About The Fraser Institute

The Fraser Institute is an independent Canadian economic and social research and educational organization. It has as its objective the redirection of public attention to the role of competitive markets in providing for the well-being of Canadians. Where markets work, the Institute's interest lies in trying to discover prospects for improvement. Where markets do not work, its interest lies in finding the reasons. Where competitive markets have been replaced by government control, the interest of the Institute lies in documenting objectively the nature of the improvement or deterioration resulting from government intervention. The Fraser Institute is a national, federally chartered non-profit organization financed by the sale of its publications and the contributions of its members, foundations, and other supporters.

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We would like to acknowledge the Prospectors and Developers Association of Canada (PDAC), whose generous financial support made this year's survey possible. Their support provided the necessary resources to develop and expand the "Objective Index" introduced last year. We are grateful to the PDAC for their suggestion to include measurable parameters and data with which to compare the Canadian jurisdictions, and for their assistance with the development of the parameters. The Objective Index can be found in Appendix A.

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Finally, we would like to thank all the companies who took the time to participate in *The Fraser Institute's Annual Survey of Mining Companies 2002/2003*. Your continued encouragement and participation have made the survey the success it is today.

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Survey Information

The Fraser Institute Annual Survey of Mining Companies 2002/2003 was sent to 972 senior and junior mining companies around the world. The survey represents responses from 16 percent (158) of those companies, comprising 131 junior and 27 senior companies (junior companies tend to be smaller, actively engaging in exploration, whereas senior companies are larger, normally with producing mines). The companies participating in the survey account for exploration expenditures totaling US$737.9 million (2001). They represent over 60 percent (US$191 million) of the total mineral exploration expenditure in Canada in 2001 (US$317.4 million) as estimated by Natural Resources Canada. This survey further represents about 32 percent (US$56.0 million) of the exploration expenditures in the United States in 2001 (US$175.8 million), and 37 percent (US$236.5 million) of the exploration expenditures in Latin America (US$639.8 million) as estimated by Metals Economics Group.

Executive Summary—2002/2003 Mining Survey

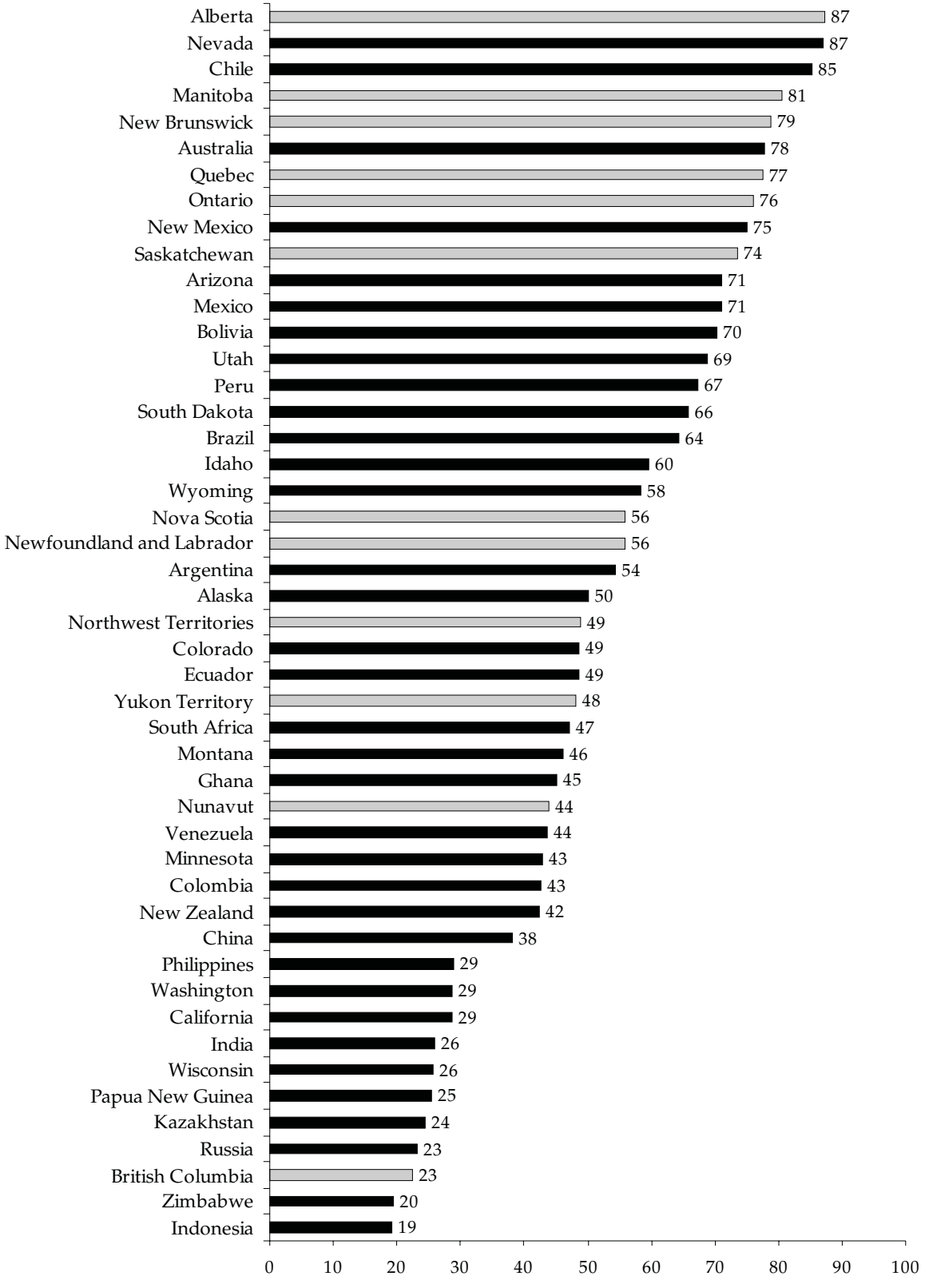
Since 1997, The Fraser Institute has conducted an annual survey of metal mining companies to assess how mineral endowments and public policy factors such as taxation and regulation affect exploration investment. Survey results represent the opinions of exploration managers in mining companies operating around the world. As the popularity of the survey has grown, we have expanded it to include more jurisdictions. We now ask companies to give us their opinions about the investment attractiveness of 47 jurisdictions including the Canadian provinces and territories (except Prince Edward Island), selected US states (this year Alaska, Arizona, California, Colorado, Idaho, Minnesota, Montana, Nevada, New Mexico, South Dakota, Utah, Washington, Wisconsin, and Wyoming), Argentina, Australia, Bolivia, Brazil, Chile, China, Colombia, Ecuador, Ghana, India, Indonesia, Kazakhstan, Mexico, New Zealand, Papua New Guinea, Peru, Philippines, Russia, South Africa, Venezuela, and Zimbabwe. We look forward to including other jurisdictions of interest to respondents to further reflect the globalization of mining in the years to come.

Policy Potential Index: A "Report Card" to Governments on the Attractiveness of their 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 Potential Index serves as a report card to governments on how attractive their policies are from the point of view of an exploration manager.

The Policy Potential Index is a composite index that measures the effects on exploration of government policies including taxation, environmental regulations, administration and duplication of regulations, uncertainty concerning native land claims, protected areas, labour issues, infrastructure, socioeconomic agreements, and political stability. The highest possible score on this index is 100. In the 2002/2003 survey, Nevada and Alberta tie for top place on the Policy Potential Index with a score of 87 (see figure 1). This is Nevada's third straight year for being rated as having the best mineral policies, and Alberta's first. Nevada tied with Chile for first place last year, and was alone at first place in 2000/2001. Other top-rated jurisdictions include Chile (85), Manitoba (81), New Brunswick (79), Australia (78), Quebec (77), Ontario (76), New Mexico (75), and Saskatchewan (74). While Chile, Nevada, and Alberta were the top three policy performers last year as well, New Mexico dramatically improved its ranking from twenty-first last year to ninth this year as a result of its improved rating in uncertainty concerning native land claims. The Yukon, ranked tenth from the bottom last year, climbed an impressive eleven positions to the middle of the group this year. This may be attributed to its improved labour regulation and political stability ratings. It is interesting to see that the uncertainty surrounding the Mineral Development Bill passed in South Africa this year did not affect its policy rating; it placed twenty-eighth on the Policy Potential Index for a second year. The worst per-

Figure 1: Policy Potential Index



forming jurisdictions, based on policy, are Indonesia (19), Zimbabwe (20), British Columbia and Russia (tied at 23), Kazakhstan (24), Papua New Guinea (25), Wisconsin and India (tied at 26), and California, the Philippines, and Washington (all with 29). Also worth noting is that this is the first time in the survey's six-year history that British Columbia has not been rated last for its mining policies.

The Mineral Potential Index

The Mineral Potential Index rates a region's attractiveness based on mining company executives' perceptions of geology. These perceptions can be affected by new information (maps, reports), and by market fluctuations which may change the mineral sought. Survey respondents were asked to rate the mineral potential of each region with which they were familiar assuming no land use restrictions in place, but further assuming that any mine would operate to industry "best practice" standards. In other words, respondents were asked to rate the attractiveness of the region's mineral potential independent of any policy restrictions. The index ranks the jurisdictions based on which regions' geology "encourages exploration investment." This year, Chile is in first place with a score of 100 (see figure 2). Quebec (last year's first place) comes in a close second with 98. Third place is shared by three jurisdictions: Australia, Brazil, and Peru, all of which rate a score of 96. Other top-ranked jurisdictions include Russia (89), Ontario (87), Nevada (85), Nunavut (83), and the Northwest Territories and China (tied at 81). The worst-rated regions on this index include Nova Scotia (2), Wisconsin (4), Alberta (6), New Zealand (9), and Minnesota and Wyoming (tied for 13).

The Investment Attractiveness Index Considers both Mineral and Policy Potential

An overall Investment Attractiveness Index is constructed by combining the mineral potential index, which rates regions based on geologic attractiveness, and the policy potential index, a composite index that measures the effects of government policy on attitudes toward exploration investment. In past years we have been criticized for giving equal weight to the policy and mineral scores. In an effort to determine a weighting with which the industry would agree, we began asking survey respondents what weights they would place on policy and mineral potential. The median result of the findings this year, as it was last, was to put a 60 percent weight on mineral potential and a 40 percent weight on policy.

Chile is the top-rated jurisdiction for investment attractiveness with a score of 94 out of 100 (see figure 3). Quebec, which shared first place with Ontario last year, comes in a close second this year with 90, just above Australia, which once again comes third (89). Nevada (86) and Peru (84) round out the top five. Other highly-ranked jurisdictions include Ontario and Brazil (tied at 83), Mexico (74), the Northwest Territories and Bolivia (tied at 68), and Nunavut (67). The lowest-rated jurisdictions on the investment attractiveness index, with low ratings on both the policy and mineral potential indices include Wisconsin (13), Washington and New Zealand (tied at 22), Nova Scotia and India (tied at 24), Minnesota (25), Wyoming (31), the Philippines and Zimbabwe (tied at 32), and California (36).

Figure 2: Mineral Potential Index

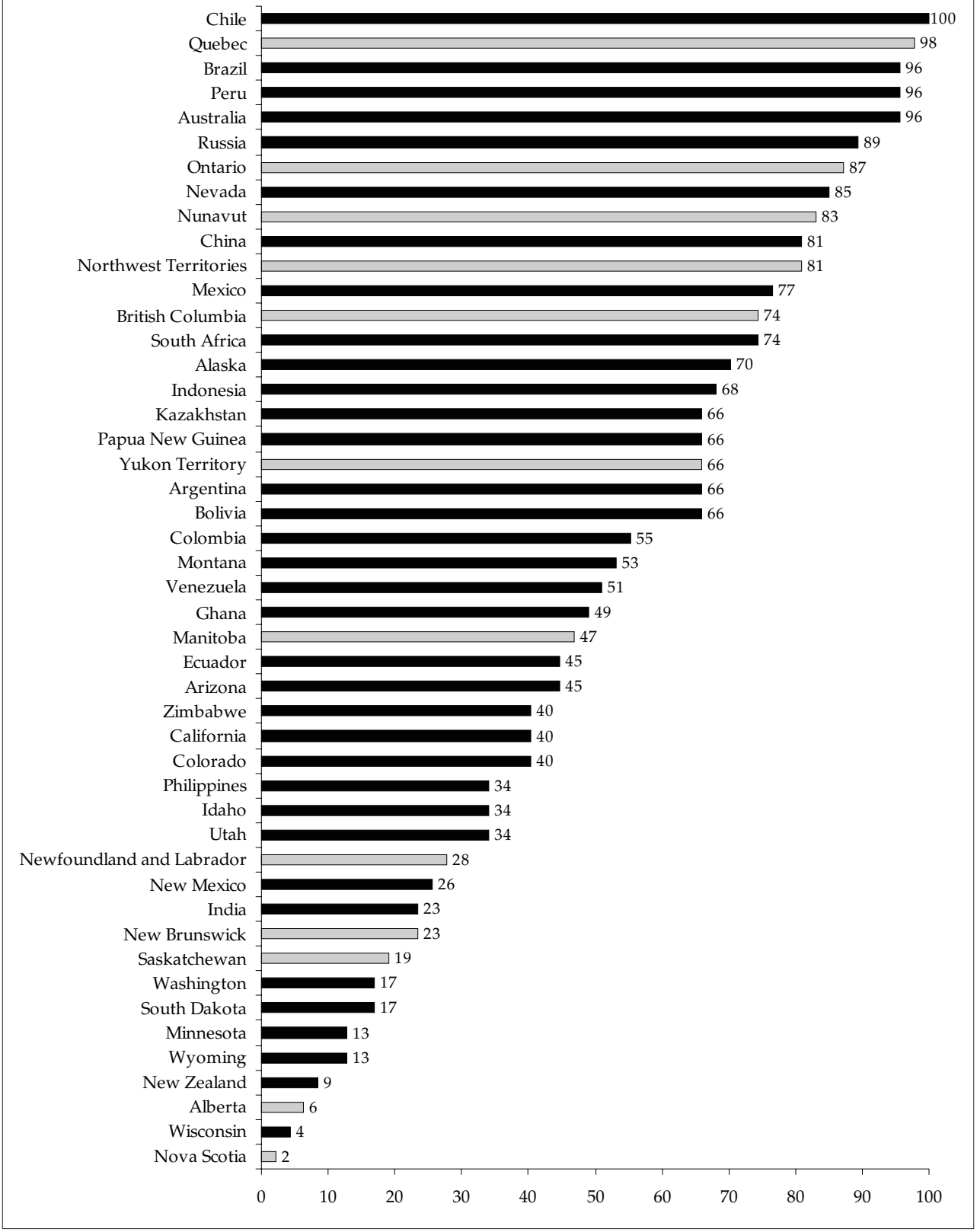
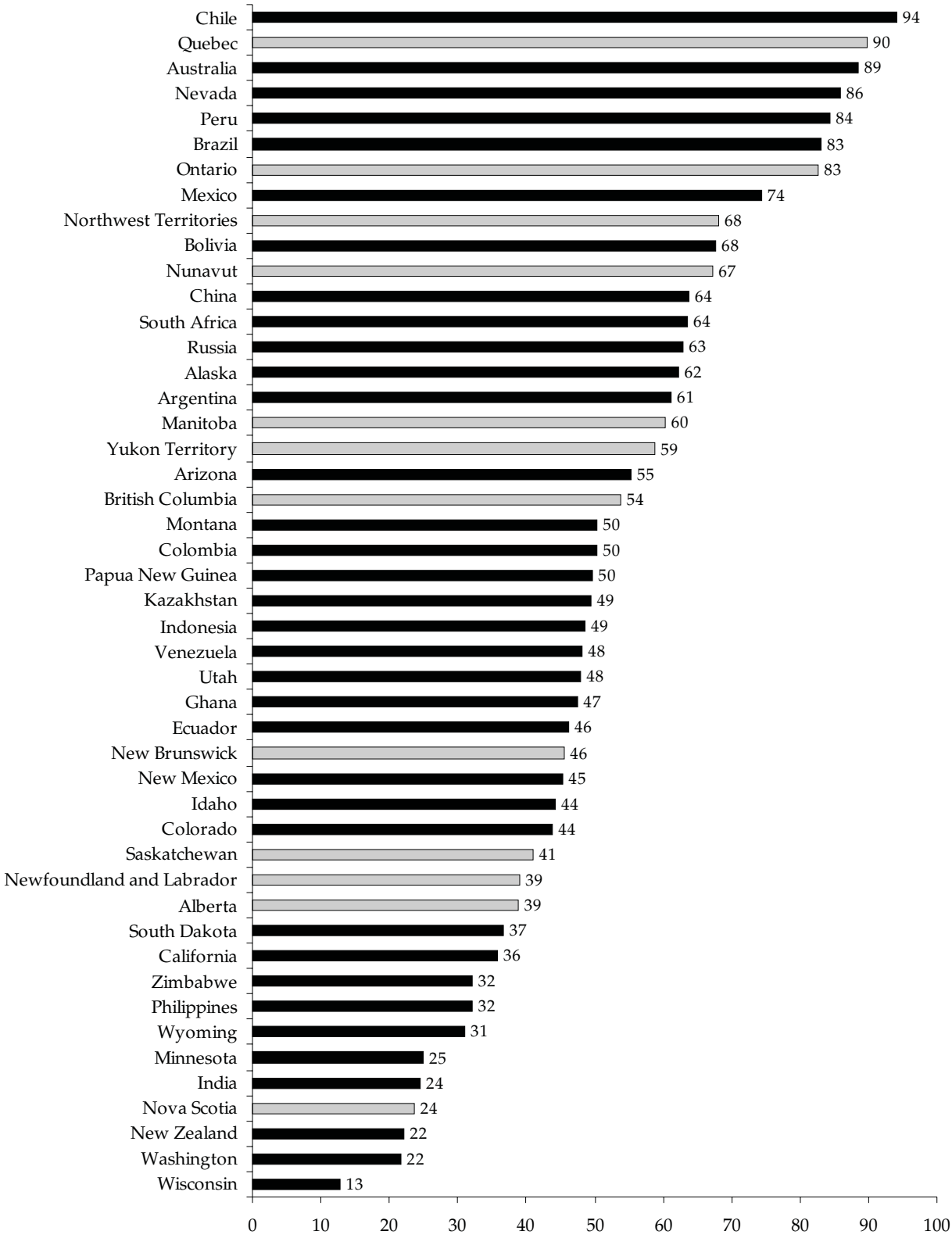


Figure 3: Investment Attractiveness Index



Complementary Objective Index Included

For the second year we have included a section that compares Canadian provinces and territories using available data to provide readers with more information about the differences between policies in different regions. These data may offer some insight into what is causing some regions to score high and others low on the opinion survey. Survey respondents and policy makers alike have suggested that poor ratings for certain jurisdictions may be a result of misperceptions about the realities of operating in a jurisdiction. Assessing the differences in policy by comparing the data may help determine whether this is the case, although relevant data are often limited. Further, data alone cannot fully capture the investment climate, which is also affected by the personalities and biases of all stakeholders, whether they be the makers of policy, the administrators of policy, or the individuals and groups who care deeply about land use decisions and feel that their concerns must also be heard. We hope to continue to expand this part of the report to include more jurisdictions and to improve it by adding more variables. This section can be found in Appendix A.

Survey Background

The idea of surveying mining companies about how government policies and mineral potential affect new exploration investment came from a Fraser Institute conference on mining held in Vancouver, Canada, in the fall of 1996. The comments and feedback from the conference showed that the mining industry was dissatisfied with government policies which deterred exploration investment within the mineral-rich province of British Columbia. Since many regions around the world have attractive geology and competitive policies, and given the increasing opportunities to pursue business ventures globally, many conference participants expressed the view that it was easier to explore in jurisdictions with attractive policies than to fight for better policies in unfriendly jurisdictions. The Fraser Institute launched the survey to examine which jurisdictions were providing the most favourable business climates for the industry, and in which areas certain jurisdictions needed to improve.

The effects of increasingly onerous, seemingly capricious regulations, uncertainty about land use, higher levels of taxation, and other policies that interfere with market conditions are rarely felt immediately, as they are more likely to deter companies looking for new projects than they are to shut down existing operations. We felt that the lack of accountability that stems from 1) the lag time between when policy changes are implemented and when economic activity is impeded and job losses occur and 2) industry's reluctance to be publicly critical of politicians and civil servants, needed to be addressed.

In order to address this problem and assess how various public policy factors influence companies' decisions to invest in different regions, The Fraser Institute began conducting an anonymous survey of senior and junior companies in 1997. The first survey included all Canadian provinces and territories. The second survey, conducted in 1998, added 17 US states, Mexico, and for comparison with North American jurisdictions, Chile. The third survey, conducted in 1999, was further expanded to include Argentina, Australia, Peru, and Nunavut. The fourth survey looked at the Canadian provinces and territories (except for Prince Edward Island, which was removed due to its relatively low mineral potential), 14 US states, Australia, Argentina, Chile, Mexico, Peru, as well as Brazil, Indonesia, Papua New Guinea, and South Africa. We expanded the fifth survey to include Kazakhstan, Russia, Bolivia, Colombia, Ecuador, Venezuela, China, Philippines, Ghana, and Zimbabwe. This year we have added India and New Zealand to last year's list of countries.

We add countries to the list based on the interests expressed by survey respondents, and have noticed that these interests are becoming increasingly global. In recognition of the fact that jurisdictions are no longer competing only with the policy climates of their immediate neighbours, but in fact with jurisdictions around the world, we think it is important to continue publishing and publicizing the results of the survey annually, and to make the results available and accessible to an increasingly global audience.

Survey Results

Section I: Investment Climate Ratings

Methodology

The following section provides an analysis of 12 factors that contribute to the ability of jurisdictions to attract exploration investment. For each jurisdiction, companies were asked to rate the following factors on a scale of 1 to 5 (with 6 as a "do not know" option):

- Uncertainty concerning the administration, interpretation, and enforcement of existing regulations
- Regulatory duplication and inconsistencies (including federal/provincial or federal/state and interdepartmental overlap)
- Environmental regulations
- Uncertainty concerning what areas will be protected as wilderness or parks
- Uncertainty concerning native land claims
- Taxation regime (including personal, corporate, payroll, capital taxes, and the complexity associated with tax compliance)
- Infrastructure
- Labour regulation/employment agreements
- Political stability
- Socioeconomic agreements
- Mineral potential assuming current regulation/land use policies
- Mineral potential assuming no regulation or land restrictions (but further assuming industry "best practice" standards)

Scale

1 = encourages exploration investment
2 = not a deterrent to exploration investment
3 = mild deterrent to exploration investment
4 = strong deterrent to exploration investment
5 = would not pursue exploration investment in this region due to this factor
6 = do not know

Figures 4 to 13 show the percentage of respondents who rate various policy factors as strong deterrents to exploration investment in each jurisdiction. This includes survey respondents who either

consider the factor a "strong deterrent to exploration investment" or "would not pursue exploration investment in this region due to this factor" (a "4" or a "5" on the scale above). We have highlighted Canadian jurisdictions for ease of comparison. On the pages opposite these graphs, we have included quotes from survey respondents that help illustrate their feelings about operating in different regions. Figures 14 and 15 show the percentage of respondents who say that mineral potential either "encourages exploration investment" or is "not a deterrent to exploration investment." Figures 1, 2, and 3, shown in the executive summary, give the composite rates for policy potential, mineral potential, and investment attractiveness. The mineral potential index was created by indexing jurisdictions according to the number of "1s" they received on the above scale. Tables 1 and 2 summarize the survey results. Table 3 shows the number of companies who indicate that a jurisdiction has the most/least favourable policies toward mining.