56.75	44/83	36/91	38/104	48/109	72/122
	Sweden	77.89	76.88	84.26	78.58	79.70	21/83	16/91	8/104	13/109	17/122
	Turkey	56.72	52.60	60.67	64.04	56.71	59/83	69/91	63/104	52/109	73/122

Notes:

* Between 5 and 9 responses

** Not Available

regardless of mineral potential. In this case, mineral potential—far from having a 60 percent weight—might carry very little weight. There is also an issue when poor policies lead to a reduction in the knowledge of mineral potential, thereby affecting the responses of potential investors.

Policy Perception Index (PPI): An assessment of the attractiveness of mining policies

While geologic and economic evaluations are always requirements for exploration, in today's globally competitive economy where mining companies may be examining properties located on different continents, a region's policy climate has taken on increased importance in attracting and winning investment. The Policy Perception Index, or PPI (see table 2 and figure 4), provides a comprehensive assessment of the attractiveness of mining policies in a jurisdiction, and can serve as a report card to governments on how attractive their policies are from the point of view of an exploration manager. In previous survey years, we have referred to this index as the Policy Potential Index. However, we feel that Policy Perception Index more accurately reflects the nature of this index.

The Policy Perception Index is a composite index that captures the opinions of managers and executives on the effects of policies in jurisdictions with which they are familiar. All survey policy questions (i.e., uncertainty concerning the administration, interpretation, and enforcement of existing regulations; environmental regulations; regulatory duplication and inconsistencies; taxation; uncertainty concerning disputed land claims and protected areas; infrastructure; socioeconomic agreements; political stability; labor issues; geological database; and security) are included in its calculation.

This year we continued the use of the methodology first used to calculate the PPI in 2015. The methodology differs from that of previous years in that it considers answers in all five response categories,[4] as well as how far a jurisdiction's score is from the average. To calculate the PPI, a score for each jurisdiction is estimated for all 15 policy factors by calculating each jurisdiction's average response. This score is then standardized using a common technique, where 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 15 policy variables are then added up to generate a final, standardized PPI score. That score is then normalized using the formula $\frac{Vmax - Vi}{Vmax - Vmin} \; x \; 100$

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.

4 The methodology used previously only considered responses in the "encourages investment" category.

Table 2: Policy Perception Index

		Score					Rank				
		2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Canada	Alberta	94.37	84.42	83.89	92.24	93.95	14/83	16/91	28/104	7/109	7/122
	British Columbia	75.98	73.80	76.57	75.28	70.18	44/83	36/91	41/104	41/109	54/122
	Manitoba	83.29	78.76	96.62	88.90	88.84	33/83	27/91	6/104	13/109	15/122
	New Brunswick	96.04	86.47	94.21	91.27	95.85	9/83	13/91	8/104	9/109	3/122
	Newfoundland & Labrador	92.85	87.46	89.01	88.24	94.17	18/83	10/91	18/104	15/109	6/122
	Northwest Territories	77.16	69.37	72.77	64.46	73.33	42/83	42/91	48/104	58/109	47/122
	Nova Scotia	94.89	82.28	91.99	87.85	93.68	11/83	24/91	11/104	17/109	8/122
	Nunavut	74.55	67.58	68.80	68.85	72.07	45/83	44/91	58/104	54/109	51/122
	Ontario	84.87	82.96	84.69	79.48	76.12	30/83	20/91	26/104	31/109	36/122
	Quebec	95.11	87.47	89.82	85.02	83.78	10/83	9/91	17/104	22/109	20/122
	Saskatchewan	100.00	91.81	98.87	95.10	95.67	1/83	3/91	2/104	4/109	5/122
	Yukon	86.87	82.69	84.81	76.66	78.70	24/83	22/91	25/104	39/109	32/122
United States	Alaska	85.48	76.85	85.42	84.89	75.70	26/83	29/91	23/104	23/109	38/122
	Arizona	91.67	85.28	90.64	87.88	84.48	19/83	14/91	14/104	16/109	18/122
	California	69.60	59.61	57.04	63.48	60.36	49/83	61/91	74/104	59/109	73/122
	Colorado	85.16	74.87	73.02	78.06	79.57	29/83	35/91	47/104	36/109	29/122
	Idaho	94.72	84.52	90.86	86.10	83.32	13/83	15/91	13/104	19/109	21/122
	Michigan	90.20	89.18	90.49	87.75	80.60	21/83	7/91	15/104	18/109	27/122
	Minnesota*	90.31	76.77	78.31	82.30	80.72	20/83	30/91	37/104	28/109	26/122
	Montana	81.24	66.06	71.16	77.58	73.63	35/83	47/91	52/104	37/109	46/122
	Nevada	99.31	90.50	97.64	94.07	91.95	2/83	5/91	5/104	6/109	10/122
	New Mexico	93.87	82.61	81.89	77.37	79.25	15/83	23/91	30/104	38/109	31/122
	Utah	96.25	86.73	88.09	89.47	88.20	8/83	12/91	20/104	11/109	16/122
	Washington	77.77	69.71	63.13	75.32	62.43	40/83	41/91	67/104	40/109	70/122
	Wyoming	93.83	87.55	94.40	97.09	93.35	16/83	8/91	7/104	2/109	9/122
Australia	New South Wales	71.60	63.21	63.91	69.12	75.01	47/83	53/91	66/104	51/109	41/122
	Northern Territory	77.32	75.31	85.70	85.15	82.72	41/83	33/91	22/104	21/109	23/122
	Queensland	84.64	75.78	78.50	79.19	78.10	31/83	31/91	36/104	32/109	33/122
	South Australia	89.65	80.39	87.05	85.50	86.78	22/83	26/91	21/104	20/109	17/122
	Tasmania*	84.11	75.65	81.51	78.34	73.08	32/83	32/91	32/104	34/109	49/122
	Victoria	76.85	63.93	73.80	72.91	76.09	43/83	52/91	42/104	43/109	37/122
	Western Australia	96.68	83.51	93.20	91.53	90.83	5/83	17/91	9/104	8/109	12/122
Oceania	Fiji	86.05	73.07	73.57	69.06	71.26	25/83	37/91	44/104	53/109	53/122
	Indonesia	54.64	39.92	29.93	40.41	34.60	70/83	84/91	99/104	91/109	110/122
	New Zealand	85.40	64.43	77.51	79.83	77.45	27/83	50/91	39/104	30/109	35/122
	Papua New Guinea	60.81	47.27	47.99	51.96	49.81	61/83	77/91	83/104	77/109	93/122
	Philippines*	42.46	38.29	28.68	41.48	33.46	79/83	85/91	100/104	89/109	113/122

Table 2 continued

		Score					Rank				
		2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Africa	Botswana*	94.77	82.84	91.79	88.29	90.26	12/83	21/91	12/104	14/109	14/122
	Democratic Republic of Congo (DRC)*	34.18	35.03	60.58	42.74	40.95	82/83	87/91	70/104	87/109	105/122
	Ethiopia*	54.31	57.31	53.29	70.27	51.89	71/83	64/91	79/104	48/109	87/122
	Ghana*	62.27	64.42	81.76	69.09	74.93	60/83	51/91	31/104	52/109	42/122
	Mali	60.00	66.86	65.48	60.86	65.76	63/83	46/91	61/104	65/109	65/122
	Namibia	80.71	71.11	77.77	80.70	84.44	36/83	39/91	38/104	29/109	19/122
	South Africa	64.57	42.66	47.50	51.91	54.24	56/83	81/91	84/104	78/109	83/122
	Tanzania	56.83	45.11	66.13	62.12	69.56	66/83	78/91	59/104	63/109	56/122
	Zambia*	65.25	53.34	73.61	62.69	75.28	53/83	71/91	43/104	61/109	40/122
	Zimbabwe*	47.68	29.54	18.06	24.67	13.68	76/83	89/91	102/104	106/109	121/122
Argentina	Catamarca*	79.31	70.50	59.28	44.35	60.35	38/83	40/91	73/104	85/109	74/122
	Chubut*	37.07	26.34	31.79	25.13	34.86	80/83	90/91	98/104	105/109	109/122
	Jujuy*	56.53	54.75	37.07	42.68	54.31	67/83	69/91	93/104	88/109	82/122
	La Rioja*	46.76	52.66	37.96	22.15	37.40	77/83	73/91	92/104	107/109	108/122
	Mendoza*	50.37	43.22	34.23	35.56	27.72	73/83	80/91	96/104	98/109	117/122
	Neuquen*	34.42	74.99	50.33	25.43	49.05	81/83	34/91	81/104	104/109	95/122
	Salta*	67.72	71.89	83.13	62.30	73.28	51/83	38/91	29/104	62/109	48/122
	San Juan	64.76	66.96	73.50	53.61	67.94	55/83	45/91	46/104	72/109	60/122
	Santa Cruz	65.09	61.38	62.00	40.86	42.02	54/83	58/91	69/104	90/109	103/122
Latin America and the Caribbean Basin	Bolivia	48.81	40.45	42.16	36.40	29.34	75/83	83/91	87/104	95/109	115/122
	Brazil	64.43	55.66	64.97	56.57	59.17	57/83	66/91	64/104	69/109	77/122
	Chile	88.61	80.55	78.68	83.50	83.16	23/83	25/91	35/104	26/109	22/122
	Colombia	58.96	44.80	45.68	53.75	57.23	65/83	79/91	86/104	70/109	81/122
	Dominican Republic*	64.42	61.66	62.04	65.55	50.99	58/83	57/91	68/104	57/109	91/122
	Ecuador	51.64	42.18	34.28	43.41	27.36	72/83	82/91	95/104	86/109	118/122
	French Guiana*	64.26	58.91	79.64	52.39	58.79	59/83	62/91	34/104	74/109	78/122
	Guatemala*	46.26	29.89	40.59	46.09	47.79	78/83	88/91	89/104	83/109	98/122
	Guyana*	68.18	61.76	72.44	59.76	71.45	50/83	56/91	50/104	67/109	52/122
	Mexico	71.32	65.13	69.97	71.14	72.90	48/83	49/91	53/104	47/109	50/122
	Nicaragua	55.47	55.24	68.81	53.64	68.20	68/83	68/91	57/104	71/109	59/122
	Panama	60.53	49.14	47.37	57.72	67.32	62/83	76/91	85/104	68/109	61/122
	Peru	79.66	68.99	69.54	66.80	68.37	37/83	43/91	54/104	55/109	58/122
	Suriname	74.52	57.87	**	**	66.65	46/83	63/91	**	**	63/122
	Venezuela	0.00	0.00	0.00	0.00	0.00	83/83	91/91	104/104	109/109	122/122

Table 2 continued

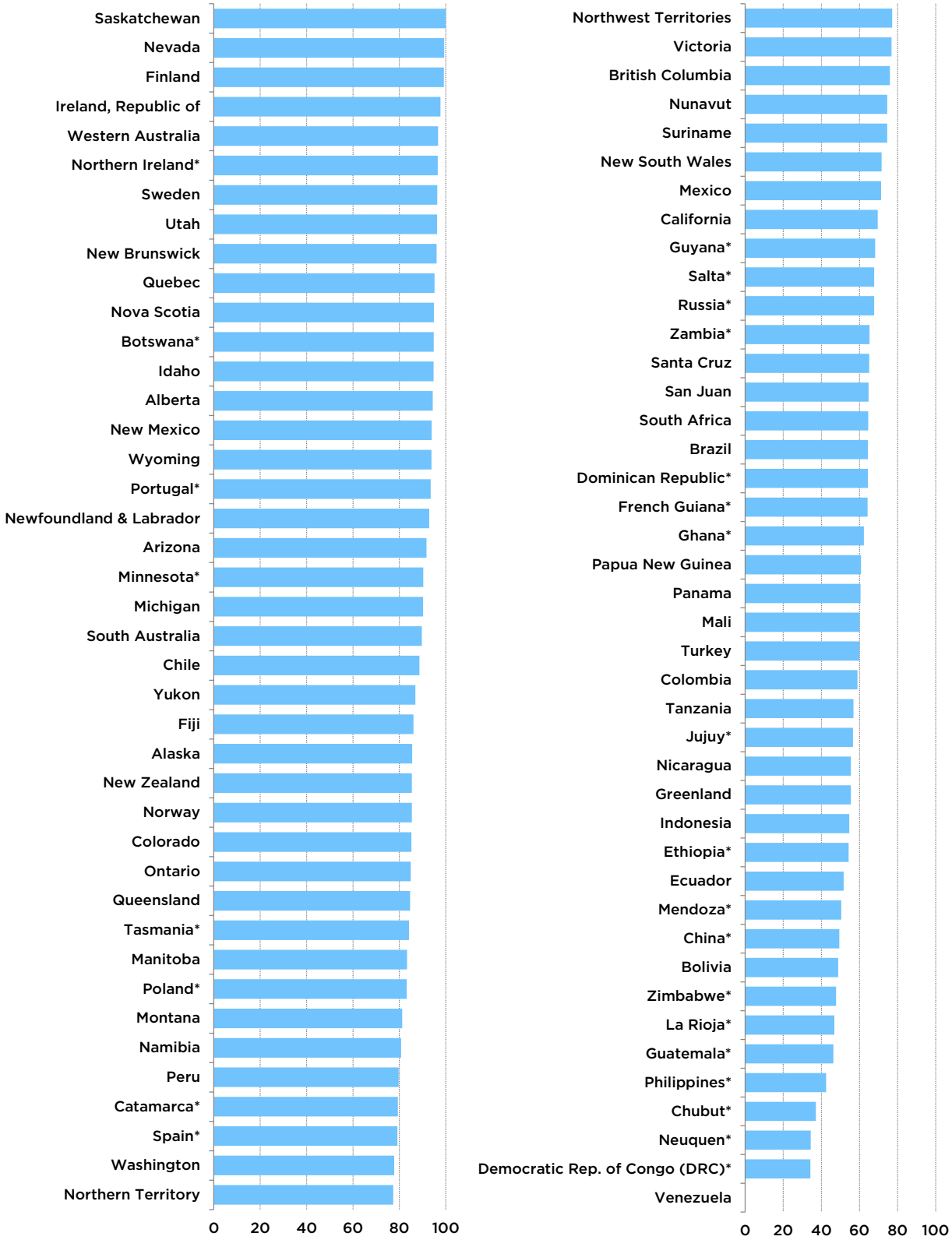
		Score					Rank				
		2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Asia	China*	49.39	37.46	59.71	46.22	42.73	74/83	86/91	71/104	82/109	102/122
Europe	Finland	99.16	98.84	97.64	94.83	98.74	3/83	2/91	4/104	5/109	2/122
	Greenland	55.46	63.07	65.14	83.58	79.94	69/83	54/91	63/104	25/109	28/122
	Ireland, Republic of	97.68	100.00	100.00	100.00	100.00	4/83	1/91	1/104	1/109	1/122
	Northern Ireland*	96.55	89.56	92.97	**	**	6/83	6/91	10/104	**	**
	Norway	85.38	77.75	88.98	89.19	90.47	28/83	28/91	19/104	12/109	13/122
	Poland*	83.17	**	84.59	78.43	74.58	34/83	**	27/104	33/109	43/122
	Portugal*	93.50	87.01	90.30	89.56	91.78	17/83	11/91	16/104	10/109	11/122
	Russia*	67.71	60.44	64.22	52.15	48.36	52/83	60/91	65/104	75/109	97/122
	Spain*	79.13	83.39	85.18	78.29	74.36	39/83	18/91	24/104	35/109	45/122
	Sweden	96.28	91.11	98.15	96.45	95.74	7/83	4/91	3/104	3/109	4/122
	Turkey	59.98	52.74	54.61	71.46	69.78	64/83	72/91	78/104	45/109	55/122

Notes:

* Between 5 and 9 responses

** Not Available

Figure 4: Policy Perception Index



Best Practices Mineral Potential Index

Table 3 and figure 5 show the mineral potential of jurisdictions, assuming their policies are based on "best practices" (i.e., world class regulatory environment, highly competitive taxation, no political risk or uncertainty, and a fully stable mining regime). In other words, this figure represents, in a sense, a jurisdiction's "pure" mineral potential, since it assumes a "best practices" policy regime.

The "Best Practices Mineral Potential" index ranks the jurisdictions based on which region's geology "encourages exploration investment" or is "not a deterrent to investment." Since the "Encourages" response expresses a much more positive attitude to investment than "Not a Deterrent," in calculating these indexes we give "Not a Deterrent" half the weight of "Encourages." For example, the "Best Practices Mineral Potential" for Western Australia was calculated by adding the percent of respondents who rated Norway's mineral potential as "Encourages Investment" (78 percent) with the 20 percent who responded "Not a Deterrent to Investment," which was half weighted at 10 percent. Thus, in the 2018 survey Western Australia has a score of 88, taking into account rounding. Table 3 provides more precise information and the recent historical record.

A caveat

This survey captures both general and specific knowledge of respondents. A respondent may give an otherwise high-scoring jurisdiction a low mark because of his or her individual experience with a problem there. We do not believe this detracts from the value of the survey. In fact, we have made a particular point of highlighting such differing views in the survey comments and the "What miners are saying" quotes.

It is also important to note that different segments of the mining industry (exploration and development companies, say) face different challenges. Yet many of the challenges the different segments face are similar. This survey is intended to capture the overall view.

Figure 5: Best Practices Mineral Potential Index

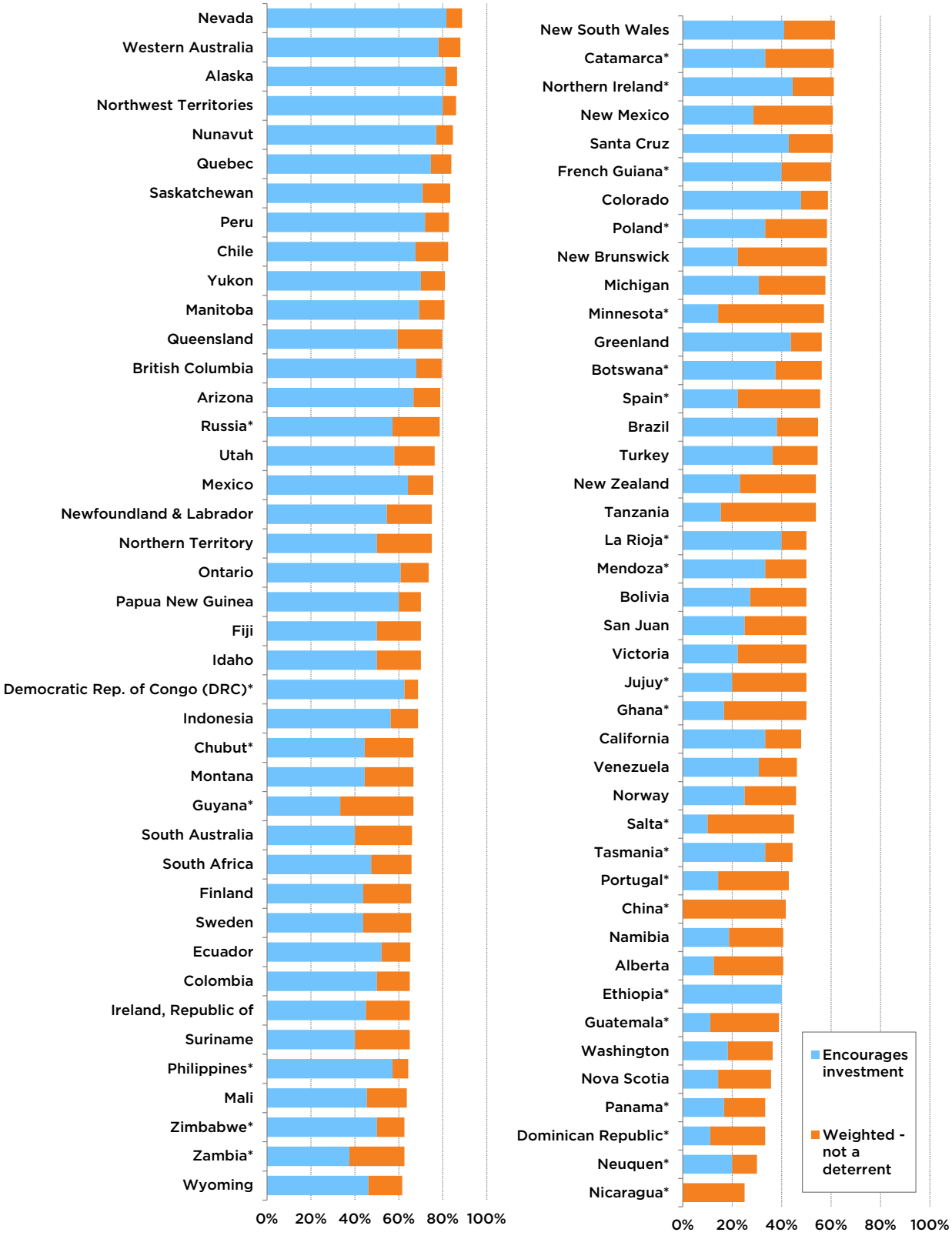


Table 3: Best Practices Mineral Potential Index

		Score					Rank				
		2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Canada	Alberta	40.63	46.67	58.33	54.69	62.07	74/83	69/91	61/104	70/109	53/122
	British Columbia	79.49	74.16	72.53	76.00	77.08	13/83	22/91	24/104	17/109	14/122
	Manitoba	80.77	71.67	84.00	66.18	81.11	11/83	28/91	2/104	42/109	5/122
	New Brunswick	58.33	57.14	52.94	50.00	65.15	49/83	52/91	74/104	78/109	44/122
	Newfoundland & Labrador	75.00	76.00	72.22	63.75	76.04	18/83	18/91	25/104	48/109	17/122
	Northwest Territories	86.00	75.76	77.78	72.83	84.44	4/83	19/91	11/104	21/109	4/122
	Nova Scotia	35.71	45.83	50.00	40.63	47.92	79/83	70/91	76/104	99/109	92/122
	Nunavut	84.62	72.58	75.00	78.05	73.75	5/83	25/91	18/104	8/109	26/122
	Ontario	73.53	81.62	74.62	77.04	75.77	20/83	9/91	22/104	13/109	18/122
	Quebec	83.90	80.16	81.82	77.98	79.72	6/83	10/91	5/104	9/109	9/122
	Saskatchewan	83.33	84.09	83.93	79.49	79.35	7/83	2/91	3/104	7/109	11/122
	Yukon	81.00	77.66	76.14	80.83	85.94	10/83	16/91	16/104	4/109	1/122
United States	Alaska	86.49	83.33	76.83	83.33	85.09	3/83	5/91	15/104	2/109	3/122
	Arizona	78.79	78.33	81.08	68.63	77.78	14/83	13/91	6/104	31/109	13/122
	California	47.92	55.00	75.00	56.45	63.51	67/83	57/91	19/104	65/109	49/122
	Colorado	58.70	69.05	66.07	68.42	65.12	48/83	31/91	41/104	33/109	45/122
	Idaho	70.00	60.53	75.00	50.00	80.00	21/83	46/91	20/104	78/109	8/122
	Michigan	57.69	66.67	63.64	63.33	66.67	51/83	34/91	47/104	49/109	41/122
	Minnesota*	57.14	63.64	71.43	69.23	73.68	52/83	37/91	31/104	28/109	27/122
	Montana	66.67	65.79	71.15	62.07	72.22	28/83	35/91	34/104	52/109	29/122
	Nevada	88.78	82.08	80.70	79.61	85.80	1/83	8/91	8/104	6/109	2/122
	New Mexico	60.71	55.56	70.45	50.00	67.86	45/83	55/91	35/104	78/109	39/122
	Utah	76.32	72.50	76.92	74.19	74.19	16/83	26/91	14/104	20/109	25/122
	Washington	36.36	36.67	38.89	60.00	50.00	78/83	82/91	93/104	56/109	83/122
	Wyoming	61.54	38.89	62.50	65.38	76.79	42/83	81/91	51/104	43/109	16/122
Australia	New South Wales	61.54	61.70	60.47	68.63	53.92	41/83	40/91	56/104	31/109	77/122
	Northern Territory	75.00	67.24	72.22	79.73	67.95	19/83	33/91	26/104	5/109	38/122
	Queensland	79.69	83.70	83.33	76.85	75.00	12/83	3/91	4/104	14/109	19/122
	South Australia	66.00	78.57	77.03	76.04	74.47	29/83	12/91	13/104	16/109	24/122
	Tasmania*	44.44	52.38	52.78	66.67	62.00	71/83	63/91	75/104	35/109	54/122
	Victoria	50.00	43.75	57.41	50.00	45.16	66/83	77/91	68/104	78/109	97/122
	Western Australia	88.00	83.59	86.00	84.56	79.51	2/83	4/91	1/104	1/109	10/122
Oceania	Fiji	70.00	58.33	66.67	43.75	61.54	22/83	48/91	39/104	93/109	55/122
	Indonesia	68.75	84.78	63.64	81.67	68.06	25/83	1/91	48/104	3/109	37/122
	New Zealand	53.85	57.89	44.12	58.00	59.26	58/83	51/91	86/104	62/109	63/122
	Papua New Guinea	70.00	75.00	73.81	77.27	70.00	23/83	20/91	23/104	12/109	32/122
	Philippines*	64.29	58.33	79.17	66.67	58.33	37/83	49/91	10/104	35/109	65/122

Table 3 continued

		Score					Rank				
		2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Africa	Botswana*	56.25	50.00	68.18	55.00	65.52	53/83	64/91	38/104	69/109	43/122
	Democratic Republic of Congo (DRC)*	68.75	79.17	80.95	70.45	68.97	24/83	11/91	7/104	26/109	34/122
	Ethiopia*	40.00	35.71	60.00	60.00	50.00	76/83	83/91	57/104	56/109	85/122
	Ghana*	50.00	77.27	71.43	72.73	62.50	61/83	17/91	33/104	22/109	51/122
	Mali	63.64	73.33	71.88	64.29	63.79	38/83	24/91	29/104	45/109	48/122
	Namibia	40.63	53.70	58.33	62.50	70.37	75/83	60/91	62/104	50/109	31/122
	South Africa	65.79	75.00	57.69	62.12	57.89	30/83	21/91	66/104	51/109	67/122
	Tanzania	53.85	47.92	56.67	54.35	60.00	59/83	68/91	71/104	71/109	57/122
	Zambia*	62.50	63.33	72.22	54.00	75.00	39/83	39/91	27/104	73/109	20/122
	Zimbabwe*	62.50	70.83	57.69	52.63	56.00	40/83	29/91	67/104	77/109	71/122
Argentina	Catamarca*	61.11	42.86	44.44	40.91	75.00	43/83	78/91	85/104	98/109	21/122
	Chubut*	66.67	33.33	31.25	46.15	59.38	26/83	85/91	97/104	90/109	62/122
	Jujuy*	50.00	61.11	16.67	54.17	61.54	62/83	42/91	103/104	72/109	56/122
	La Rioja*	50.00	41.67	31.25	33.33	45.00	63/83	80/91	98/104	106/109	99/122
	Mendoza*	50.00	20.00	36.36	40.48	44.12	64/83	89/91	95/104	100/109	102/122
	Neuquen*	30.00	50.00	10.00	58.33	54.55	82/83	66/91	104/104	60/109	74/122
	Salta*	45.00	56.25	60.00	52.94	73.53	70/83	54/91	59/104	76/109	28/122
	San Juan	50.00	60.71	57.14	55.88	75.00	65/83	43/91	69/104	68/109	22/122
	Santa Cruz	60.71	60.71	50.00	43.75	64.71	46/83	44/91	78/104	93/109	46/122
Latin America and the Caribbean Basin	Bolivia	50.00	29.17	53.13	50.00	55.00	60/83	87/91	73/104	78/109	73/122
	Brazil	54.76	54.76	60.87	64.71	75.00	56/83	59/91	54/104	44/109	23/122
	Chile	82.43	82.14	63.64	77.36	80.36	9/83	7/91	49/104	11/109	6/122
	Colombia	65.00	63.64	68.75	68.75	63.89	34/83	38/91	36/104	29/109	47/122
	Dominican Republic*	33.33	44.44	30.00	44.44	50.00	80/83	74/91	100/104	92/109	88/122
	Ecuador	65.22	58.70	61.11	46.67	60.00	33/83	47/91	53/104	89/109	58/122
	French Guiana*	60.00	45.45	58.33	42.86	50.00	47/83	72/91	63/104	95/109	89/122
	Guatemala*	38.89	25.00	50.00	38.89	31.82	77/83	88/91	79/104	103/109	115/122
	Guyana*	66.67	42.86	66.67	45.00	63.33	27/83	79/91	40/104	91/109	50/122
	Mexico	75.64	61.63	65.12	67.46	77.97	17/83	41/91	43/104	34/109	12/122
	Nicaragua	25.00	35.00	45.83	61.54	59.09	83/83	84/91	84/104	53/109	64/122
	Panama	33.33	50.00	43.75	53.33	56.25	81/83	67/91	87/104	74/109	68/122
	Peru	82.81	77.78	76.09	70.90	80.36	8/83	14/91	17/104	25/109	7/122
	Suriname	65.00	57.14	**	**	50.00	36/83	53/91	**	**	90/122
	Venezuela	46.15	60.71	46.43	53.13	52.17	68/83	45/91	83/104	75/109	82/122

Table 3 continued

		Score					Rank				
		2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Asia	China*	41.67	44.44	68.75	66.67	52.78	73/83	75/91	37/104	35/109	80/122
Europe	Finland	65.63	82.50	77.50	76.79	76.92	31/83	6/91	12/104	15/109	15/122
	Greenland	56.25	69.57	64.29	66.67	60.00	54/83	30/91	46/104	35/109	59/122
	Ireland, Republic of	65.00	74.00	71.88	75.00	65.91	35/83	23/91	30/104	17/109	42/122
	Northern Ireland*	61.11	44.12	58.70	**	**	44/83	76/91	60/104	**	**
	Norway	45.83	53.57	58.33	58.33	52.50	69/83	61/91	64/104	60/109	81/122
	Poland*	58.33	**	62.50	50.00	46.88	50/83	**	52/104	78/109	94/122
	Portugal*	42.86	55.00	57.89	64.29	58.33	72/83	58/91	65/104	45/109	66/122
	Russia*	78.57	72.22	72.22	75.00	67.86	15/83	27/91	28/104	17/109	40/122
	Spain*	55.56	55.56	60.53	56.82	44.74	55/83	56/91	55/104	64/109	100/122
	Sweden	65.63	67.39	75.00	66.67	68.52	32/83	32/91	21/104	35/109	35/122
	Turkey	54.55	52.50	64.71	59.09	47.06	57/83	62/91	44/104	58/109	93/122

Notes:

* Between 5 and 9 responses

** Not Available

Global Survey Rankings

The top

The top jurisdiction in the world for investment based on the Investment Attractiveness Index is Nevada, which moved up from 3rd place in 2017 (see table 1). Western Australia moved into 2nd place after ranking 5th in the previous year. Saskatchewan dropped one spot from 2nd in 2017 to 3rd in 2018. Quebec's rank improved from 6th last year to 4th this year, and Alaska's rank also moved up from 10th in 2017 to 5th in 2018. Rounding out the top 10 are Chile, Utah, Arizona, Yukon, and Northwest Territories. Three jurisdictions—Northwest Territories, Yukon, and Utah—were outside of the top 10 in the previous year.

Saskatchewan had the highest PPI score of 100 this year, displacing the Republic of Ireland which held the top spot since 2013. Saskatchewan was followed by Nevada in 2nd, which moved up from 5th the previous year. Along with Saskatchewan and Nevada the top 10 ranked jurisdictions are Finland, Ireland, Western Australia, Northern Ireland, Sweden, Utah, New Brunswick, and Quebec.

All were in the top 10 last year except for Western Australia, Utah, and New Brunswick. Western Australia increased in the rankings from 17th in 2017 to rank 5th in 2018, Utah improved from 12th in 2017 to 8th in 2018, and New Brunswick moved up from 13th last year to 9th this year. Displaced from the top 10 were Michigan, Wyoming, and Newfoundland and Labrador.

Finland, the Republic of Ireland, Nevada, Saskatchewan, and Sweden have ranked consistently in the top 10 over the last six surveys. Table 2 illustrates in greater detail the shifts in the relative ranking of the policy perceptions of the jurisdictions surveyed.

The bottom

When considering both policy and mineral potential in the Investment Attractiveness Index, Venezuela ranks as the least attractive jurisdiction in the world for investment. This year, Venezuela replaced Guatemala as the least attractive jurisdiction in the world. Also in the bottom 10 (beginning with the worst) are Argentina: Neuquen, Nicaragua, Guatemala, Panama, China, Ethiopia, Dominican Republic, Argentina: La Rioja, and Bolivia.

The 10 least attractive jurisdictions for investment based on the PPI rankings are (starting with the worst) Venezuela, Democratic Republic of Congo, Argentina: Neuquen, Argentina: Chubut, Philippines, Guatemala, Argentina: La Rioja, Zimbabwe, Bolivia, and China. Venezuela, Democratic Republic of Congo, Chubut, Philippines, Guatemala, Zimbabwe, Bolivia, and China were all in the bottom 10 jurisdictions last year. Displaced from the bottom 10 in 2018 were Indonesia and Ecuador.

Global Results

Canada

Canada's median PPI score increased by 7 points this year and three Canadian jurisdictions—Saskatchewan (1st), New Brunswick (9th) and Quebec (10th)—are ranked in the top 10. When considering how Canadian jurisdictions rank on the Investment Attractiveness Index, Canada continues to perform well as it continues to be the most attractive region in the world for investment.[5] Four Canadian jurisdictions—Saskatchewan (3rd), Quebec (4th), Yukon (9th), and the Northwest Territories (10th) —are all in the top 10 in terms of investment attractiveness.

Focusing on policy alone (and not overall investment attractiveness), British Columbia's PPI score was similar to 2017. However, British Columbia's relative rank decreased this year, coming in at an overall ranking of 44th (out of 83) after ranking 36th (out of 91) last year.[6] This year respondents expressed increased concern over regulatory duplication and inconsistencies (+15 points), the legal system (+11 points), and uncertainty regarding the administration, interpretation, or enforcement of existing regulations (+11 points). In particular, 75 percent of respondents cited British Columbia's environmental regulations as a deterrent to investment. The two other policy areas that continue to significantly hamper British Columbia are uncertainty concerning disputed land claims and uncertainty over which areas will be protected. The sum of negative responses for these policy factors was 72 percent and 74 percent of respondents, respectively. These scores likely reflect the ongoing tensions in the province over land title issues.[7]

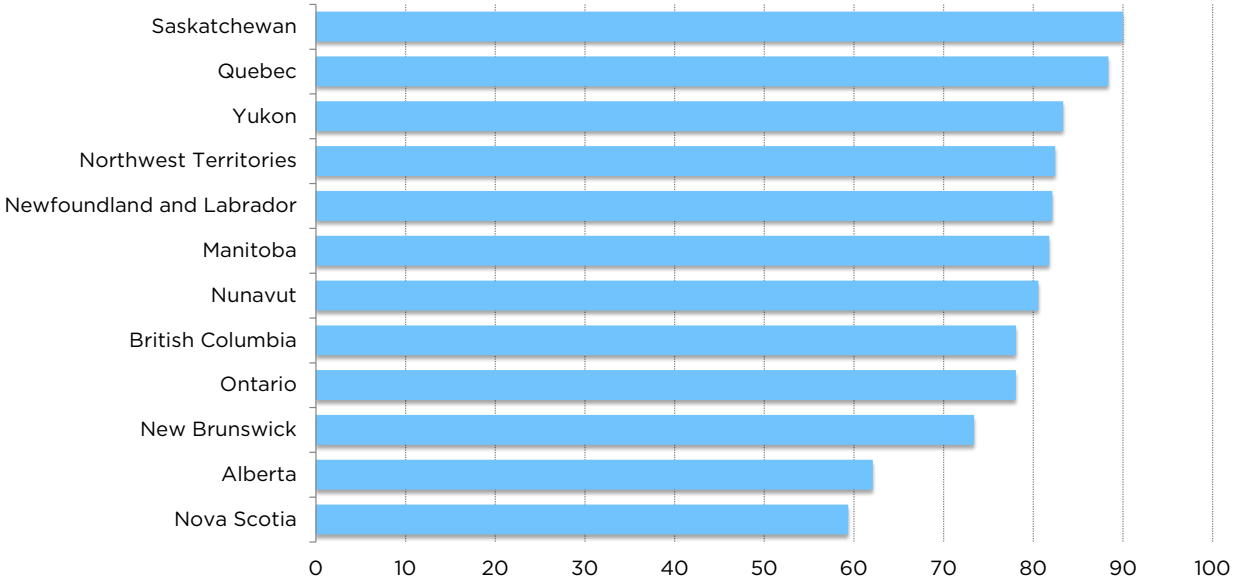
Alberta's PPI score improved by almost 10 points this year, and its rank improved from 16th in 2017 to 14th in 2018. Despite this increase, Alberta's overall rank (16th) has deteriorated in recent years, from ranking 7th (of 122) in 2014 and 2015 (of 109), to 28th in 2016 and 16th (of 91) in 2017. This year,

[5] Asia was not included in the regional analysis this year due to insufficient responses. Only one jurisdiction from the region (China) received sufficient responses to be included in this year's survey.

[6] Rankings are based on a jurisdiction's score relative to those of the other ranked jurisdictions. As a result, a jurisdiction may experience a drop or increase in rank when its year-over-year score is unchanged.

[7] See Ravina Bains (2014), *A Real Game Changer: An Analysis of the Supreme Court of Canada* Tsilhqot'in Nation v. British Columbia Decision, Research Bulletin, Fraser Institute; and Ravina Bains (2015), *Economic Development in Jeopardy? Implications of the* Saik'uz First Nation and Stellat'en First Nation v. Rio Tinto Decision, Research Bulletin, Fraser Institute. Both available at www.fraserinstitute.org.

Figure 6: Investment Attractiveness Index—Canada



miners expressed decreased concern over uncertainty concerning disputed land claims (-22 points), legal system (-20 points), and socioeconomic agreements and community development conditions (-15 points).

Saskatchewan saw an 8-point increase in its PPI score this year, making this jurisdiction the top ranked jurisdiction based on policy factors. Respondents expressed decreased concern over socioeconomic agreements and community development conditions (-14 points), political stability (-10 points), and uncertainty concerning protected areas (-8 points). Despite improvements in these areas, respondents expressed increased concern over disputed land claims (+18 points).

Manitoba saw its score increase since last year, but its rank deteriorated from 27th (of 91) in 2017 to 33rd (of 83) in 2018. Manitoba's rank also remains far behind where it was in 2014 when the province ranked 15th (of 122). The decline reflects lower scores on the PPI as a greater percentage of respondents indicated that the following policy factors in Manitoba were "deterring investment": taxation regime (an increase of 13 percentage points)[8], uncertainty regarding the administration, interpretation, or enforcement of existing regulations (+12 points), and uncertainty concerning disputed land claims (+8 points), among others. In addition, respondents expressed decreased concern over labour regulations and employment agreements (-9 points) and political stability (-8 points).

[8] The numbers in brackets show the difference between the total percentage of respondents that rate a particular policy factor as either a mild deterrent to investment, a strong deterrent to investment, or that they would not pursue investment due to this factor from 2016 to 2017 (i.e., the change in percentage points).

Table 6: Explorers vs. Producers in British Columbia, Ontario, and Quebec

Areas of Policy	British Columbia		Ontario		Quebec	
	Explorers	Producers	Explorers	Producers	Explorers	Producers
Uncertain Existing Regulations	68.6%	62.5%	35.7%	31.3%	22.2%	20.0%
Uncertain Environmental Regulations	74.5%	62.6%	42.9%	50.1%	28.6%	26.6%
Regulatory Duplication	68.7%	56.3%	42.8%	56.3%	28.6%	40.0%
Legal System	29.4%	26.7%	25.0%	12.6%	20.0%	0.0%
Taxation Regime	40.7%	62.5%	33.3%	31.3%	28.6%	33.3%
Disputed Land Claims	74.0%	81.4%	66.6%	62.5%	39.3%	46.7%
Protected Areas	68.0%	87.6%	59.2%	37.6%	39.4%	20.0%
Infrastructure	32.0%	31.3%	37.0%	26.7%	20.0%	26.7%
Socioeconomic Agreements	33.4%	50.0%	28.0%	31.3%	23.5%	13.4%
Trade Barriers	16.7%	18.8%	7.7%	0.0%	14.7%	0.0%
Political Stability	42.5%	37.6%	23.1%	12.5%	26.4%	0.0%
Labour Regulations	37.6%	33.4%	38.4%	12.5%	35.3%	6.7%
Geological Database	0.0%	0.0%	7.6%	0.0%	5.9%	0.0%
Security	4.2%	6.7%	7.6%	6.3%	0.0%	0.0%
Availability of Skills and Labour	4.3%	20.0%	19.2%	6.3%	12.1%	0.0%

Ontario's PPI score remained similar to last year's, while its rank declined from 20th in 2016 to 30th in 2018. This year, miners expressed increased concern over uncertainty concerning disputed land claims (+15 points), uncertainty concerning protected areas (+13 points), and uncertainty concerning environmental regulations (+11 points).

Quebec's PPI score increased by nearly 8 points this year, and its relative rank was similar to the previous year as it ranked 10th in 2018 and 9th in 2017. This year miners expressed increased concern over labour regulations and employment agreements (+10 points), and decreased concern over infrastructure (-3 points).

Nova Scotia saw its PPI score rebound this year, increasing by almost 13 points, and its rank improved from 24th in 2017 to 11th in 2018. Miners expressed increased decreased concern over regulatory duplication and inconsistencies (-17 points), socioeconomic agreements and community development conditions (-10 points), and infrastructure (-9 points).

In an effort to compare how the different types of firms engaged in exploration view the policy environment, we also broke out the responses for British Columbia, Ontario, and Quebec according to whether the respondents were primarily explorers or producers. These three provinces were

selected for the comparison because all had more than 10 respondents for each type of firm. Table 6 displays the sum of the three "deterrent to investment" categories for the three provinces by whether the respondent was an explorer or a producer. There are a few notable differences.

In general, the results suggest that explorers are generally more deterred than producers from investing in exploration activities in the three provinces due to the policy environment, as seen by their higher "deterrent to investment" percentages in most categories. In particular, explorers indicated that they are more deterred than producers are from investing due to political stability and labour regulations and employment agreements. For example, in Quebec, 26 percent of explorers indicated that political stability was a deterrent to investment, while none of the producers said that this was the case. In Ontario and Quebec, explorer and producer perceptions also deviated widely—26 and 29 percentage points, respectively—when considering labour regulations. In British Columbia, 69 percent of explorers see regulatory duplication and inconsistencies as a deterrent to investment, compared to 56 percent of producers. In contrast, one area where producers in British Columbia and Quebec expressed more concern than explorers was taxation. The difference between the two types of firms was largest in British Columbia, where almost 63 percent of producers expressed concerns about the taxation regime, compared to approximately 41 percent of explorers.

Comments: Canada

The comments in the following section have been edited for length, grammar and spelling, to retain confidentiality, and to clarify meanings.

British Columbia

Permitting process is unpredictable because it can be easily impeded by various groups.
—An exploration company, Company president

Rules around Indigenous consultation and environmental regulations are unclear and this deters investment.
—An exploration company, Company president

The BC government's opposition to the Trans Mountain Pipeline speaks volumes to all resource developers.
—A producer company with more than US$50M, Company president

Timely communication occurred between company and the mines inspector responsible for permitting, which was a positive experience.
—An exploration company, Manager

Manitoba

Indigenous consultation and exploration permitting process is being handled poorly.
—An exploration company, Company president

Unable to get work permits on legally acquired mineral dispositions due to land claims issues. The Manitoba government seems unable or unwilling to enforce the rule of law and this is concerning for investors.
—An exploration company, Company president

Disputed land claims are a major issue for investors, and the provincial government is exacerbating uncertainty rather than providing clarity.
—An exploration company, Company president

Nunavut

Excessive delays in the permitting process, inconsistencies related to approvals, and political interference deter investment.
— A producer company with more than US$50M, Company Vice-president

Ontario

There is no clear policy/rules on consultation processes with Indigenous communities which creates confusion and deters investment.
—An exploration company, Company president

Ongoing Ring of Fire delays are hindering Ontario's ability to unlock its considerable mineral potential.
—A producer company with more than US$50M, Company Vice-president

The ability of interest groups to impact decision making is concerning for investors.
—An exploration company, Other

Quebec

This province is missing out on valuable investment dollars as a result of its uranium moratorium.
—An exploration company, Company president

Quebec's timely and effective permitting process is encouraging for investors.
—An exploration company, Company president

Saskatchewan

This province has an exceptional permitting process that is proactive and timely which is positive for investors.
—An exploration company, Company president

The provincial government seems supportive of efforts to drill in areas that haven't been explored previously.
—An exploration company, Company president

Yukon

Active engagement from the Territorial government in streamlining processes and marketing exploration and mining opportunities is encouraging for investors.
—An exploration company, Company president

The United States

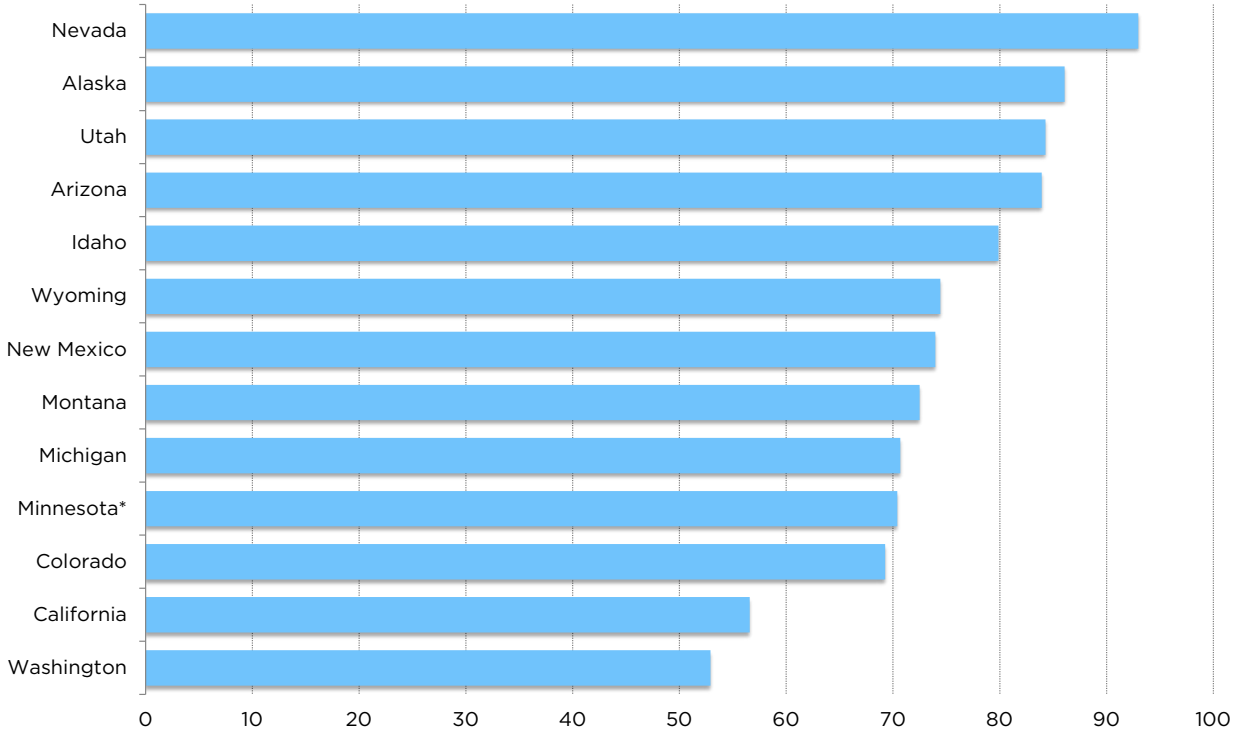
The United States' median investment attractiveness score improved this year. Based on policy factors and mineral potential, the most attractive state to pursue exploration investment is Nevada, which this year ranked as the most attractive jurisdiction in the world.

Based on the region's median investment attractiveness score, the United States is the third most attractive region in the world for investment, behind Canada and Australia. The median PPI score for the United States also increased in 2018, making the United States the top ranked jurisdiction based on policy alone. The state with the most attractive policy environment alone is Nevada, which ranked 2nd in the world. This year, two US jurisdictions—Nevada (2nd) and Utah (8th)—ranked in the global top 10.

Amongst US jurisdictions, Montana saw the greatest improvement in its PPI score this year. Montana's rank improved from 47th last year to 35th this year. The three areas where Montana experienced the most improvement were: uncertainty concerning which areas will be protected (-23 points), uncertainty regarding the administration, interpretation, or enforcement of existing regulations (-18 points), and uncertainty concerning environmental regulations (-17 points).

Wyoming's PPI score increased since last year, but its rank dropped from 8th (out of 91) in 2017 to 16th (out of 83) in 2018. Prior to this year, Wyoming has consistently ranked in the global top ten most attractive jurisdictions based on policy factors. This year, miners expressed increased concern

Figure 7: Investment Attractiveness Index—United States



over uncertainty concerning disputed land claims (+27 points), infrastructure (+19 points), and availability of labour and skills (+14 points).

California is the least attractive jurisdiction in the US based on policy, but it saw its rank improve from 61st in 2017 to 49th in 2018. This year, 93 percent of respondents expressed concern over California's environmental regulations. In addition, miners expressed greater concern since last year over security (+23 points), and decreased concern over uncertainty concerning disputed land claims (-32 points).

Comments: United States

The comments in the following section have been edited for length, grammar and spelling, to retain confidentiality, and to clarify meanings.

Alaska

> *Contacted a state regulator regarding a permit application and they worked collaboratively throughout the application process to ensure that it was completed in a*

timely manner.
—A consulting company, Other

Alaska continues to catalog and provide useful geologic information about the region.
—A producer company with less than US$50M, Other

Arizona

The state at all levels supports projects and diligently defends their decisions whether in court, in public, or in administrative proceedings.
—A producer company with more than US$50M, Senior management

Arizona has stringent timelines for responding to permitting requests and staff attempt to beat timelines which is encouraging for investors.
—A producer company with less than US$50M, Company president

Colorado

Colorado's inconsistent and unreasonable regulations are deterring investors.
—An exploration company, Company president

Montana

Montana's ban on cyanide mining is deterring investment.
—An exploration company, Company president

Nevada

The procedures for submitting a Notice of Intent, calculating reclamation costs, and posting exploration bonds are clear and efficiently administered.
—An exploration company, Company president

Utah

Government officials at the federal, state, and local levels go out of their way to assist with exploration activities.
—An exploration company, Company president

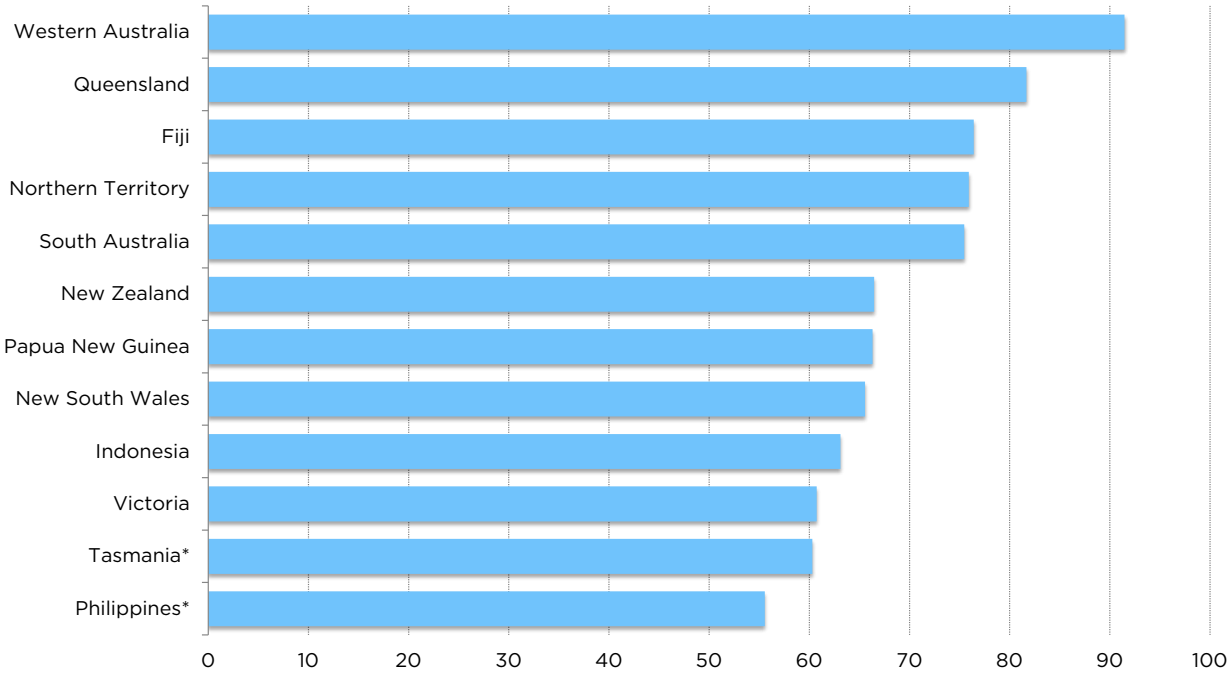
Australia and Oceania

In considering of both policy and mineral potential, Australia retained its position as the second most attractive region in the world for investment. Western Australia was once again rated to be the most attractive jurisdiction in the region and the 2nd most attractive jurisdiction in the world this year based on its Investment Attractiveness score. This year, only Western Australia appeared in the global top 10 on the Investment Attractiveness Index.

Two Australian jurisdictions—Victoria and Western Australia—saw their PPI scores improve by more than 10 points this year. Victoria's score and rank improved from 52nd (of 91) in 2017 to 43rd (of 83) in 2018. This year, respondents expressed decreased concern over Victoria's political stability (-17 points), uncertainty regarding the administration, interpretation, or enforcement of existing regulations (-13 points), and the taxation regime (-11 points). Western Australia saw a significant improvement in its score and rank, moving up to 5th (of 83) from 17th (of 91) last year, as fewer respondents rated the taxation regime (-23 points), political stability (-15 points), and uncertainty concerning environmental regulations (-12 points) as deterrents to investment.

The PPI score for New South Wales increased by over 8 points since last year, and the state's rank improved 53rd (out of 91) in 2017 to 47th (out of 83) in 2018. This year miners expressed decreased

Figure 8: Investment Attractiveness Index—Australia and Oceania



concern over trade barriers (-10 points) and increased concern over the legal system (+14 points). Despite this state's increase in the rankings, New South Wales is Australia's lowest ranked jurisdiction when considering policy factors alone.

Oceania continues to have a number of jurisdictions with relatively unattractive investment environments. The Philippines (79th) ranked in the bottom 10 of all jurisdictions included in the survey this year based on their PPI scores and Indonesia ranked 70th. While many jurisdictions struggle when only policy is considered, many (such as Indonesia) perform much better when mineral potential is included, indicating that it is the resource base that drives the overall investment ratings for many of the jurisdictions in the region. The disparity between their PPI and Mineral Potential Index scores also indicates that there is considerable room for improvement in Oceania.

Within Oceania, New Zealand experienced the largest increase in its PPI score this year. Its 21-point increase caused New Zealand's rank to increase from 50th (of 91) in 2017 to 27th (of 83) in 2018. Miners expressed decreased concern over socioeconomic agreements and community development conditions (-33 points), the taxation regime (-29 points), and labour regulations and employment agreements (-27 points). Despite New Zealand's increase this year, Fiji continues to be the top ranked jurisdiction in the region based on policy.

The Philippines is the worst performing jurisdiction in the region as it ranked 79th (of 83) this year. All respondents cited infrastructure, security, and disputed land claims as significant deterrents to investment in this jurisdiction.

Indonesia's score increased by almost 15 points this year, leading to an increase in the rankings from 84th (of 91) last year to 70th (of 83) this year. Fewer respondents for Indonesia indicated that the taxation regime (-27 points), uncertainty concerning disputed land claims (-17 points), and socioeconomic agreements and community development conditions (-15 points), were deterrents to investment.

Comments: Australia and Oceania

The comments in the following section have been edited for length, grammar and spelling, to retain confidentiality, and to clarify meanings.

New South Wales

> *Frequent changes to policy, poor consultation with industry, and frequent changes to regulatory staff are concerning for investors.*
> —An exploration company, Company President

Getting access to Crown Lands is much more difficult than accessing private lands, which poses challenges for investors.
—An exploration company, Senior Management

South Australia

Poor and flawed legislation relating to the Mining Act (1971) is a major concern for investors. Although the legislation has been acknowledged as flawed by the government, no attempt is being made to address its deficiencies in the latest amendments.
—An exploration company, Company president

Victoria

Victoria's high electricity prices are a deterrent for investors.
—An exploration company, Company chairman

Victoria's moratorium on onshore gas exploration is a deterrent for investors.
—A producer company with less than US$50M, Company president

Western Australia

Western Australia's environmental policies and permitting requirements are streamlined and easy to understand. In addition, well-documented environmental, economic, and social requirements create a positive experience for investors.
—An exploration company, Other senior management

Western Australia's wonderful new data sets are stimulating exploration in the region.
—An exploration company, Manager

Fiji

Land rights issues are resolved quickly and the government encourages exploration.
—An exploration company, Company president

Africa

The median score for Africa on policy factors (PPI) increased this year. This was also the case for the region's median investment attractiveness score. In terms of overall investment attractiveness, as a region, Africa ranks as the second least attractive jurisdiction for investment.

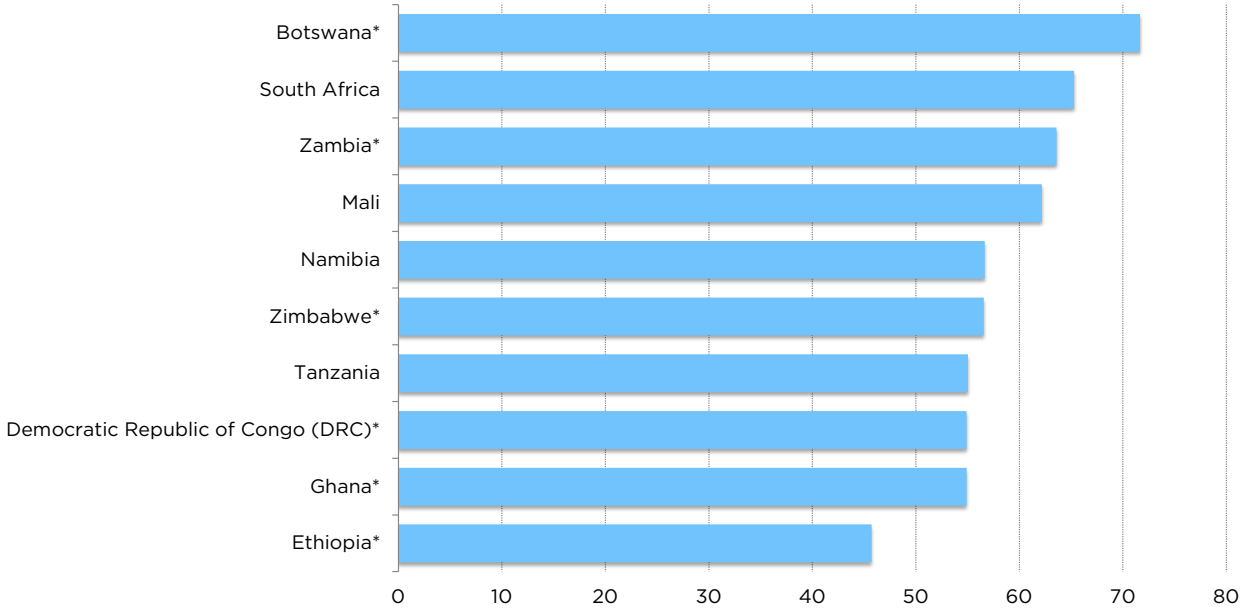
Two African countries—the Democratic Republic of Congo (82nd) and Zimbabwe (76th) —ranked in the bottom 10 of the survey rankings this year based on policy. Zimbabwe was also amongst the bottom 10 in the previous six years on the PPI. Ethiopia was the only African jurisdiction in the global bottom 10 based on its overall investment attractiveness.

Botswana is again the highest ranked jurisdiction in Africa on policy, ranking 12th (of 83) in 2018, after ranking 21st (of 91) in 2017. Botswana's increase in its PPI score this year reflects decreased concern over uncertainty concerning protected areas (-24 points), trade barriers (-20 points), and political stability (-18 points). Namibia is the second most attractive jurisdiction when only policies are considered, ranking 36th (of 83) this year.

Four other African countries—South Africa, Tanzania, Zambia and Zimbabwe—experienced notable increases in their PPI scores this year. South Africa's increase of almost 22 points resulted in an increase in the rankings from 81st (of 91) last year to 56th (of 83) this year. This year miners expressed decreased concern over uncertainty concerning protected areas (-28 points), the taxation regime (-24 points), and regulatory duplication and inconsistencies (-23 points). Tanzania also experienced an increase of nearly 12 points on its PPI score, resulting in it rising in the global rankings from 78th (of 91) in 2017 to 66th (of 83) in 2018. Investors expressed decreased concern over security (-24 points), uncertainty concerning disputed land claims (-21 points), and uncertainty regarding the administration, interpretation, or enforcement of existing regulations (-15 points). Zambia (53rd) saw its PPI score increase this year as well. However, this African country was unable to recover to 2016 levels when it ranked 43rd (of 104). Since last year, respondents expressed decreased concern over Zambia's political stability (-18 points), infrastructure (-15 points), and legal system (-13 points). Zimbabwe's score and rank increased this year, moving it up from 89th (of 91) last year to 76th (of 83). Despite this increase, the country is still Africa's second least attractive jurisdiction based on policy factors.

Mali experienced the largest decline in Africa based on the perceptions miners have of policy. Mali's decrease of almost 7 points resulted in this country dropping from 46th (of 91) last year to 63rd (of 83) this year. Investors displayed increased concern this year over labour regulations and employment agreements (+54 points), the legal system (+39 points), and availability of labour and skills (+37 points).

Figure 9: Investment Attractiveness Index—Africa



Comments: Africa

The comments in the following section have been edited for length, grammar and spelling, to retain confidentiality, and to clarify meanings.

Botswana

The tax regime in Botswana continues to be exemplary when compared to other African jurisdictions and encourages investment in exploration.
—An exploration company, Vice-president

Democratic Republic of Congo

The Congo's recent unilateral royalty rate increase is a deterrent to investment.
—A producer company with more than US$50M, Company president

Lack of clarity on exploration mineral concession boundaries and instances of corruption deter investment.
—A producer company with more than US$50M, Company president

Namibia

The Investment Promotion Act is misleading and is a deterrent to investment. It will be difficult to pursue any new major mining capital projects in Namibia unless this legislation is repealed or amended.
—An exploration company, Company president

Political instability and unclear laws in the region are concerning for investors.
—Other, Senior management

South Africa

South Africa's revised Mining Charter continues to be an absolute deterrent for exploration companies.
—An exploration company, Vice-president

Rules around mining ownership discourage investment.
—An exploration company, Company president

Tanzania

Changes to mining legislation will severely limit the ability of mining companies to generate a return on investment.
—A producer company with more than US $50M, Vice-president

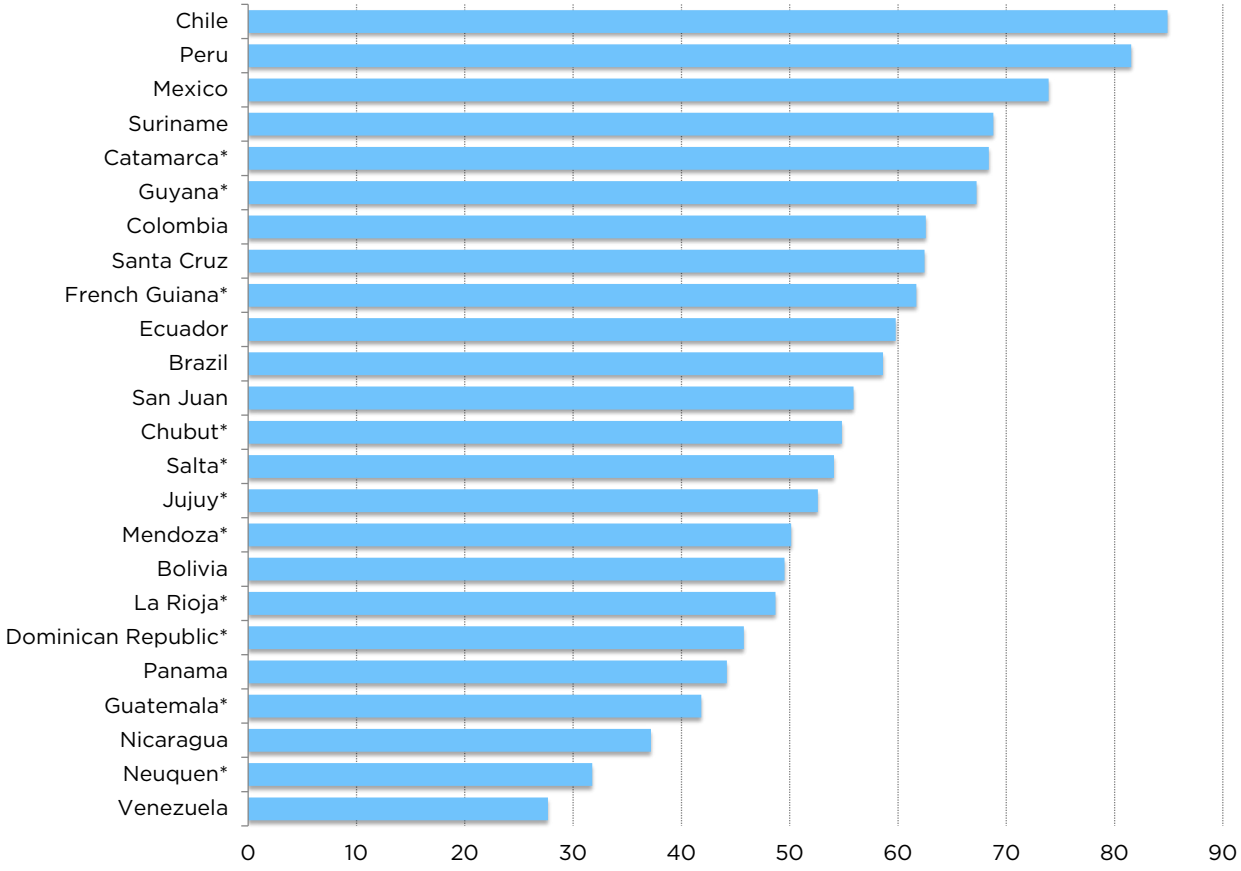
Taxation is excessive and discourages investment.
—An exploration company, Company president

Political instability and corruption are major concerns for investors.
—An exploration company, Company president

Argentina, Latin America, and the Caribbean Basin

Argentina is once again the least attractive region in the world for investment, and this region's decline comes after an improvement in the rankings last year. Both its median PPI score and its median investment attractiveness score decreased this year, both by over 4 points, making Argentina the least attractive region on both indexes. Argentina is the only region that saw both its median investment attractiveness and PPI scores decline in 2018.

Figure 10: Investment Attractiveness Index—Argentina, Latin America, and the Caribbean Basin



This year there was significant variation across the Argentinian provinces when comparing PPI scores to last year. Five jurisdictions saw increases in their PPI scores since 2017, while four experienced decreases. Neuquen had the largest PPI score decrease within Argentina, and the province is now ranked as the least attractive jurisdiction for investment in the country based on perceptions of its policy environment. Neuquen's over 40-point score decrease resulted in the province dropping in the rankings from 34th (of 91) in 2017 to 81st (of 83) in 2018, as respondents showed increased concern over the uncertainty concerning environmental regulations and political stability (both +80 points), and labour regulations and employment agreements (+60 points). Salta also saw its score and rank decline this year, dropping from 38th (of 91) in 2017 to 81st (of 83) in 2018. Respondents expressed increased concern over the province's political stability (+43 points), uncertainty regarding the administration, interpretation, or enforcement of existing regulations (+33 points), and socioeconomic agreements and community development conditions (+25 points).

The Argentinian province Catamarca (38th) is the top ranked jurisdiction in the region based on its policy environment. Catamarca saw an increase in its PPI score this year; it moved up by nearly 9

points as respondents' ratings improved for security (-14 points), infrastructure (-13 points), and the socioeconomic agreements and community development conditions (-13 points). Catamarca also saw an improvement of over 10 points from 2016 to 2017.

Despite improvements in five jurisdictions, some of Argentina's provinces are also among the least attractive jurisdictions in the world based on policy, demonstrating that there is considerable room for improvement in this region. Indeed, Neuquen (81st) and Chubut (80th) are the third and fourth least attractive jurisdictions for investment globally based on their PPI scores. And for investment attractiveness, the scores of La Rioja (75th) Neuquen (82nd) rank them in the bottom 10.

In Latin America and the Caribbean Basin, the median investment attractiveness score increased this year, improving its position to the third least attractive for investment globally. Based on their investment attractiveness scores, six jurisdictions in this region—Bolivia, Dominican Republic, Panama, Guatemala, Nicaragua, and Venezuela—ranked in the global bottom 10. Venezuela is the least attractive jurisdiction for investment globally based on policy and mineral potential; the jurisdiction dropped nearly 9 points this year.

Three Latin American countries—Venezuela, Guatemala, and Bolivia—were also among the bottom 10 jurisdictions based solely on policy (PPI). Venezuela again occupied the least attractive spot in the world based on policy. The median PPI score for Latin America and the Caribbean Basin improved by almost 9 points since 2017. Overall, Chile (23rd), Peru (37th), Suriname (46th), Mexico (48th), and Guyana (50th) are the most attractive jurisdictions in the region for investment based on policy. In the 2018 survey, none of the jurisdictions in this region experienced significant year-over-year declines in their PPI scores.

Chile is once again the top-ranked jurisdiction in the region, ranking 23rd (of 83) this year, after ranking 25th (of 91) overall on the PPI in 2017. Respondents indicated decreased concern over uncertainty concerning disputed land claims (-11 points), uncertainty concerning environmental regulations (-10 points), and trade barriers (-9 points).

Peru saw its PPI scores improve by more than 10 points this year. Peru's score and rank improved from 43rd (of 91) in 2017 to 37th (of 83) in 2018. This year, respondents expressed decreased concern over Peru's availability of labour and skills (-13 points), socioeconomic agreements and community development conditions (-12 points), and labour regulations and employment agreements (-11 points).

Within Latin America and the Caribbean, Colombia also experienced a large increase in its PPI score this year. Its over 14-point increase enabled Colombia's rank to increase from 79th (of 91) in 2017 to 65th (of 83) in 2018. Miners expressed decreased concern over regulatory duplication and inconsistencies (-21 points), labour regulations and employment agreements (-16 points), and the taxation regime (-13 points).

Comments on Argentina, Latin America, and the Caribbean Basin

The comments in the following section have been edited for length, grammar and spelling, to retain confidentiality, and to clarify meanings.

Chubut

Chubut has a ban on open pit mining. Such policies are unfavorable for investment in exploration and mining.
—A producer company with more than US$50M, Company president

Santa Cruz

Corruption plagues the environmental inspection process and this creates uncertainty for investors.
—A producer company with more than US$50M, Senior management

Bolivia

The selective targeting of private mining areas for inspection to revert them to the domain of the state discourages investment.
—An exploration company, Company president

Brazil

Onerous regulations and corruption continue to plague this jurisdiction, which deters investment.
—A consulting company, Company president

Chile

There is political support for mining activities at the federal level which is encouraging for investors.
—A consulting company, Consultant

Colombia

Opposition from community and activist groups are impacting permitting processes which creates uncertainty for investors.
—An exploration company, Company president

Ecuador

Political decisions can alter the permitting process for new exploration areas. This creates tremendous uncertainty for investors.
—A consulting company, Other senior management

Guatemala

Consultation processes continue to be inconsistent and unclear, which deters investment.
—A producer company with more than US$50M, Vice-president

Peru

The professionalism of Peru's mining institutions is exemplary in terms of the level of information it provides to investors.
—A consulting company, Other

Asia

Asia was not included in the regional analysis this year due to insufficient responses. Only one jurisdiction from the region—China—received sufficient responses to be included in this year's survey.

China (74th) experienced an increase in its PPI score this year, moving up by almost 12 points. Investors expressed decreased concern over regulatory duplication and inconsistencies (-39 points) and increased concern over trade barriers (+33 points). Despite an increase in this country's rank in 2018, China remains in the bottom 10 jurisdictions globally based on its policy environment.

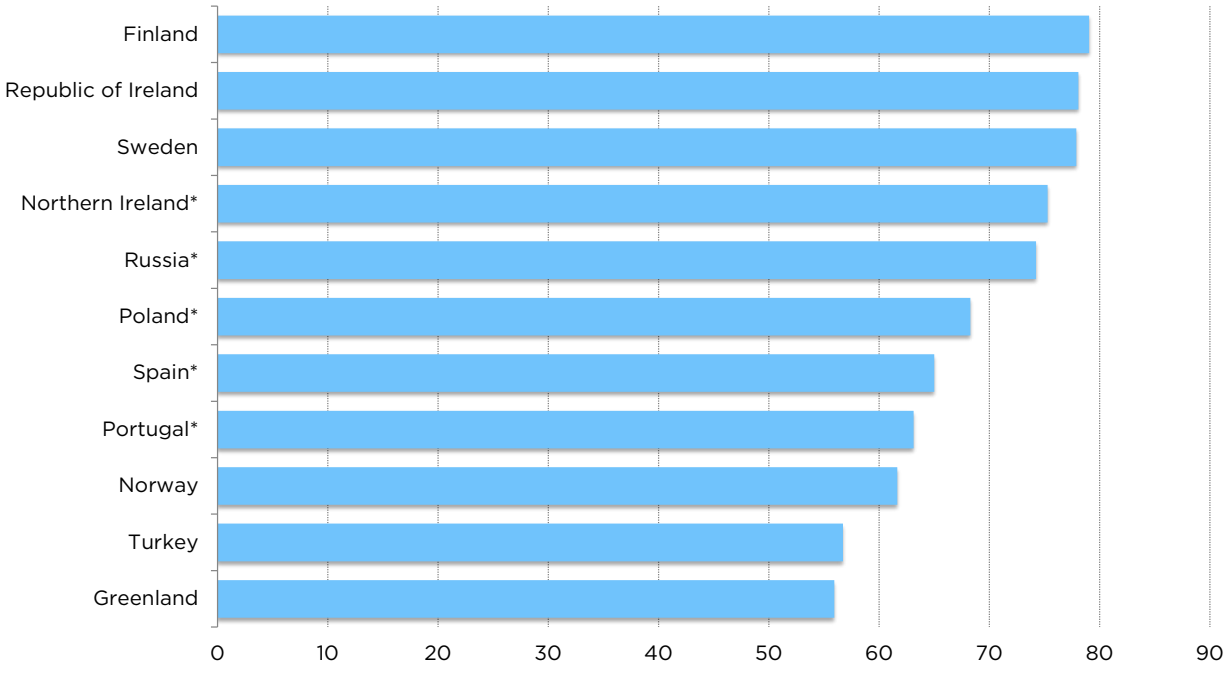
Europe

Europe's median investment attractiveness score increased slightly this year. However, none of Europe's jurisdictions made the global top 10 this year. Last year, two jurisdictions—Finland (17th) and the Republic of Ireland (19th)—ranked in the global top 10 based on investment attractiveness. The lowest ranked European jurisdiction on this measure is Greenland at 63rd.

Despite a decline in the investment attractiveness rankings for some of Europe's top performers, a number of jurisdictions still have relatively attractive policy environments. Finland (3rd), the Republic of Ireland (4th), Northern Ireland (6th), and Sweden (7th) all ranked in the global top 10 on policy, the highest number of jurisdictions in any one region. Ireland, Finland, and Sweden have all ranked in the PPI top 10 every year over the last seven years.

The Republic of Ireland saw its score and rank decrease from 1st (out of 91) in 2017 to 4th (out of 83) in 2018 due to increased uncertainty regarding the administration, interpretation, or enforcement of existing regulations (+22 points), the legal system (+17 points), and socioeconomic agreements and community development conditions (+15 points). After holding the top spot for the past five years, Ireland was replaced by Saskatchewan as the top performer based on policy. Greenland also experienced a more than 7-point drop in its PPI score which led to a rank of 69th (of 83) in 2018,

Figure 11: Investment Attractiveness Index—Europe



down from 54th (of 91) in the previous year. Investors expressed greater concern over uncertainty concerning protected areas (+44 points), the availability of labour and skills (+35 points), and regulatory duplication and inconsistencies (+29 points).

Sweden saw a 5-point increase in its PPI score but its rank declined from 4th (of 91) in 2017 to 7th (of 83) in 2018. Rankings in the survey are based on a jurisdiction's score relative to those of the other ranked jurisdictions, which explains why Sweden experienced a decrease in rank when its year-over-year score improved. This year, investors expressed greater concern over Sweden's taxation regime (+16 points), and decreased concern over infrastructure (-11 points).

Comments on Europe

The comments in the following section have been edited for length, grammar and spelling, to retain confidentiality, and to clarify meanings.

Finland

Finland has a straightforward and transparent regulatory environment which creates certainty for investors.
—An exploration company, Company president

Court challenges related to natural resources projects come at a high cost for investors and ultimately create uncertainty.
—An exploration company, Chairman

Greenland

Permit conditions are inconsistent and administrative processes are lengthy and onerous.
—An exploration company, Other

Republic of Ireland

The Republic of Ireland provides online access to historic exploration data and an online GIS claim viewer, which is encouraging for investors.
—A producer company with more than US$50M, Manager

Extreme delays in the permitting process are a deterrent to investment.
—An exploration company, Company president

Sweden

Sweden's exploration permit regulator works cooperatively with investors to get permits issued in a timely manner.

—A producer company with more than US$50M, Company president

Overview

An analysis of the regional trends in the results of the Investment Attractiveness Index (based on both mineral potential and policy factors) from the 2018 mining survey indicates a stark difference between geographical regions; notably the divide between Canada, Australia, the United States, and the rest of the world. As figure 12 indicates, Canada is once again the most attractive region in the world for investment this year, followed by the Australia and then the United States. Five jurisdictions—Latin America and Caribbean, Canada, Australia, the United States, and Oceania—saw an increase in their relative investment attractiveness. Latin America experienced an increase of over 16 percent in its regional median score from 2017, while Canada experienced a 9 percent increase. Argentina was the only jurisdiction to see a decline, with an 8 percent decrease in its regional median investment attractiveness score, while Africa's median score was unchanged. In general, investment attractiveness is improving in almost all of the world's regions.[9]

The regional trend for policy measures (figure 13) is again dominated by certain regions (the United States, Canada, Europe, and Australia). When considering policy alone, the United States displaced Europe from the top spot in 2018. America's position as the top performing region, when only policy is considered (not pure mineral potential), indicates that mineral potential is the factor holding the United States back from being in the same category as the two other most attractive regions in the world. Oceania's median policy score experienced a large increase this year, although, as a whole, it is still the second least attractive region in the survey. Of the regions included in the survey, Argentina now has the least attractive policy environment.

Also of interest is the difference in results between regional median investment attractiveness and PPI. For example, the United States performs less favourably on its median investment attractiveness score, while performing better as a region on the PPI. This indicates that the region's investment attractiveness rank is being driven by investors' views of America's pure mineral potential, not necessarily its policy.

[9] The regional median investment attractiveness scores are calculated based on the jurisdictions included in each year. As a result, the number of jurisdiction included in the regional score will vary year-over-year depending on the number of survey responses.

Figure 12: Regional Median Investment Attractiveness Scores 2017 and 2018

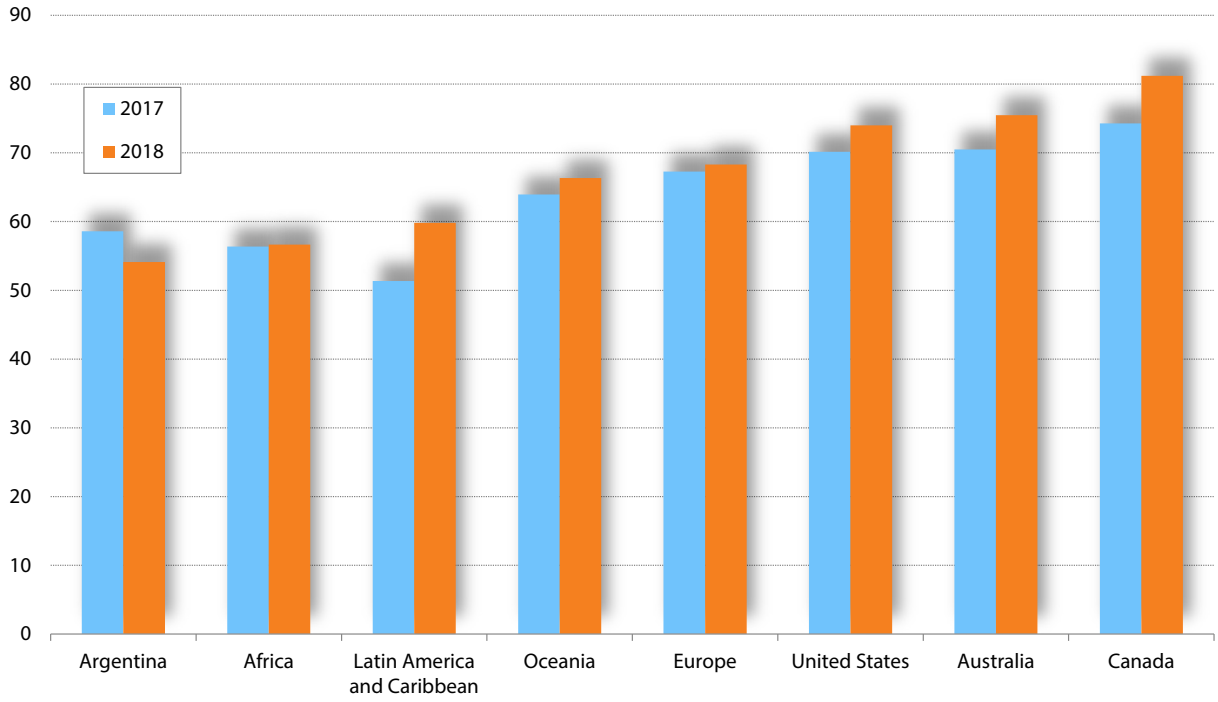
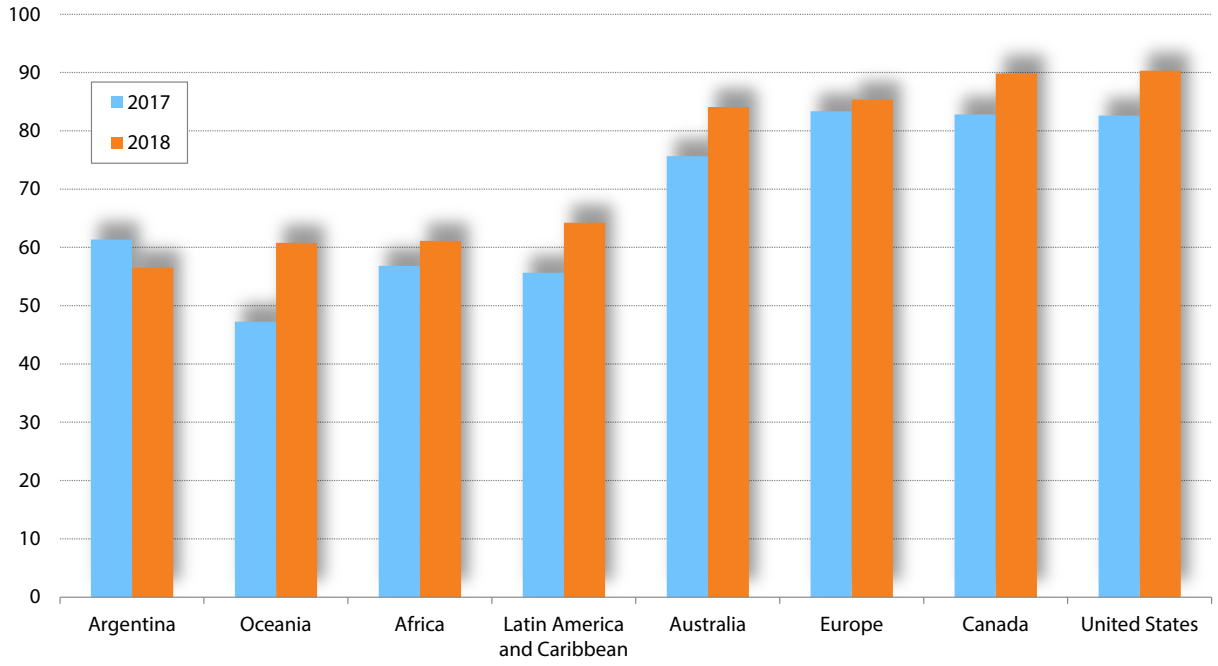


Figure 13: Regional Median Policy Perception Index Scores 2017 and 2018



Permit Times for Mining Exploration 2018

This year's *Annual Survey of Mining Companies* includes and continues the work of a publication entitled *Permit Times for Mining Exploration in 2017*, an early attempt to assess the exploration permitting process and its possible effects. As was the case with the 2017[10] report, this year we surveyed mining executives who had recently applied for exploration permits in Canada's provinces and territories to get a better understanding of how timelines for permit approval, transparency, and other issues in the permit approval process differ within Canada.

Results from this sub-survey have enabled us to better understand how provinces and territories perform in this area and have served as a starting point for future research aimed at identifying best practices for exploration permitting. This year's sub-survey of permit times adds further data for future research by including a number of additional jurisdictions in Australia, the United States, and Scandinavia to the report—all regions where mining, environmental, and other policies are broadly comparable to those in Canada. This will help gauge Canada's performance in comparison to a number of similar jurisdictions.

To ensure that only individuals with knowledge of mining exploration in the regions answered the permit time component of the survey, only those who provided responses for Canada, the United States, Australia, and Scandinavia in the broader survey were given access to the sub-survey on exploration permits. This screening resulted in approximately 234 eligible respondents. Of those, only respondents who had applied for an exploration permit, license, notice of work, or similar document within the last two years were asked to respond to the sub-survey to ensure that only those with the most recent and relevant experience answered the questions. A resulting 150 executives and managers answered the permit-time component of the survey. Only jurisdictions that had a minimum of five responses were included in the exploration permits study. Table 7 lists the jurisdictions that met these criteria. Those with between 5 and 9 responses have been noted with an asterisk; results for these jurisdictions may not be as robust as those for jurisdictions with 10 or more responses.

10 Ashley Stedman and Kenneth P. Green (2018). *Permit Times for Mining Exploration in 2017*. Fraser Institute. <https://www.fraserinstitute.org/sites/default/files/permit-times-for-mining-exploration-2017.pdf>

Table 7: Jurisdictions Discussed

Canada	United States	Australia	Scandinavia
British Columbia	Alaska	New South Wales	Finland
Manitoba*	Arizona*	Northern Territory*	Sweden*
Northwest Territories	Idaho*	Queensland	
Nunavut*	Montana	South Australia	
Ontario	Nevada	Victoria*	
Quebec	Wyoming*	Western Australia	
Saskatchewan*			
Yukon			

*Between 5 and 9 responses

Just over half of respondents (53 percent) to the Canadian permit-time component of the *Annual Survey of Mining Companies* were company presidents.[11] A further 23 percent of respondents were either company vice-presidents or managers. The majority of respondents, 65 percent, were from exploration companies. An additional 21 percent of responses came from producer companies that are also involved in exploration activities.[12]

The results of the survey have been broken into three areas: the time it takes to be approved for the necessary permits, the transparency of the permitting process, and the certainty of the permitting process. Jurisdictions with fewer than five responses were dropped from the analysis and those with between five and nine responses have been noted in the tables.

Time

Length of time to receive permits

To assess how the length of the permitting process differs among jurisdictions, we asked the survey respondents three questions. Question 1 asked them to estimate the amount of time that they expected to spend acquiring the necessary permits to conduct exploration activities. Note that these are not permits to develop a mine, but rather permits to explore. In most Canadian provinces and territories, the majority of respondents said they were able to acquire the necessary exploration

[11] Another 8 percent of respondents came from other senior management roles, 4 percent were consultants, and 11 percent identified as other.

[12] An additional 8 percent of respondents came from consulting companies and 6 percent of respondents identified as other.

Table 8: The Amount of Time Respondents Expected to Spend Getting the Permits, Licences, or Notices of Work, etc. to Conduct Exploration Activities

	2 months or less	3 to 6 months	7 to 10 months	11 to 14 months	15 to 18 months	19 to 23 months	24 months or more
British Columbia	9.1%	36.4%	30.3%	12.1%	12.1%	0.0%	0.0%
Manitoba*	30.0%	30.0%	0.0%	10.0%	0.0%	0.0%	30.0%
Northwest Territories	70.0%	10.0%	0.0%	20.0%	0.0%	0.0%	0.0%
Nunavut*	12.5%	37.5%	12.5%	25.0%	12.5%	0.0%	0.0%
Ontario	27.8%	38.9%	11.1%	16.7%	5.6%	0.0%	0.0%
Quebec	45.5%	36.4%	9.1%	9.1%	0.0%	0.0%	0.0%
Saskatchewan*	60.0%	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Yukon	14.3%	57.1%	14.3%	0.0%	9.5%	0.0%	4.8%
Alaska	60.0%	33.3%	0.0%	6.7%	0.0%	0.0%	0.0%
Arizona*	50.0%	25.0%	0.0%	12.5%	0.0%	0.0%	12.5%
Idaho*	25.0%	0.0%	0.0%	37.5%	0.0%	0.0%	37.5%
Montana	0.0%	75.0%	25.0%	0.0%	0.0%	0.0%	0.0%
Nevada	52.6%	31.6%	10.5%	5.3%	0.0%	0.0%	0.0%
Wyoming*	0.0%	80.0%	0.0%	0.0%	0.0%	0.0%	20.0%
New South Wales	9.5%	38.1%	9.5%	14.3%	14.3%	4.8%	9.5%
Northern Territory*	0.0%	0.0%	20.0%	20.0%	20.0%	0.0%	40.0%
Queensland	7.7%	23.1%	15.4%	23.1%	7.7%	0.0%	23.1%
South Australia	10.0%	20.0%	30.0%	10.0%	10.0%	0.0%	20.0%
Victoria*	0.0%	40.0%	0.0%	0.0%	0.0%	0.0%	60.0%
Western Australia	35.7%	21.4%	21.4%	0.0%	14.3%	0.0%	7.1%
Finland	0.0%	25.0%	0.0%	50.0%	0.0%	0.0%	25.0%
Sweden*	60.0%	20.0%	20.0%	0.0%	0.0%	0.0%	0.0%

*Between 5 and 9 responses

permits within six months. However, there are some notable differences among the provinces and territories (table 8).

Canada

Many of Canada's provinces and territories have poor results for the amount of time required for respondents to receive necessary permits compared to their internatioal competitors. The Northwest Territories performed particularly well this year: 70 percent of respondents indicated that they were able to acquire the permits necessary for exploration in two months or less. However, in Nunavut and Yukon, only 13 and 14 percent of the respondents respectively indicated that they were able to

acquire the necessary permits for exploration in two months or less. The pan-Canadian average for this measure is 34 percent.

Of the territories, Nunavut has the lowest percentage of respondents, 50 percent, who acquired permits in six months or less. The Northwest Territories, where 80 percent of respondents indicated that they received their necessary permits in less than six months, performs better than the Yukon, where 71 percent indicated that this was the case. Overall, the results from Canada's top performing territories are similar to those in provinces like Ontario and Quebec, which attract exploration investment for similar types of commodities. For example, 82 percent of respondents in Quebec, and 67 percent in Ontario, acquired the permits necessary for exploration in six months or less.

Amongst the three provinces that attract the majority of Canadian exploration spending on base metals and precious metals—British Columbia, Ontario, and Quebec—the results are mixed. For example, in Quebec (45 percent) and Ontario (28 percent), a higher percentage of respondents indicated that they expected it to take two months or less to acquire the necessary exploration permits. That is compared to British Columbia, where only 9 percent of respondents were able to acquire the necessary permits for exploration in two months or less. In fact, British Columbia underperforms all of its competitors in Canada on the question of timeliness; it has the lowest percentage of respondents (45 percent) among the three provinces indicating that they expected to spend six months or less acquiring the necessary permits. Where 55 percent of respondents for British Columbia indicated that they expected to spend more than 6 months to get their exploration permits, just 33 percent in Ontario and only 18 percent in Quebec expected to wait that long.

United States

In the United States, Alaska is the jurisdiction with the highest percentage of respondents (60 percent) who indicated that they were able to attain their necessary permits in two months or less. Compared to Arizona, Idaho, Montana, Nevada, and Wyoming, the other US states included in the analysis, Alaska also performed best for providing necessary permits in six months or less: it had the highest percentage of respondents (93 percent) who indicated that they received their necessary permits within this time. The poorest performing of the six American jurisdictions was Idaho, where only 25 percent of respondents received their permits in six months or less.

Australia

In Australia, out of the five jurisdictions included in this analysis, two—Northern Territory and Victoria—had no respondents indicate that they were able to receive their permits within two months or less. Western Australia performed the best on this measure: 36 percent of respondents indicated

that they received their permits in two months or less from that jurisdiction. Western Australia also had the highest percentage of respondents (57 percent) indicating that they received their permits in 6 months or less.

On the measure of timely permitting for exploration, most of Australia performed poorly compared to Canada. In fact, a sizable percentage of respondents for a few of the Australian states indicated that it was taking 15 months or more to receive their permits. For example, 60 percent of respondents for both Northern Territory and Victoria indicated that it took over 15 months to receive their permits.

Scandinavia

This year, once again, we received enough responses to include only Finland and Sweden in this report (Norway was excluded). Based on the survey responses, it appears that Sweden was able to grant permits faster than Finland. In Sweden, 60 percent of respondents indicated that they received their permits in two months or less and an additional 20 percent reported receiving them in six months or less. This compares to 0 percent receiving permits in two months or less and 25 percent receiving them in six months or less in Finland. In particular, Finland has a relatively high percentage of respondents—25 percent compared to 0 percent in Sweden—indicating that it took 15 months or more to receive their permits.

Overall

A comparison of the four regions included in the survey—Canada, the United States, Australia, and Scandinavia—indicates that, on average, a higher percentage of respondents indicated that they received their permits in six months or less from US jurisdictions. The average was 72 percent amongst US jurisdictions, 69 percent amongst Canadian jurisdictions, 53 percent for the two Scandinavian countries, and 34 percent amongst the Australian jurisdictions.

Changes over time

We also tried to determine how the length of time that explorers expected to spend attaining permit approval had changed over the last decade.

Canada

The results indicate that, in general, permit approval times in Canada are lengthening. In five out of eight provinces and territories included in the survey (British Columbia, Manitoba, Nunavut, Ontario, and Yukon), 65 percent or more of respondents said that the time they had to wait for permit approval had lengthened over the last 10 years. That said, in three cases—Northwest Territories, Quebec, and

Table 9: Changes in the Time to Permit Approval Over the Last 10 Years

	Shortened Considerably	Shortened Somewhat	Stayed the Same	Lengthened Somewhat	Lengthened Considerably
British Columbia	3.0%	6.1%	18.2%	24.2%	48.5%
Manitoba*	0.0%	0.0%	33.3%	22.2%	44.4%
Northwest Territories	20.0%	20.0%	20.0%	30.0%	10.0%
Nunavut*	0.0%	0.0%	12.5%	50.0%	37.5%
Ontario	0.0%	5.6%	16.7%	33.3%	44.4%
Quebec	10.0%	30.0%	20.0%	30.0%	10.0%
Saskatchewan*	0.0%	20.0%	80.0%	0.0%	0.0%
Yukon	9.5%	4.8%	19.0%	57.1%	9.5%
Alaska	13.3%	13.3%	46.7%	26.7%	0.0%
Arizona*	0.0%	37.5%	50.0%	0.0%	12.5%
Idaho*	12.5%	37.5%	12.5%	12.5%	25.0%
Montana	25.0%	25.0%	25.0%	25.0%	0.0%
Nevada	5.3%	10.5%	36.8%	31.6%	15.8%
Wyoming*	0.0%	20.0%	60.0%	0.0%	20.0%
New South Wales	0.0%	23.8%	19.0%	42.9%	14.3%
Northern Territory*	0.0%	0.0%	20.0%	20.0%	60.0%
Queensland	0.0%	15.4%	38.5%	23.1%	23.1%
South Australia	0.0%	20.0%	30.0%	20.0%	30.0%
Victoria*	0.0%	20.0%	40.0%	20.0%	20.0%
Western Australia	0.0%	28.6%	35.7%	21.4%	14.3%
Finland	25.0%	0.0%	25.0%	25.0%	25.0%
Sweden*	20.0%	40.0%	0.0%	40.0%	0.0%

*Between 5 and 9 responses

Saskatchewan—most respondents indicated that permit approval times had shortened or stayed the same (table 9).

For one Canadian province, Saskatchewan, no respondents indicated that the permit approval time had lengthened somewhat or considerably. Of the three provinces attracting the bulk of Canada's exploration spending (Ontario, British Columbia, and Quebec), Ontario had the highest percentage of respondents (78 percent) indicating that the time to permit approval had lengthened either somewhat or considerably, compared to 73 percent in British Columbia, and 40 percent in Quebec. Of these three, British Columbia had the highest percentage of respondents (48 percent) indicating that the time it took to have their permits approved had lengthened considerably. Indeed, it appears that

many of the Canadian jurisdictions included could benefit from stemming or reducing lengthening exploration permit times.

United States

For all of the US states included in the sub-survey, less than 50 percent of respondents indicated that the time needed for permit approval had lengthened. Specifically, Nevada saw 47 percent of respondents indicate that the time to permit approval had lengthened somewhat or considerably compared to only 13 percent of respondents for Arizona.

Australia

Survey respondents' views on permit approval times vary across jurisdictions Australia. In three of the six Australian jurisdictions, 50 percent or more of the respondents indicate that the time for permit approvals had either lengthened somewhat or considerably. Western Australia performed the best in the country on this measure, with 36 percent of respondents indicating that permit approval times had lengthened in some way, while Northern Territory was the worst performer at 80 percent. Northern Territory also had the highest percentage of respondents (60 percent) of any jurisdiction included in this analysis who indicated that the time to permit approval had lengthened considerably.

Scandinavia

The results for Scandinavia are consistent. For Finland, 50 percent of respondents indicated that permit approval times had lengthened either somewhat or considerably. This compares to 40 percent of respondents indicating the same for Sweden.

Overall

Overall, Canada is performing poorly relative to other regions due to the lengthening of its permit approval times over time. The percentage of respondents in the Canadian jurisdictions indicating that permit approval times had lengthened either somewhat or considerably over the past 10 years was, on average, 56 percent. That compares to 52 percent in Australia, 45 percent in Scandinavia, and 28 percent in the United States.

Timeline Certainty

It is also important to those applying for exploration permits that the permit-granting organizations adhere to their advertised timelines. If the organizations do not meet the expected milestones, thereby extending the time it takes to get a permit, it can place additional costs and risks on firms and act as a deterrent to investment (table 10).

Table 10: How Often Did the Jurisdiction Meet its Own Established Timelines/Milestones for Permit Approval Decisions?

	Most of the time (80 to 100%)	Some of the time (60 to 80%)	About half the time (40 to 60%)	Less than half the time (20 to 40%)	Rarely met own timelines (0 to 20%)
British Columbia	15.6%	9.4%	31.3%	9.4%	34.4%
Manitoba*	22.2%	22.2%	11.1%	0.0%	44.4%
Northwest Territories	50.0%	20.0%	20.0%	10.0%	0.0%
Nunavut*	0.0%	37.5%	25.0%	37.5%	0.0%
Ontario	22.2%	38.9%	11.1%	22.2%	5.6%
Quebec	20.0%	40.0%	30.0%	10.0%	0.0%
Saskatchewan*	100.0%	0.0%	0.0%	0.0%	0.0%
Yukon	40.0%	25.0%	15.0%	15.0%	5.0%
Alaska	66.7%	13.3%	13.3%	6.7%	0.0%
Arizona*	37.5%	12.5%	25.0%	12.5%	12.5%
Idaho*	37.5%	12.5%	12.5%	25.0%	12.5%
Montana	0.0%	50.0%	25.0%	25.0%	0.0%
Nevada	38.9%	33.3%	16.7%	11.1%	0.0%
Wyoming*	25.0%	50.0%	0.0%	0.0%	25.0%
New South Wales	14.3%	28.6%	23.8%	19.0%	14.3%
Northern Territory*	20.0%	0.0%	0.0%	40.0%	40.0%
Queensland	23.1%	30.8%	15.4%	7.7%	23.1%
South Australia	10.0%	30.0%	30.0%	20.0%	10.0%
Victoria*	20.0%	20.0%	0.0%	20.0%	40.0%
Western Australia	42.9%	35.7%	7.1%	7.1%	7.1%
Finland	25.0%	50.0%	0.0%	0.0%	25.0%
Sweden*	60.0%	40.0%	0.0%	0.0%	0.0%

*Between 5 and 9 responses

Canada

In Canada, British Columbia (75 percent), Nunavut (63 percent), and Manitoba (56 percent) had the highest percentages of respondents indicating that the permitting authority met its own established timelines or milestones only about half the time or less. Saskatchewan was the top performer in the country for timeline certainty; all of the respondents for the province indicated that timelines were met between 80 and 100 percent of the time.

United States

In the United States, the top performing jurisdiction is Alaska, where 67 percent of respondents indicated that established timelines were met 80 to 100 percent of the time. The poorest performer on this measure is Montana, where none of the respondents indicated that the state met its own established timelines most of the time. In fact, 50 percent of respondents for Montana indicated that the permitting authority met its own established timelines or milestones only about half the time or less.

Australia

Western Australia was the top performing state in Australia on this measure: 21 percent of respondents for Western Australia indicated that the permitting authority met its own established timelines or milestones only about half the time or less. This is in stark comparison to Northern Territory, where 80 percent of respondents indicated established timelines were met only about half the time or less, and South Australia and Victoria where 60 percent said the same. Moreover, 40 percent of respondents for Northern Territory and Victoria said that timelines were rarely met.

Scandinavia

Both Finland and Sweden perform well compared to many other jurisdictions in the survey on timeline certainty, with 60 percent of respondents in Sweden, and 25 percent in Finland, indicating that timelines for permit approval decisions were met between 80 and 100 percent of the time.

Transparency

Another critical issue in the granting of permits for exploration is transparency. When those prospecting for exploitable mineral deposits do not understand what the rules are or how they are applied, political interference and even corruption can enter the process, with the result that investment may be deterred (table 11).

Canada

In the area of transparency, Saskatchewan continues to perform far better than many of the other Canadian provinces and territories included in the sub-survey. No respondents for Saskatchewan reported that a lack of transparency in the permitting process was a deterrent to investment, a performance unmatched by any other Canadian jurisdiction.

Of the three territories, Yukon's process was judged more transparent than that of the Northwest Territories or Nunavut: only 29 percent of respondents for the Yukon indicated that a lack of transparency was a deterrent to investment. The feedback was worse for the Northwest Territories (50 percent)

Table 11: How Does the Level of Transparency in the Permitting Process Affect Exploration Investment?

	Encourages exploration investment	Not a deterrent to exploration investment	Is a mild deterrent to exploration investment	Is a strong deterrent to exploration investment	Would not pursue exploration investment due to this factor
British Columbia	15.2%	30.3%	18.2%	33.3%	3.0%
Manitoba*	11.1%	33.3%	0.0%	33.3%	22.2%
Northwest Territories	0.0%	50.0%	20.0%	20.0%	10.0%
Nunavut*	0.0%	12.5%	50.0%	37.5%	0.0%
Ontario	11.1%	44.4%	38.9%	0.0%	5.6%
Quebec	50.0%	20.0%	20.0%	10.0%	0.0%
Saskatchewan*	80.0%	20.0%	0.0%	0.0%	0.0%
Yukon	14.3%	57.1%	23.8%	4.8%	0.0%
Alaska	46.7%	53.3%	0.0%	0.0%	0.0%
Arizona*	37.5%	37.5%	12.5%	0.0%	12.5%
Idaho*	62.5%	12.5%	12.5%	12.5%	0.0%
Montana	0.0%	75.0%	25.0%	0.0%	0.0%
Nevada	42.1%	31.6%	21.1%	5.3%	0.0%
Wyoming*	20.0%	40.0%	20.0%	0.0%	20.0%
New South Wales	4.8%	38.1%	28.6%	28.6%	0.0%
Northern Territory*	20.0%	40.0%	0.0%	40.0%	0.0%
Queensland	15.4%	38.5%	30.8%	15.4%	0.0%
South Australia	20.0%	30.0%	30.0%	20.0%	0.0%
Victoria*	0.0%	20.0%	40.0%	40.0%	0.0%
Western Australia	42.9%	42.9%	7.1%	7.1%	0.0%
Finland	50.0%	25.0%	0.0%	0.0%	25.0%
Sweden*	60.0%	0.0%	40.0%	0.0%	0.0%

*Between 5 and 9 responses

and Nunavut (88 percent). In fact, at 88 percent, Nunavut had the highest percentage of respondents out of the 22 jurisdictions in the sub-survey reporting that transparency in the exploration permit process was a deterrent to investment.

Amongst the three provinces that attract the majority of Canadian exploration spending, Quebec performed the best with 30 percent of respondents indicating that a lack of transparency in the

exploration permitting process was a deterrent to investment, followed by Ontario at 44 percent, and British Columbia at 55 percent. This is an area where many Canadian jurisdictions performed poorly compared to their counterparts in the United States and Scandinavia.

United States

In this category, Alaska was the top performer in the United States, with no respondents indicating that the level of transparency was deterring investment. Arizona, Idaho, Montana, and Nevada also performed relatively well with around 25 percent of respondents indicating that transparency was a deterrent for investment. When compared directly to Alaska, Idaho at 63 percent had a greater percentage of respondents stating that the level of transparency in the state was an encouragement to investment. Wyoming performed the worst in the United States on this measure, with 40 percent of respondents saying that the level of transparency was acting as a deterrent to investment.

Australia

For Australia, 80 percent of respondents indicated that the level of transparency in the state of Victoria was a deterrent to investment. Likewise, 50 percent or more of survey respondents said that transparency in New South Wales and South Australia was a deterrent to investment. Western Australia was the top performer on this measure: only 14 percent of respondents said that the level of transparency in that jurisdiction deterred investment.

Scandinavia

Finland performs better than Sweden on the effect that the level of transparency in the permitting process has on deterring investment. Twenty-five percent of respondents for Finland said that a lack of transparency was deterring investment in that country compared to 40 percent of respondents for Sweden.

Overall

Survey respondents indicated that many Australian and Canadian jurisdictions perform poorly on transparency. For example, 40 percent or more of survey respondents indicated that five out of eight Canadian jurisdictions have levels of transparency in the permitting process that are deterring investment. In fact, the average percentage of respondents indicating that lack of transparency was a deterrent to investment for Canadian jurisdictions was 44 percent. This compares to an average of 48 percent in Australia, 33 percent in Scandinavia, and only 24 percent in the United States.

Table 12: Confidence Level of Respondents that They Will Eventually be Granted the Necessary Permit(s)

	Not at all Confident	Low Confidence	Confident	High Confidence
British Columbia	18.2%	15.2%	51.5%	15.2%
Manitoba*	44.4%	11.1%	33.3%	11.1%
Northwest Territories	20.0%	20.0%	10.0%	50.0%
Nunavut*	37.5%	25.0%	37.5%	0.0%
Ontario	5.6%	5.6%	77.8%	11.1%
Quebec	0.0%	0.0%	80.0%	20.0%
Saskatchewan*	0.0%	0.0%	20.0%	80.0%
Yukon	0.0%	9.5%	66.7%	23.8%
Alaska	0.0%	0.0%	33.3%	66.7%
Arizona*	12.5%	0.0%	12.5%	75.0%
Idaho*	0.0%	12.5%	25.0%	62.5%
Montana	0.0%	25.0%	50.0%	25.0%
Nevada	0.0%	0.0%	52.6%	47.4%
Wyoming*	0.0%	20.0%	60.0%	20.0%
New South Wales	5.0%	15.0%	70.0%	10.0%
Northern Territory*	0.0%	50.0%	25.0%	25.0%
Queensland	0.0%	25.0%	33.3%	41.7%
South Australia	0.0%	10.0%	80.0%	10.0%
Victoria*	0.0%	25.0%	50.0%	25.0%
Western Australia	0.0%	7.1%	42.9%	50.0%
Finland	25.0%	0.0%	25.0%	50.0%
Sweden*	0.0%	0.0%	20.0%	80.0%

*Between 5 and 9 responses

Confidence

We also asked our survey respondents how confident they were that they would eventually be granted a permit. When firms are not confident that they will be able to acquire the necessary permits to carry out their exploration activities once they have met the regulatory requirements, it is less likely that they will consider investing in the given jurisdiction (table 12).

Canada

When asked about how confident they were that the necessary permits would eventually be granted, respondents rated many Canadian jurisdictions as lagging behind other regions. Quebec and Saskatchewan performed the best on this measure; all respondents were confident or highly confident

that they would be granted the necessary permits. Specifically, 80 percent of respondents for Quebec reported that they were confident that they would receive their permits, with an additional 20 percent saying that they were highly confident. In Saskatchewan, 20 percent of respondents were confident and 80 percent were highly confident that they would be granted the necessary permits. In Ontario 89 percent and in the Yukon 90 percent of respondents indicated that they were either highly confident or confident that they would receive the necessary permits. That compares to just 67 percent in British Columbia and 60 percent in the Northwest Territories. In Manitoba and Nunavut, less than 45 percent of respondents indicated that they were highly confident or confident that they would be granted the necessary permits.

United States

All respondents for two US jurisdictions—Alaska and Nevada—reported that they were either highly confident or confident that they would receive the necessary exploration permits. Over 85 percent of respondents for Arizona and Idaho also indicated that they were confident or highly confident that they would receive the necessary permits.

Australia

Survey respondents were quite confident about the permitting process for two Australian jurisdictions—South Australia and Western Australia; 90 percent and 93 percent of respondents respectively indicated that they were either highly confident or confident that they would receive their permits from those jurisdictions. New South Wales also performed well; 80 percent of respondents indicated that they were confident or highly confident that they would receive their permits from that state. Northern Territory, Queensland, and Victoria, however, showed a need for improvement; only 75 percent of respondents or less said they were confident or highly confident that they would be eventually granted an exploration permit from these jurisdictions.

Scandinavia

Respondents for Finland (75 percent) and Sweden (100 percent) indicate that they have a high degree of confidence that they will receive their permits from those jurisdictions.

Overall

A comparison of the four regions included in the survey—Canada, the United States, Australia, and Scandinavia—shows that at 73 percent, respondents are less confident, on average, that Canadian jurisdictions will eventually grant them their necessary exploration permits. This compares to an average confidence of 88 percent for US and Scandinavian jurisdictions, and 77 percent for the Australian jurisdictions.

Explanation of the figures

Figures 14 through 28 show the percentage of respondents who rate each policy factor as "encouraging investment" or "not a deterrent to investment: (a "1" or "2" on the scale). Readers will find a breakdown of both negative and positive responses for all areas online at fraserinstitute.org. (Note that any jurisdictions shown with a * received between 5 and 9 responses from survey participants.)

Figure 14: Uncertainty Concerning the Administration, Interpretation and Enforcement of Existing Regulations

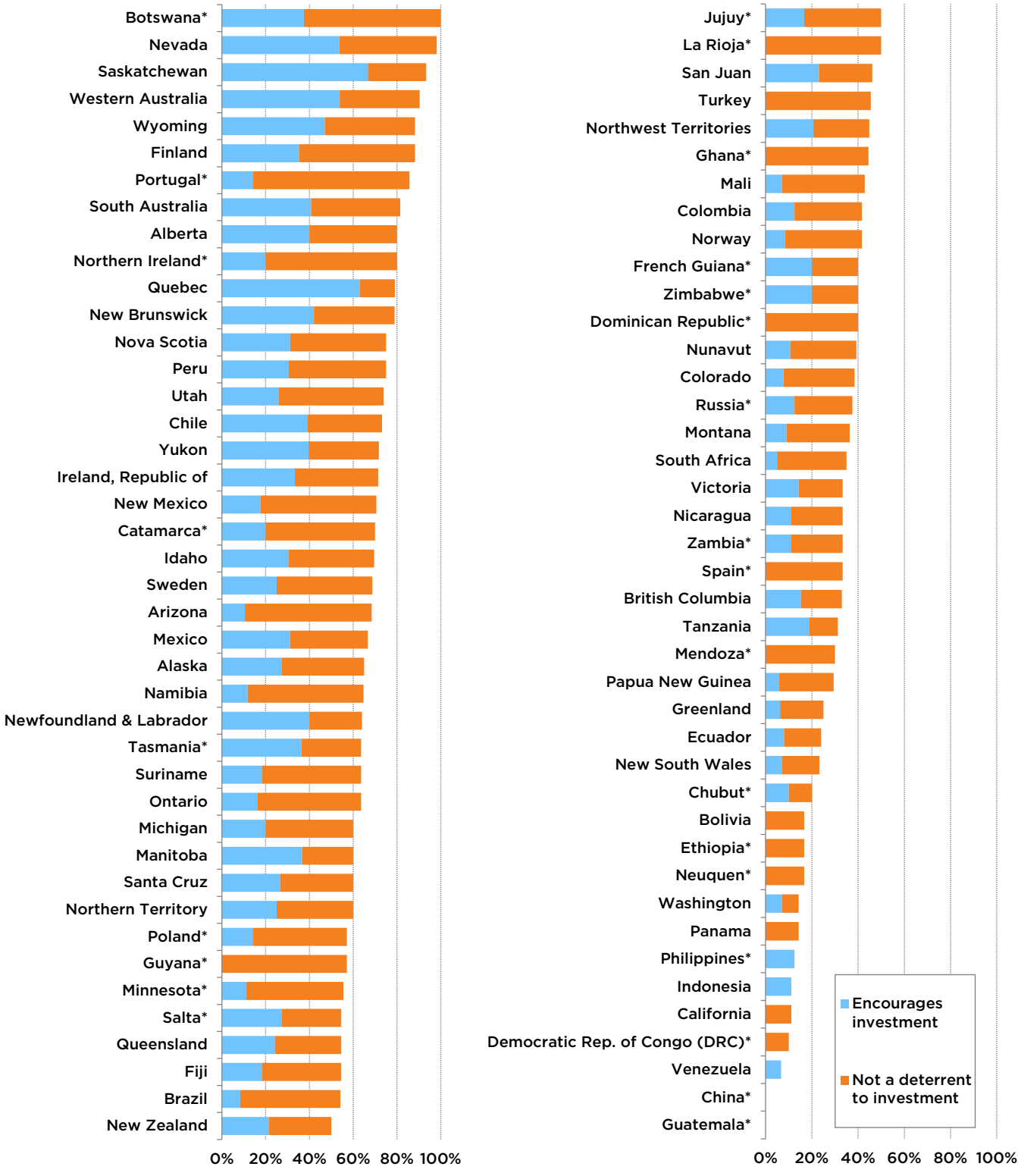


Figure 15: Uncertainty Concerning Environmental Regulations

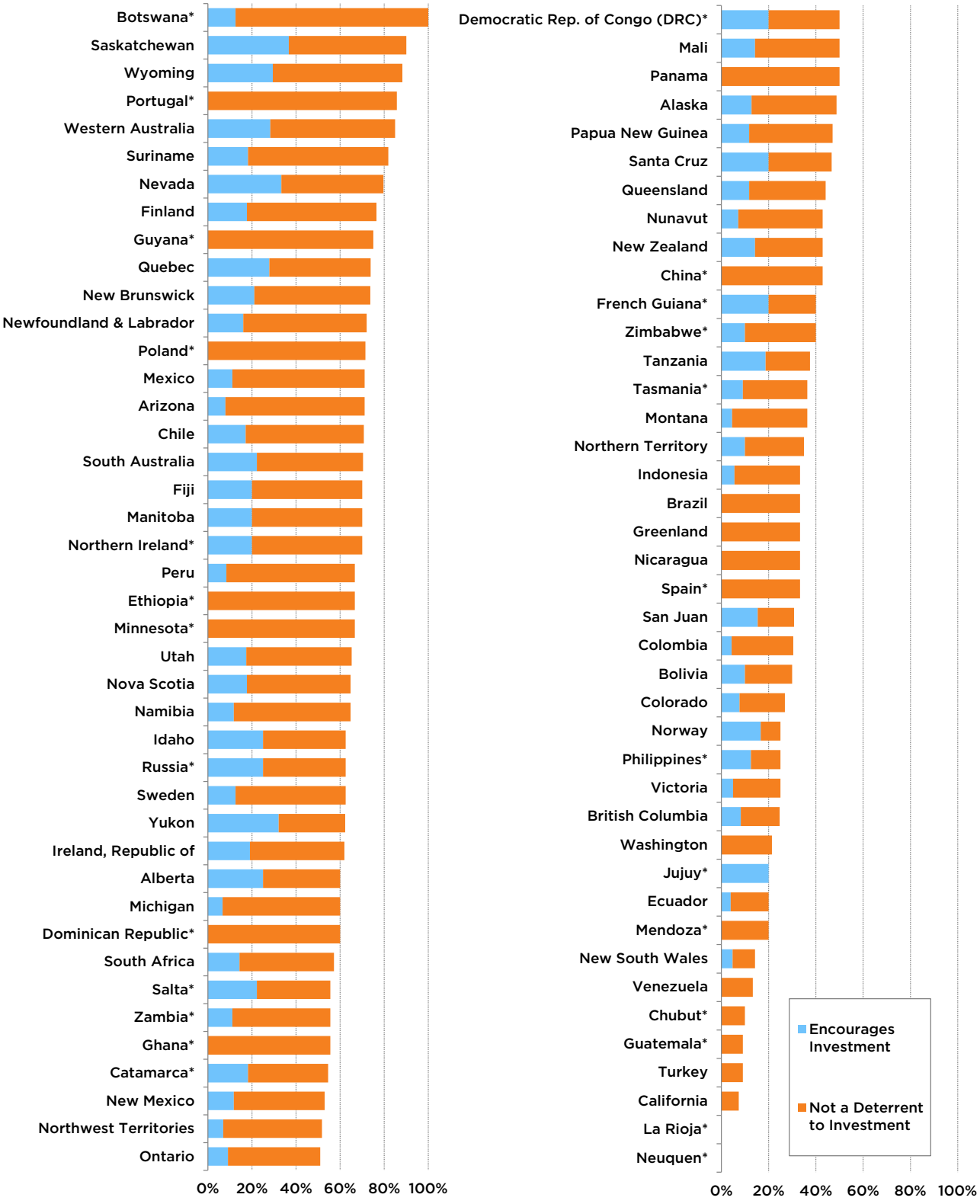


Figure 16: Regulatory Duplication and Inconsistencies

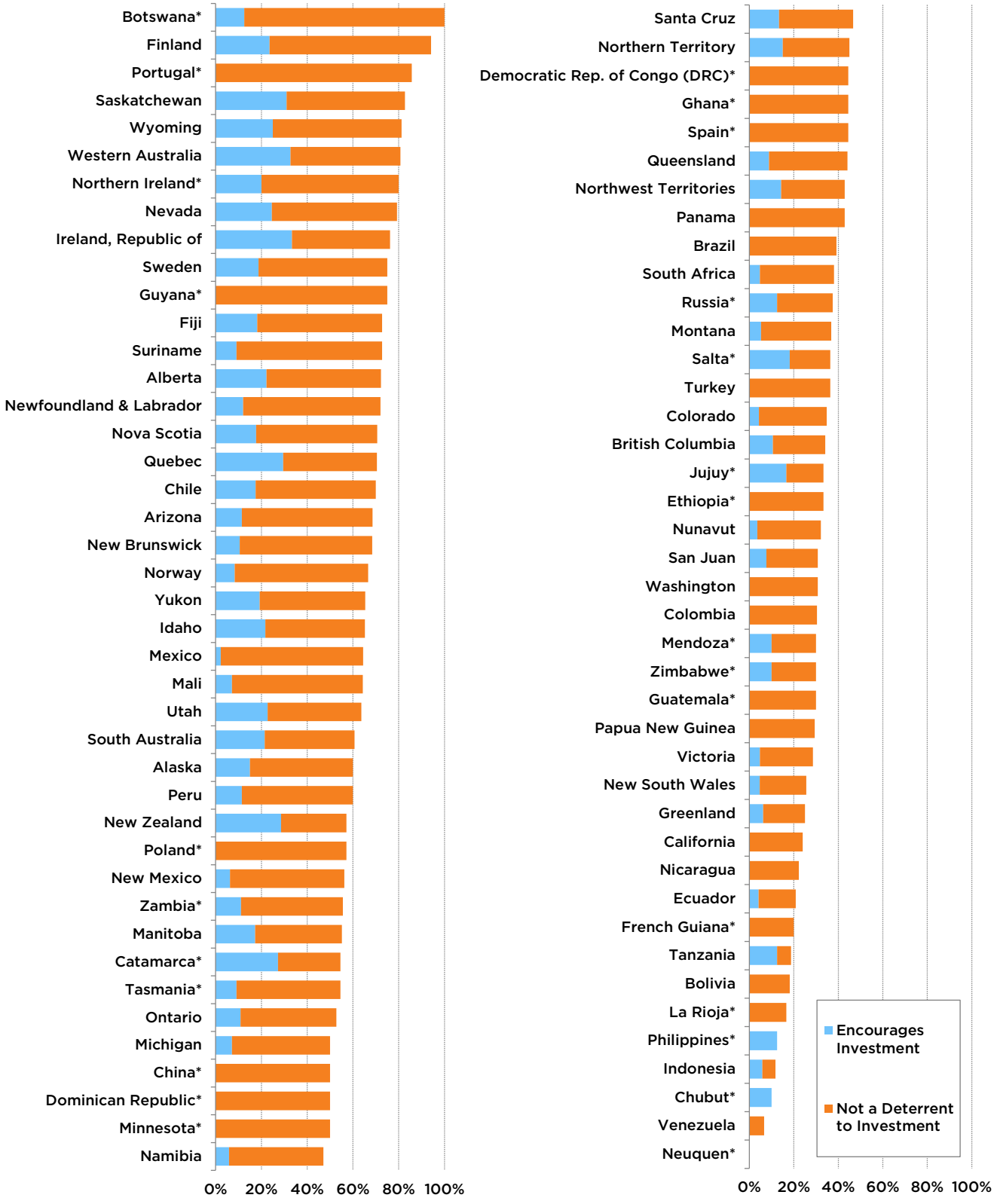


Figure 17: Legal System

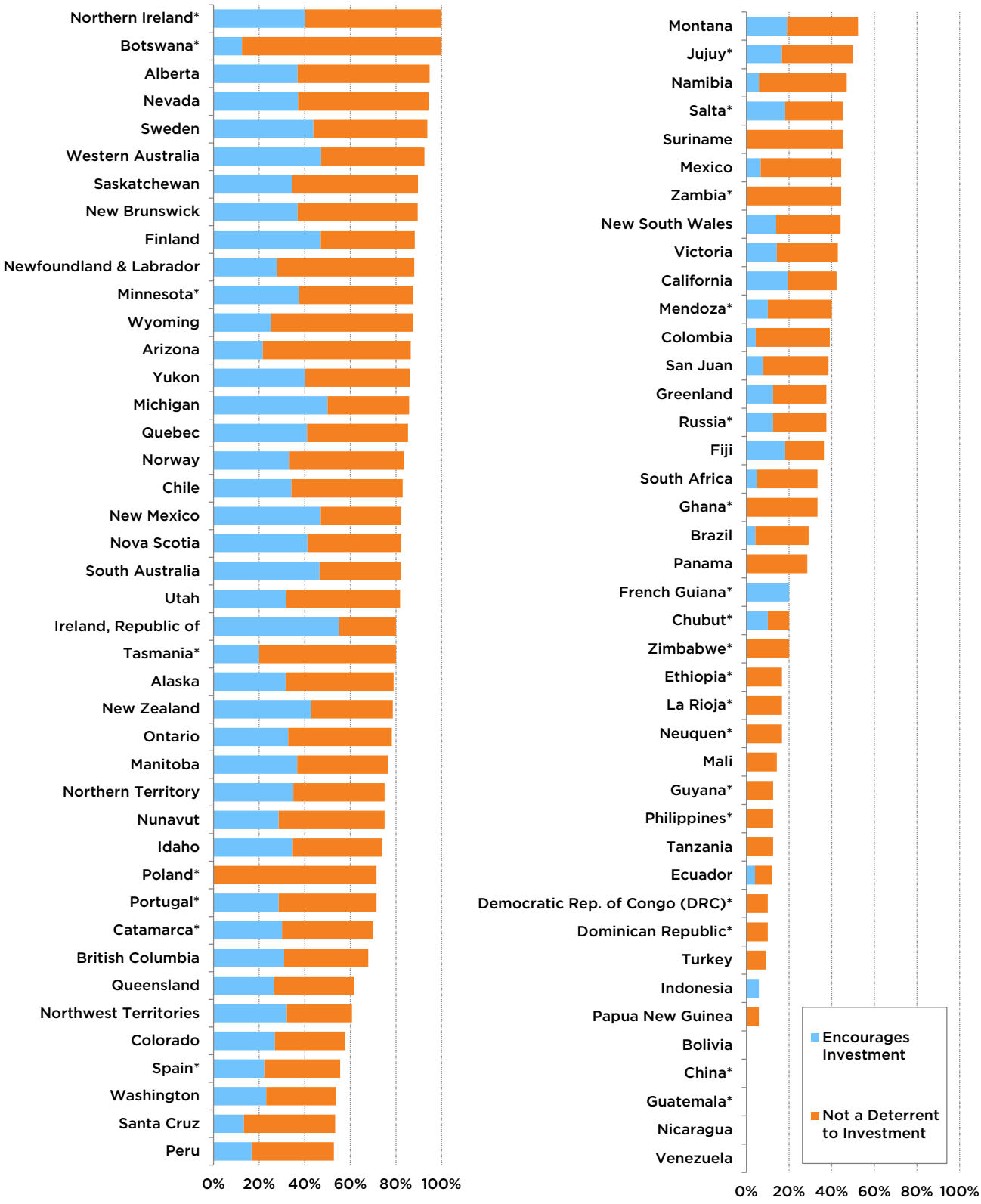


Figure 18: Taxation Regime

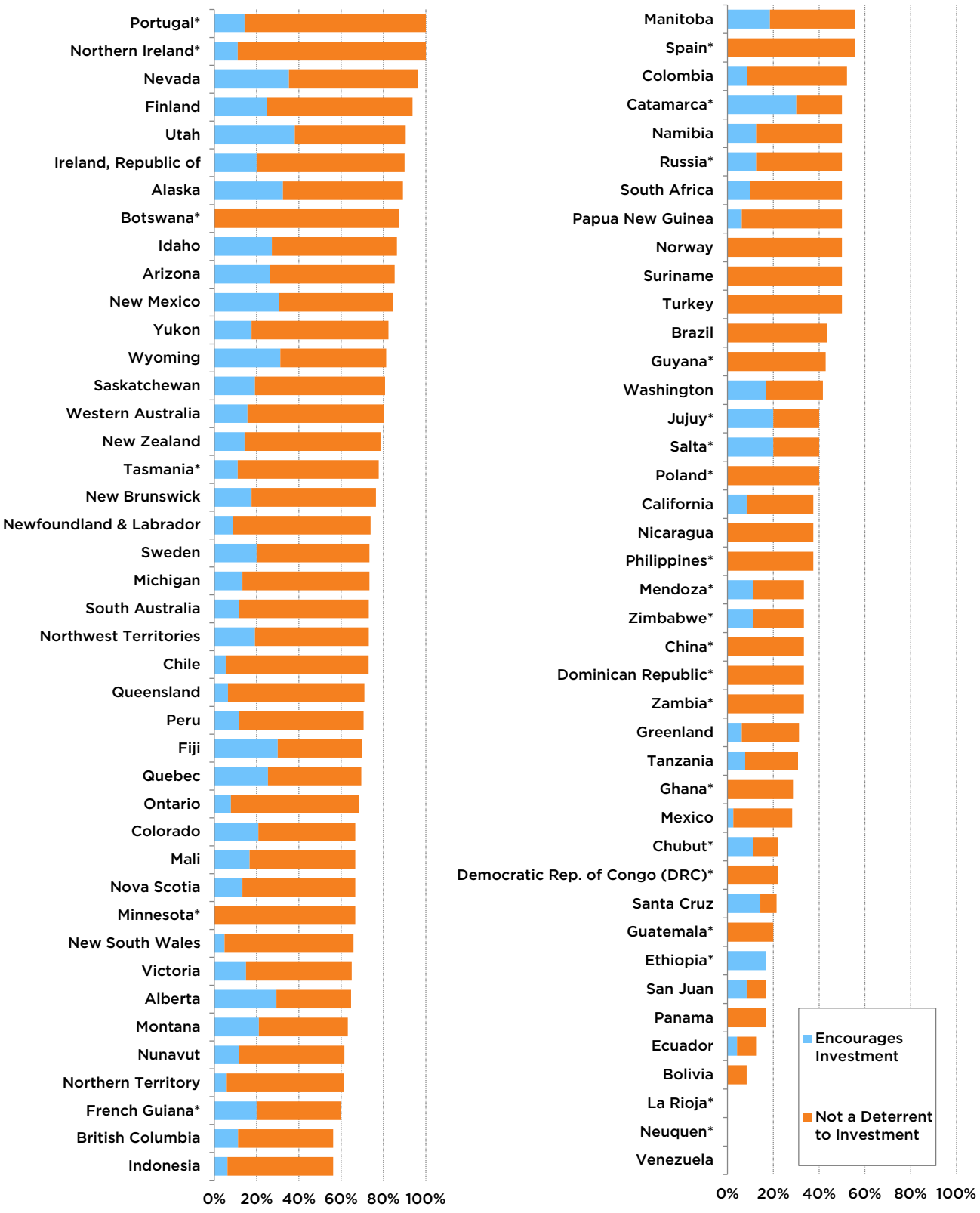


Figure 19: Uncertainty Concerning Disputed Land Claims

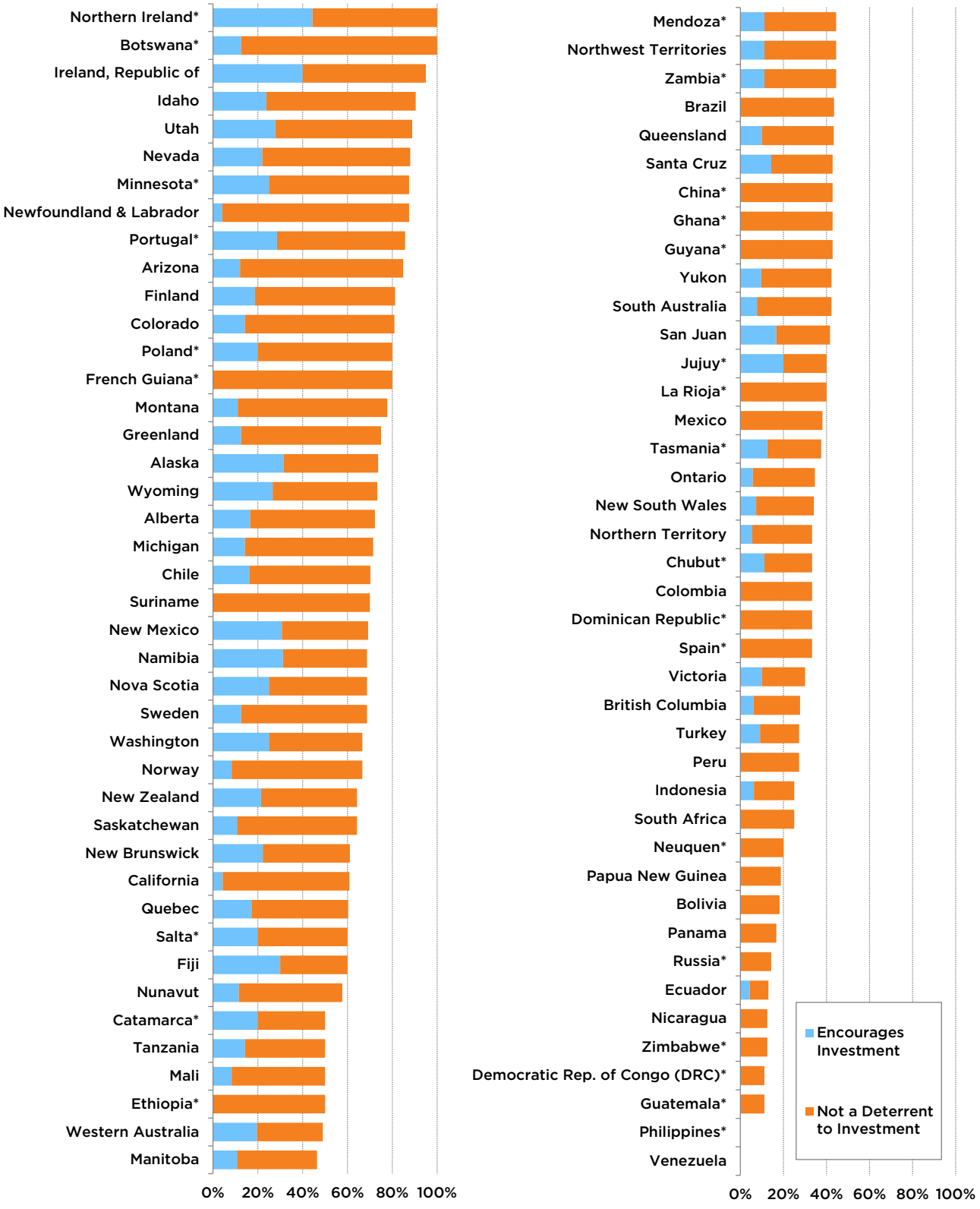


Figure 20: Uncertainty Concerning Protected Areas

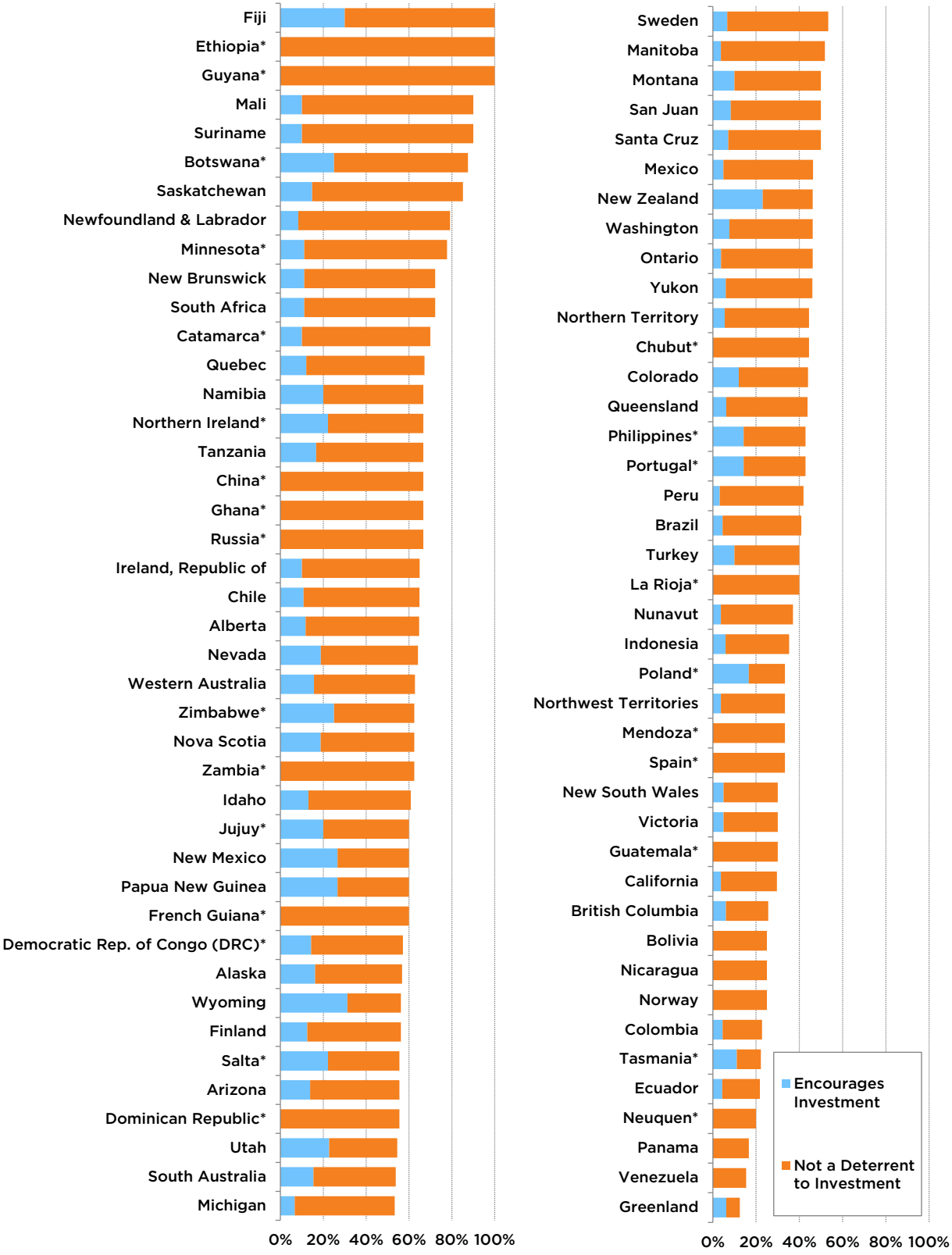


Figure 21: Quality of Infrastructure

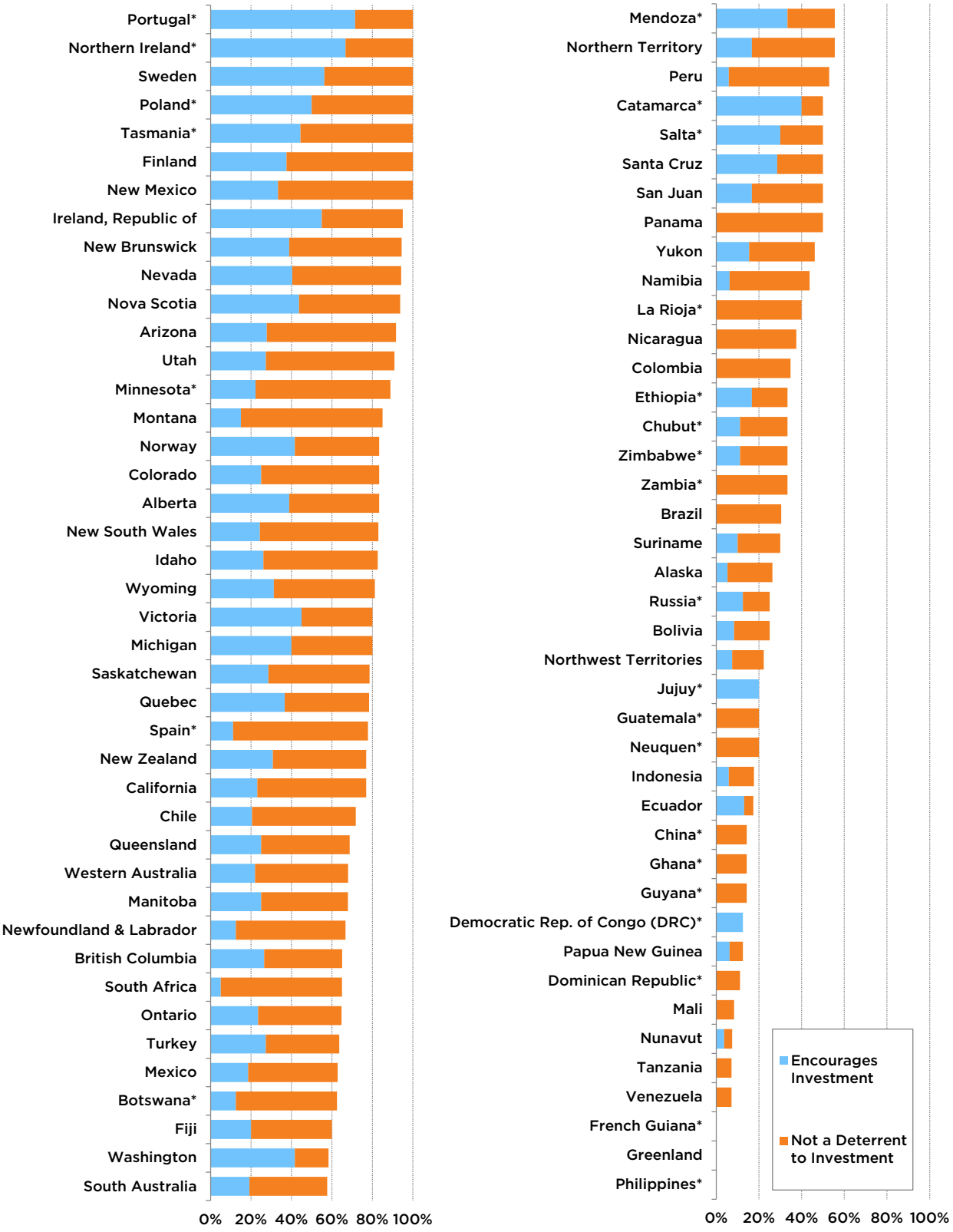


Figure 22: Socioeconomic Agreements/ Community Development Conditions

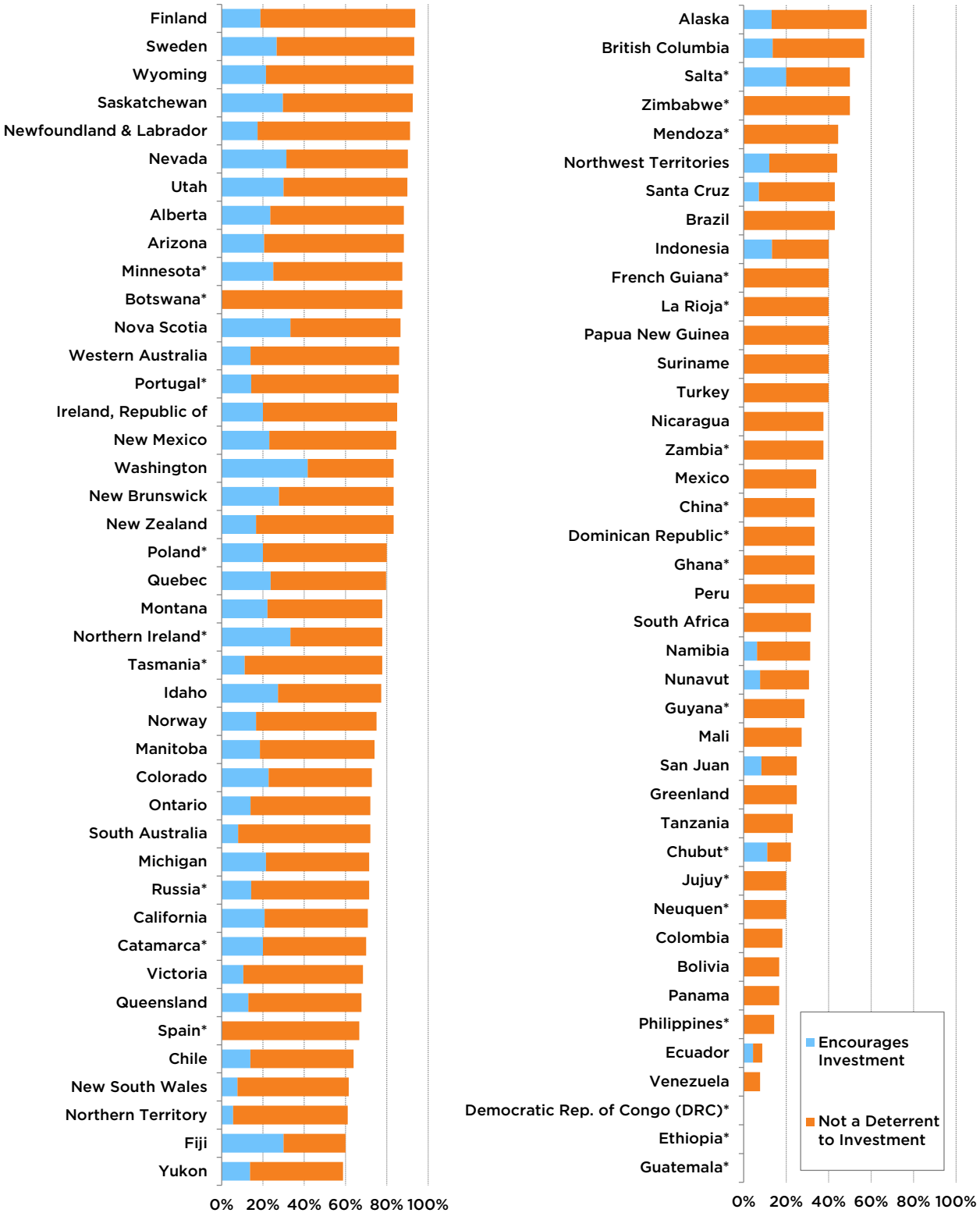


Figure 23: Trade Barriers

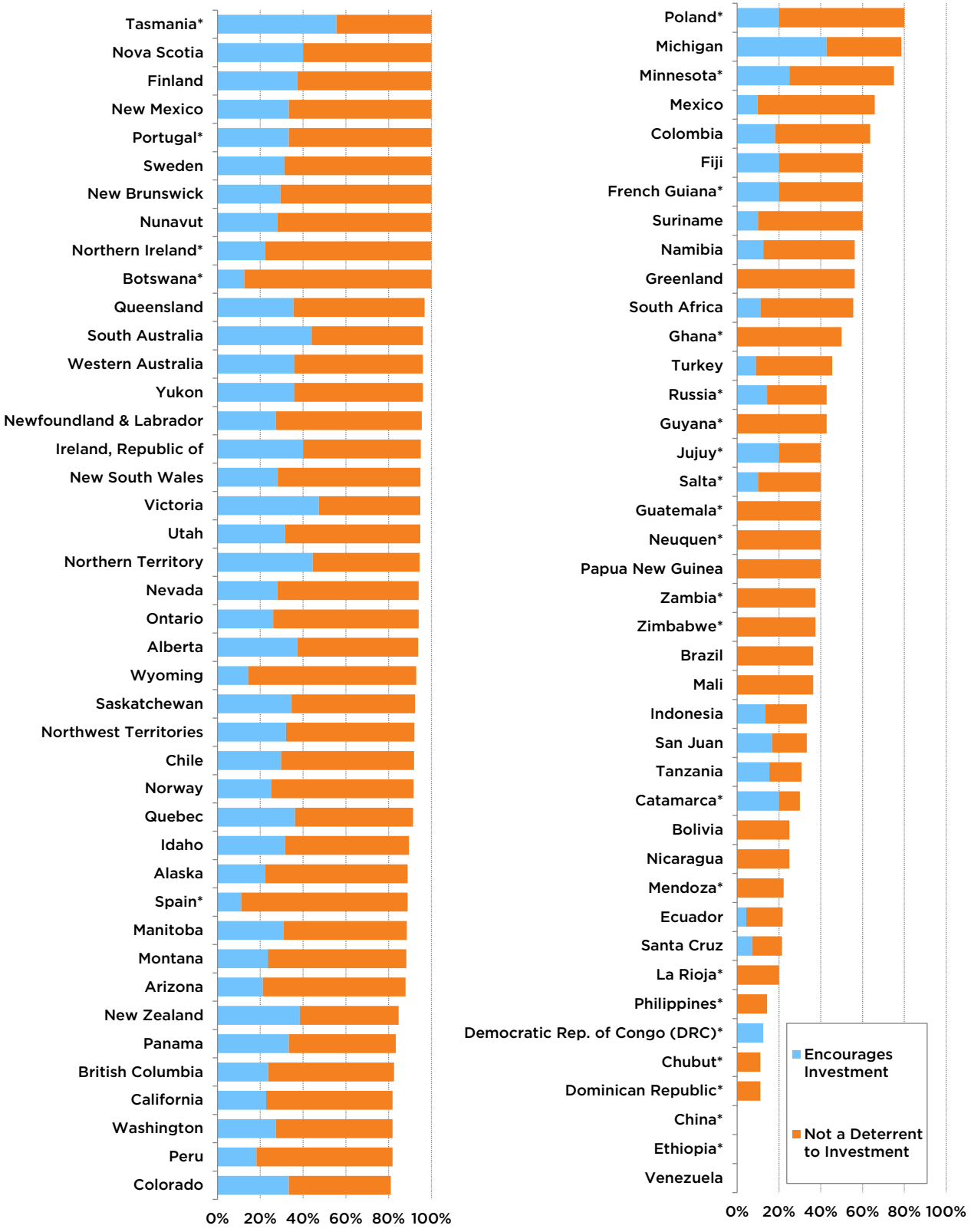


Figure 24: Political Stability

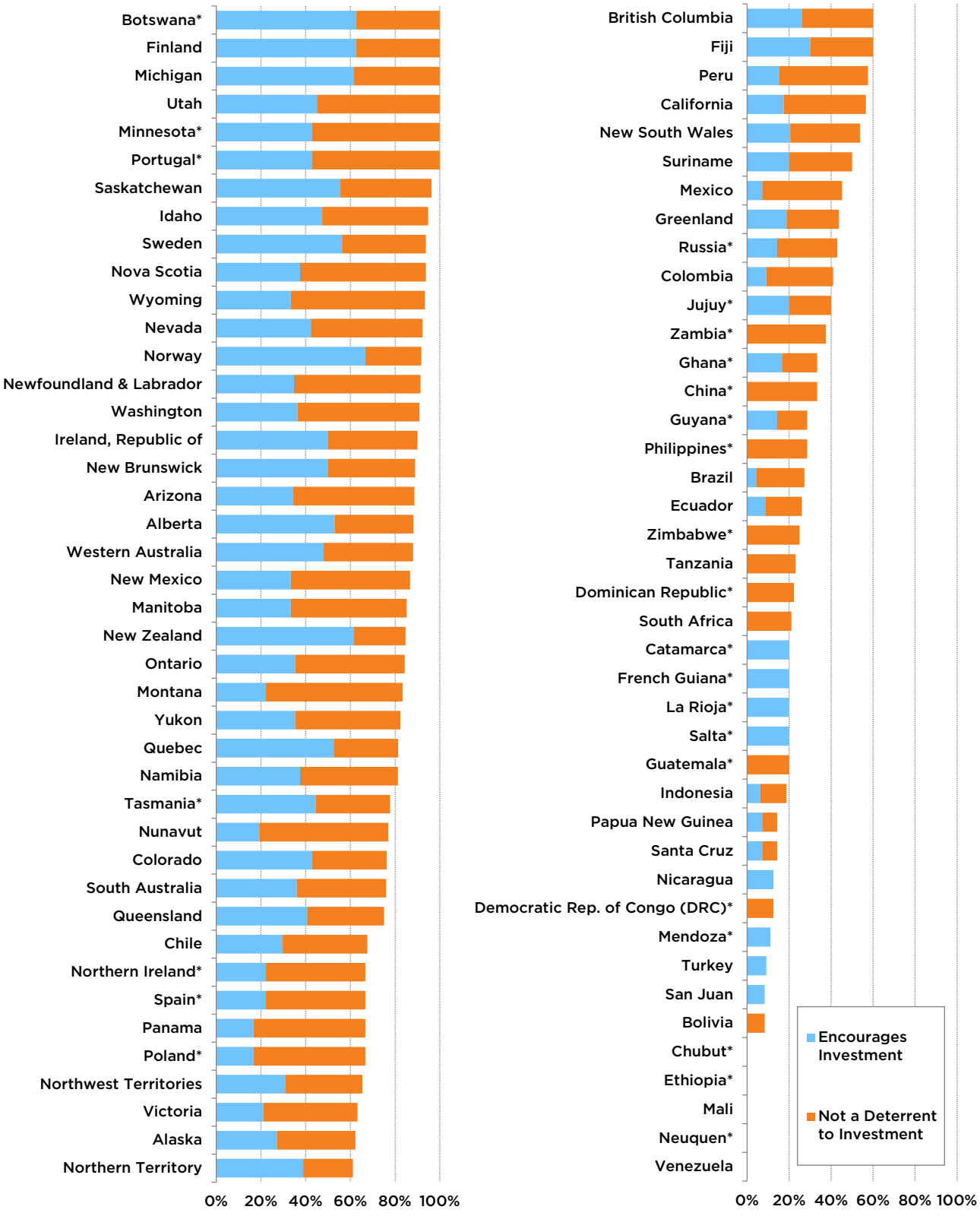


Figure 25: Labor Regulations/Employment Agreements and Labour Militancy/Work Disruptions

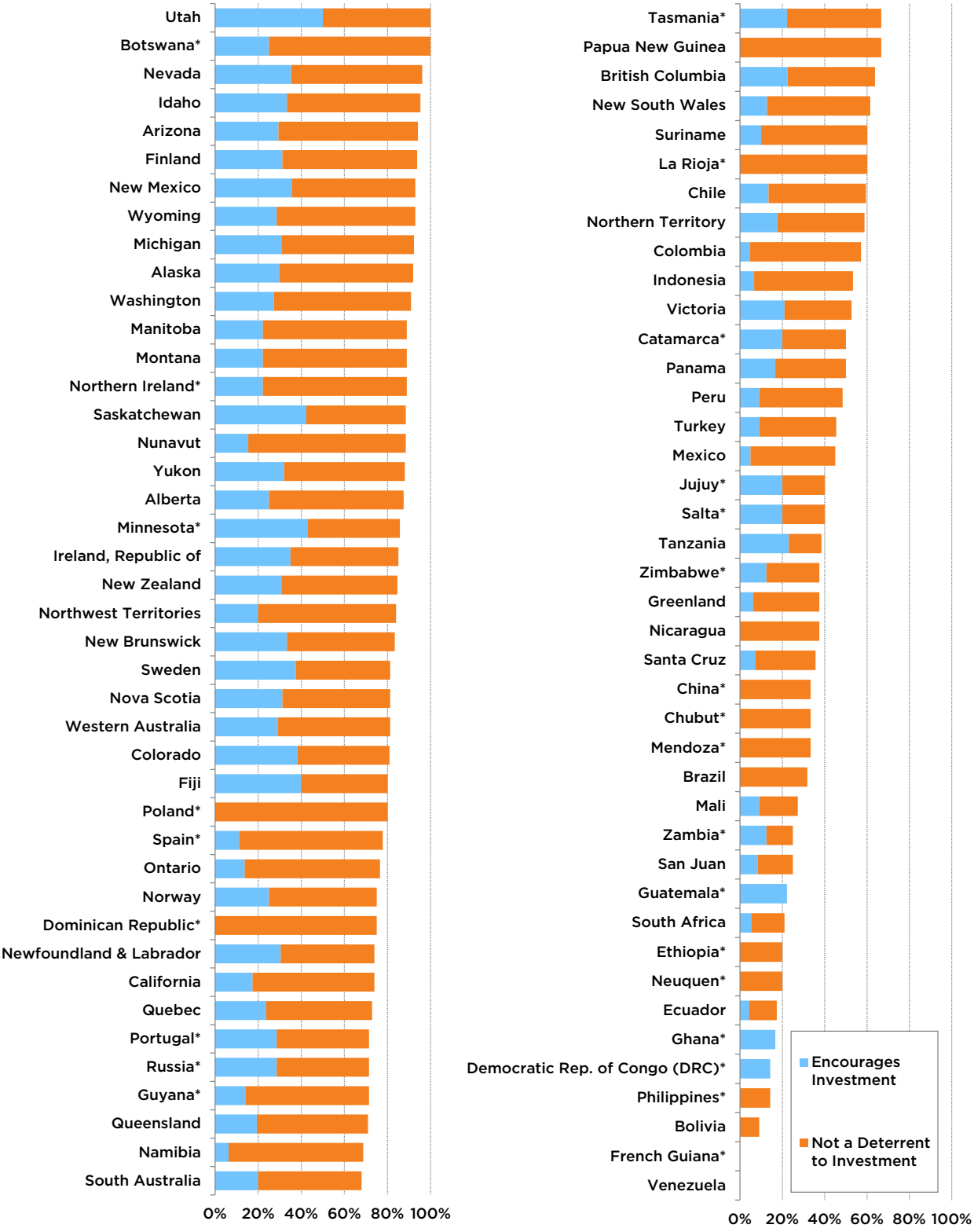


Figure 26: Geological Database

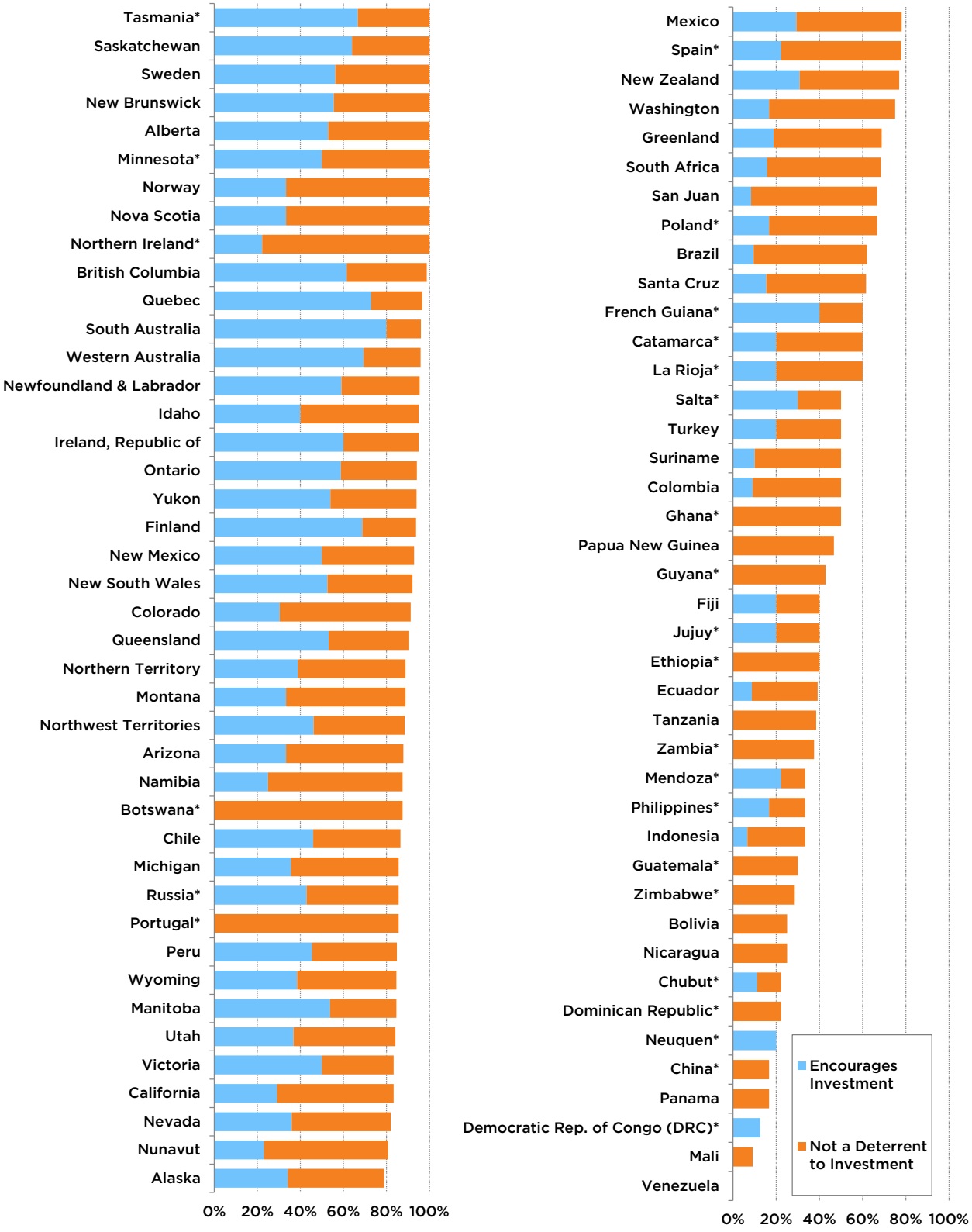


Figure 27: Security

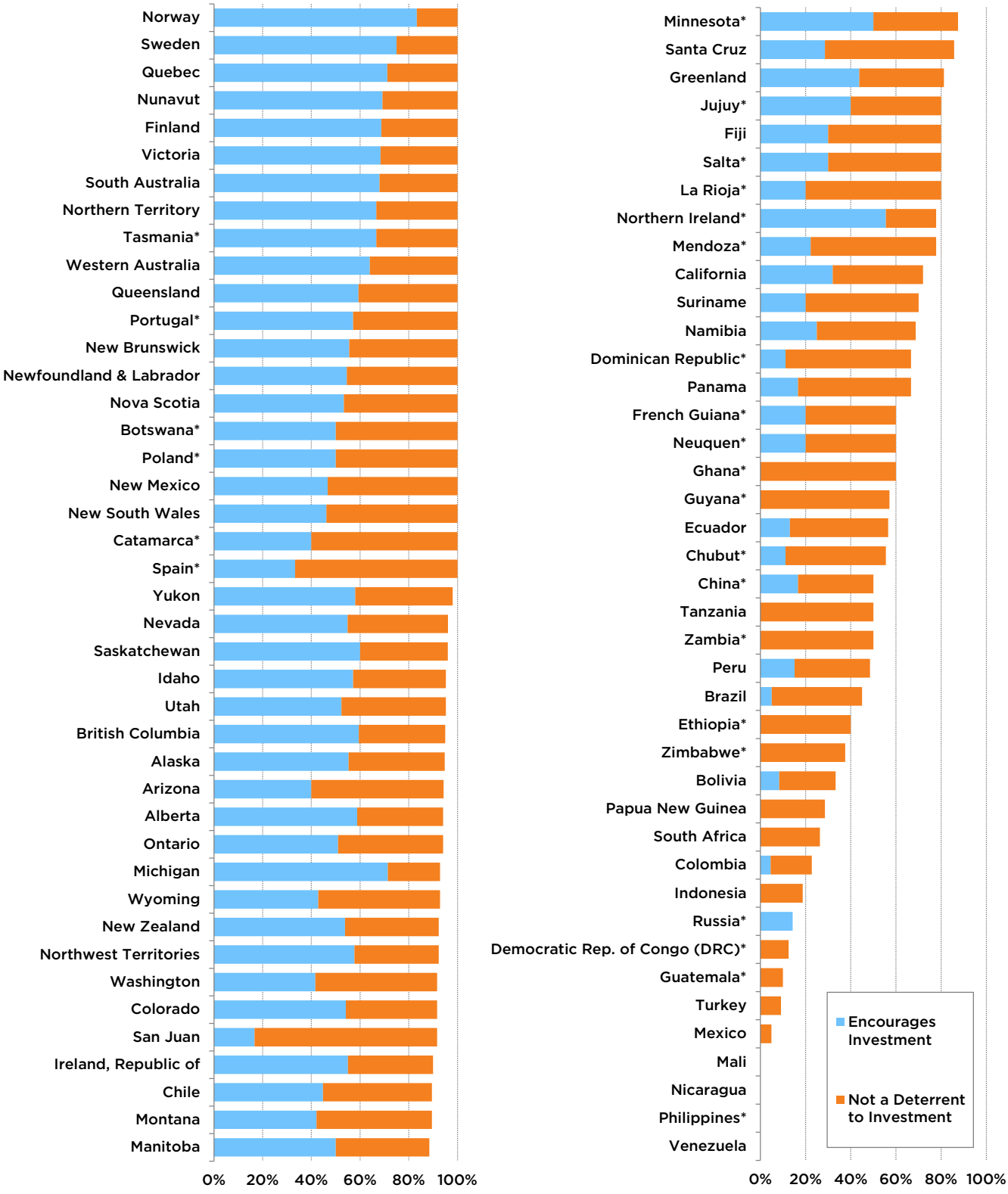
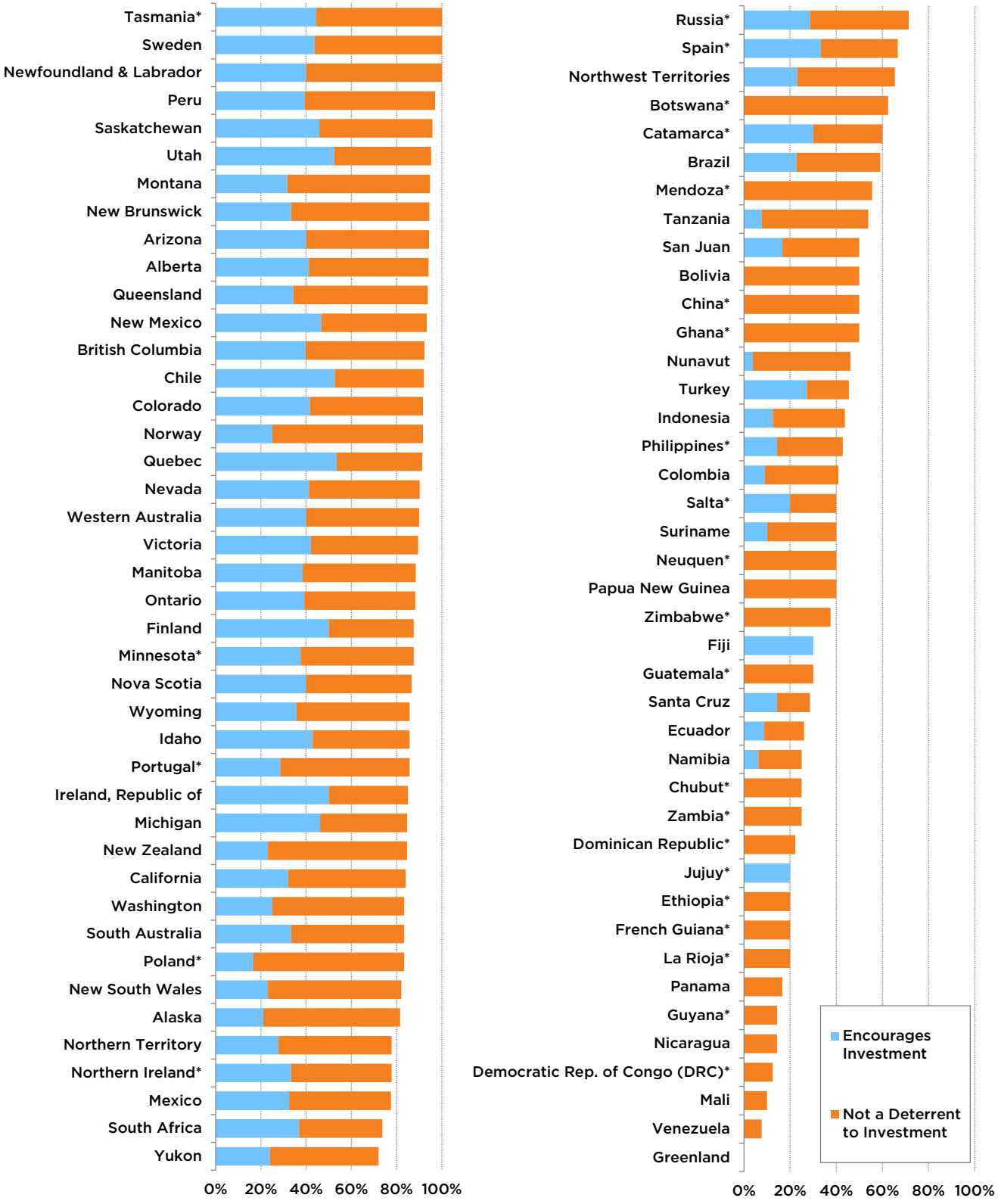


Figure 28: Availability of Labor/Skills



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