

The economic impact of local resource suppliers in Saskatchewan **SIMSA**

September 2019



Strictly private and confidential

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Executive summary

Our mandate

PricewaterhouseCoopers LLP (“PwC” “we” or “us”) was engaged by the Saskatchewan Industrial and Mining Suppliers Association (SIMSA) to assess the economic impact of mining and energy suppliers in Saskatchewan. For the purpose of this report, we refer to these sectors together as the “resource” sector. The goals of this study are to assess and quantify the following:

1. The economic footprint assessment of SIMSA’s members.
2. The economic footprint of \$1 of mining project spending on three types of projects:
 - a. A resource project in Saskatchewan using a Saskatchewan-based supplier
 - b. A resource project outside of Saskatchewan using a Saskatchewan-based supplier
 - c. A resource project in Saskatchewan using an out-of-province supplier

Methodology

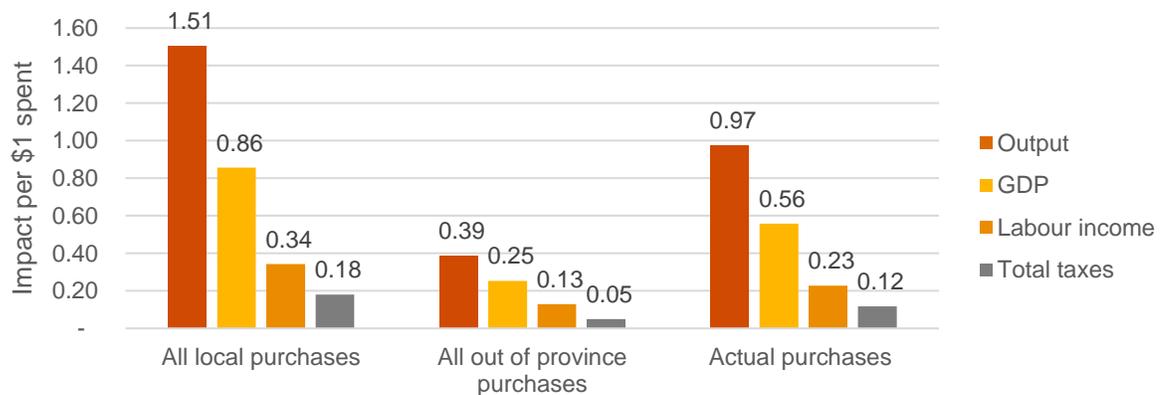
To carry out this mandate, we took the following major steps:

- Conducted a survey of SIMSA members
- Reviewed past surveys of SIMSA members
- Interviewed SIMSA members
- Identified relevant secondary sources
- Analyzed and quantified the economic footprints described above

Key findings

We assessed the economic impact of purchases from local suppliers in Saskatchewan, compared to those from out of province suppliers. To do this, we used data on current spending patterns by resource companies in Saskatchewan and interviews with SIMSA members. We present three sets of results: the hypothetical impact of one dollar of spending on 100% local purchases, the hypothetical impact of one dollar of spending on 0% local purchases, and the actual impact of one dollar of spending, based on current spending patterns where 65% of purchases are local. These results are presented below:

Figure 1: Total economic footprint in Saskatchewan per \$1 spent by a resource company



We found that local purchases generate substantially higher economic benefits in Saskatchewan compared to out of province purchases. One dollar spent on local suppliers generates \$1.51 in total economic output, compared to \$0.39 for a dollar spent on out of province suppliers.

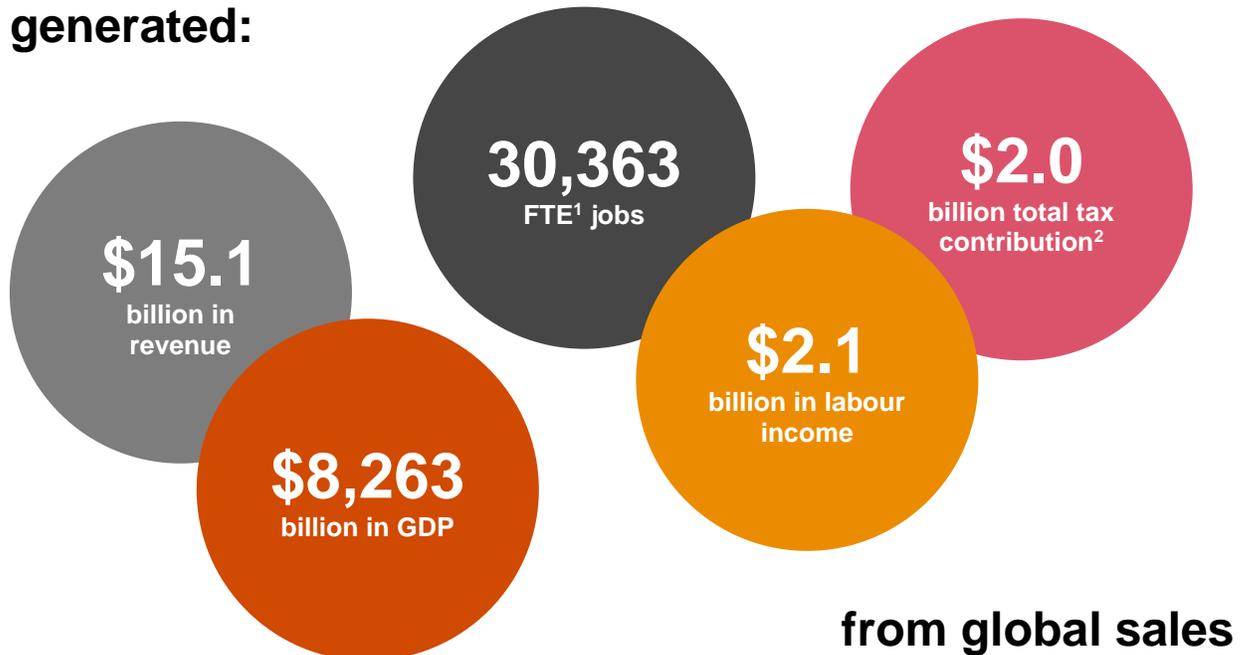
Out of province resource companies also make purchases from Saskatchewan suppliers- 81% of SIMSA members surveyed indicated that they do work outside of Saskatchewan. One dollar spent on Saskatchewan suppliers by out of province companies generates \$1.12 in output in Saskatchewan.

Currently, resource companies make 65% of their purchases from local suppliers. If this share increased to 100%, Saskatchewan's GDP would increase by \$3.0 billion annually. However, increasing local purchases may not be possible in all cases. For example, because not all required inputs are manufactured in Saskatchewan.

We also assessed the economic footprint of SIMSA's members based on their global sales, and based on sales in Saskatchewan. The total economic footprint includes direct, indirect (supply chain), and induced (employee spending) impacts. These results are presented below:

Figure 2: SIMSA members' economic impact based on global spending, 2018

In 2018, SIMSA members generated:



Based on their sales to solely their Saskatchewan clients (vs. all clients per above), SIMSA members generated a total of \$4.0 billion in output, \$2.2 billion in GDP, 19,316 jobs, \$1.3 billion in labour income, and \$522 million in total tax contribution.

¹ Full time equivalent.

² Includes provincial, federal, and municipal taxes.

Introduction

PricewaterhouseCoopers LLP (“PwC,” “we,” or “us”) was engaged by the Saskatchewan Industrial & Mining Suppliers Association Inc. (SIMSA) to assess the economic footprint of SIMSA’s membership, as well as the economic footprint of purchases from local suppliers compared to those from outside Saskatchewan. SIMSA members primarily serve mining and energy companies, which we refer to together as the “resource” sector for the purposes of this report.

This study estimates the following economic footprints:

1. The economic footprint assessment of SIMSA’s members.
2. The economic footprint of \$1 of mining project spending on three types of projects:
 - a. A resource project in Saskatchewan using a Saskatchewan-based supplier
 - b. A resource project outside of Saskatchewan using a Saskatchewan-based supplier
 - c. A resource project in Saskatchewan using an out-of-province supplier

Unless otherwise specified, all dollar figures in this report are in 2018 Canadian dollars.

The key authors of this study are:

- Michael Dobner, National Leader, Economics Practice
- Gemma Stanton-Hagan, Senior Economist
- Michal Staszewski, Economist

Scope of review

To prepare this assessment, we have reviewed and, where appropriate, relied upon various documents and sources of information. By general classification, these sources include the following:

- A survey of SIMSA's members conducted by PwC in 2019;
- A survey of SIMSA's members conducted by SIMSA in 2018;
- Interviews with SIMSA members; and
- Statistics Canada.

Background

This section provides background information on the mining sector in Saskatchewan and the role of Saskatchewan based suppliers, in order to contextualize our analysis.

The mining sector in Saskatchewan

Saskatchewan's mining sector is a key component of the provincial economy. Based on exploration and development spending, the sector will continue to be important for Saskatchewan in the future. This sector provides substantial business opportunities for suppliers of goods and services related to resource extraction. Together, mining, and support services for mining and oil and gas extraction accounted for 12% of Saskatchewan's economy in 2018.³

The value of mining in Saskatchewan was \$5.7 billion in 2017, or 13% of the total for Canada.⁴ The Fraser Institute's Annual Survey of Mining Companies consistently ranks Saskatchewan among the top mining jurisdictions in the world for investment attractiveness. In the 2018 survey, it ranked 3rd overall and first in terms of policy attractiveness.⁵ Key areas of focus for Saskatchewan's mining sector are potash and uranium, where Saskatchewan accounts for 33% and 22% of global production, respectively.⁶ Other minerals mined in Saskatchewan are coal, salt, silica sands, kaolin, clays, sodium, and potassium sulfates.⁷

Overall, the outlook is positive for Saskatchewan's mining sector: in 2017, the province attracted \$159 million in exploration spending, \$30.5 million in deposit appraisal, and \$2.61 billion in mine complex development, the second highest spending in Canada.⁸ According to Natural Resources Canada, there are eight major minerals and metals project under development in Saskatchewan, worth \$17.1 billion in potential investment. This figure accounts for 24% of the value of projects under development in Canada (i.e. mine construction, redevelopment, expansion, and processing).⁹

Suppliers to the mining sector in Saskatchewan

Purchases from local suppliers are one of the ways mining contributes to Saskatchewan's economy. Local suppliers provide a wide range of goods and services to mining companies through all stages of exploration, development, operation, and remediation. Many suppliers offer specialized solutions aligned with the types of mining taking place in Saskatchewan, principally potash and uranium.

Currently, 65% of resource companies' spending on goods and services goes to Saskatchewan suppliers, amounting to \$5.6 billion.¹⁰ SIMSA represents over 200 mining supply and service companies in Saskatchewan, employing over 20,000 people in the province.

³ Statistics Canada. Table 36-10-0402-01 Gross domestic product (GDP) at basic prices, by industry, provinces and territories (x 1,000,000)

⁴ Mining Association of Canada Facts and Figures 2018

⁵ Fraser Institute Annual Survey of Mining Companies, 2018

⁶ Government of Saskatchewan, 2019.

⁷ Ibid.

⁸ Mining Association of Canada Facts and Figures 2018

⁹ Natural Resources Canada, 2018.

¹⁰ Statistics Canada Supply Use Tables 2015.

The economic footprint of local versus out of province suppliers

This section estimates the economic footprint of purchases by local suppliers, compared to purchases from out-of-province suppliers. For the purposes of this report, “local” suppliers refer to those with a physical location in Saskatchewan, and out-of-province suppliers refer to those without a physical location in Saskatchewan. We focus our analysis on mining and energy companies operating in Saskatchewan, which are the main customers of SIMSA’s members.

Spending on mining and energy supply and services in Saskatchewan

In order to assess the impact of local spending, it is first important to understand the spending patterns of mining and energy companies. Mining and energy operations engage in three main types of spending: direct employees, fuel and utilities, and purchases of goods and services. The first two categories, by definition, must occur locally at the mine site. Purchases of goods and services, however, may be made from local or out-of-province suppliers and these are the focus of our analysis. In Saskatchewan, 26% of spending is site specific (certain utilities and direct employees), while 74% is on goods and services.¹¹

Figure 3: Spending by Saskatchewan-based mining and energy companies



¹¹ Ibid.

Resource companies make decisions about purchases of goods and services based on a range of factors. In most cases, they have a choice about whether to purchase from local or out-of-province suppliers. Factors affecting their decision may include the ability to meet the required scale and specifications, price, quality, relationships, and service history.

The economic footprint of purchases by resource companies varies based on the characteristics of the individual good or service. For example, a piece of machinery purchased from out-of-province will have minimal economic footprint in Saskatchewan, while construction services such as scaffolding must be provided locally, even if the supplier is based out of province. Therefore, for the purpose of this analysis, we have separated resource project spending into three categories based on the requirement for local provision. These three categories are: goods, site services, and off-site services, and are described in the table below.

Table 1: Spending by resource companies, by category

	Goods	Site services	Off-site services
Description	Retail purchases of physical supplies	Services that by their nature must be provided at the site	Services that can be provided off-site, possibly with some on-site components
Examples	Machinery and equipment, chemicals, HVAC systems	Exploration, construction, maintenance, remediation	Engineering, financial services, insurance, consulting
Local provision requirement	Minimal	High	Moderate
Share of goods and services purchases¹²	58%	25%	17%
Share currently purchased locally¹³	61%	72%	66%

See **Appendix B: Local economic footprint analysis** for details on what is included in each category. As expected, the category with the highest local purchase share is site services, which makes 72% of its purchases locally, followed by off-site services at 66%, and goods at 61%.

The economic footprint of local vs. out of province suppliers

Based on the above classification of goods and services, we have estimated the average economic footprint of purchases from local suppliers and purchases from out of province suppliers. We have relied on interviews with industry participants to understand the economic footprint of both types of purchases (local and out of province). As noted previously, the impact of out of province purchases is not zero because some goods and services must be provided at the mine site, and therefore create economic footprint in Saskatchewan even if the supplier is based out of province.

We have calculated three sets of economic footprint figures: hypothetical impact if a resource company made 100% of its purchases from local suppliers “all local purchases,” hypothetical impact if a resource company made 100% of its purchases from out of province suppliers “all out of province purchases,” and the actual impact based on current local purchase shares in Saskatchewan (65%) “actual purchases.”

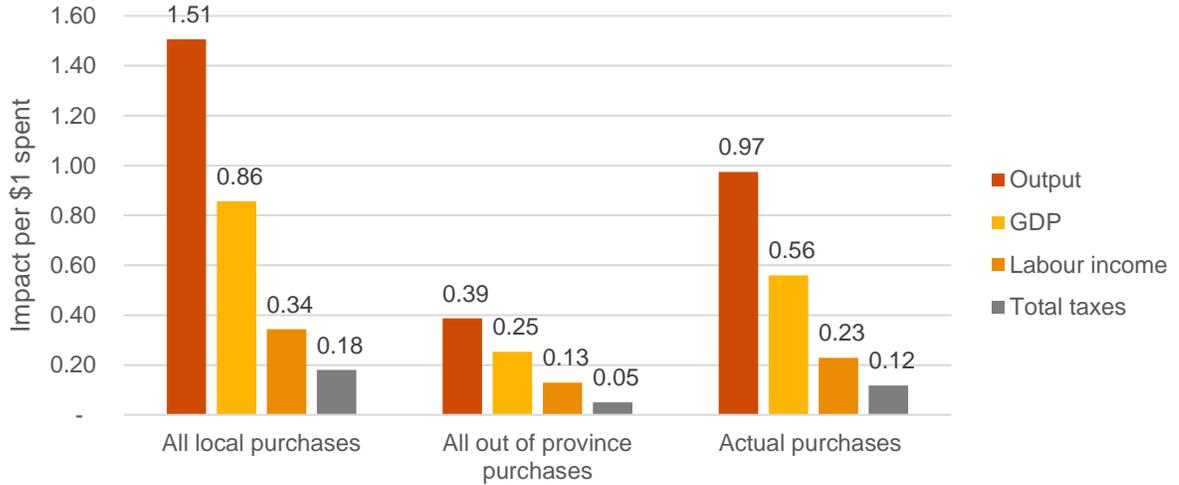
We used the input output methodology to calculate the figures below, which include direct, indirect, and induced impacts. Read more about this approach in **Economic footprint methodology** and

Appendix B: Local economic footprint analysis.

¹² Statistics Canada Supply Use Tables 2015 and PwC analysis.

¹³ Ibid

Figure 4: Total economic footprint per \$1 spent by a resource company



One dollar spent by a resource company on 100% local suppliers generates a total of \$1.51 in economic output, \$0.86, in GDP, \$0.34 in labour income, and \$0.18 in tax revenue in Saskatchewan. However, a dollar spent on 100% out of province suppliers generates only \$0.39 in output, \$0.25 in GDP, \$0.13 in labour income and \$0.05 in tax revenue in the province.

In terms of overall output, purchases from out of province suppliers have only 26% of the impact of purchases from in-province suppliers. If all resource companies in Saskatchewan switched to 100% local purchases, Saskatchewan GDP would increase by \$3.0 billion annually, and tax revenue would increase by \$544 million. However, we note that local purchasing is not feasible for all goods and services. For example, not all required inputs are available in Saskatchewan. Additionally, the development of several large-scale projects at once may lead to labour shortages. Given the scale of several projects currently planned in Saskatchewan, labour shortages may be a problem.

Factors affecting supply choices

Currently, resource companies in Saskatchewan make 65% of their purchases from Saskatchewan-based suppliers. When making sourcing decisions, similar to other companies, resource companies consider ability to meet requirements, price, and quality as key factors. However, in making procurement decisions, resource companies consider many other factors that are more specific to the nature of their business. Below we describe several of the factors considered in mining sourcing decisions, categorized by those that tend to support local purchases and those that tend to support out-of-province purchases for resource projects operating in Saskatchewan. We note that procurement decisions are not always made by resource companies, but sometimes by a contractor that is overseeing development, operations, or remediation activities on behalf of the resource company.

Reasons for using local suppliers

Below we list some of the specific factors considered by resource companies in their procurement decisions.

Table 2: Factors that favour local suppliers

Factor	Impact
Proximity to the client	<p>For goods, having warehouse facilities close to clients can reduce delays in shipping products, limiting disruptions to operations.</p> <p>For services such as construction, bringing teams from other provinces can be costly in terms of travel time and the need to provide local accommodation.</p> <p>Where local companies provide both goods and services, local service providers have the advantage of being familiar with the equipment.</p>
Specialization	Local suppliers are able to better customize their offerings to the needs of the local market (e.g. potash and uranium in Saskatchewan).
Relationships	Local suppliers are able to build closer relationships with their clients through in-person contacts, allowing them to better tailor their offerings. They also develop networks with other local suppliers.
Requirements for highway permits	Highway permits are required for out of province industrial vehicles, which according to industry participants, can be a significant barrier to entry.
Union rules	When suppliers work with certain unions, they are required to use local (in-province) union labour unless it is unavailable. This requires suppliers to hire more local labour, whether they are based in Saskatchewan or out of province.
Image and social license to operate	Although resource companies have a range of positions on the issue, many are conscious of their local image, and choose local suppliers in order to create economic benefits in Saskatchewan and maintain their social license to operate. Local suppliers provide follow-on effects through supply chain impacts and their own community engagement.

Reasons for using out of province suppliers

The table below lists some reasons why resource companies choose not to engage local suppliers.

Table 3: Factors that favour out of province suppliers

Factor	Impact
Availability of products	Some inputs required for resource companies are not produced in Saskatchewan.
Procurement preferences	Some large companies that operate in multiple jurisdictions prefer to use suppliers that can serve them at multiple locations.
Labour supply	Given the large scale of some projects in Saskatchewan, suppliers (either local or out of province) may encounter labour shortages and need to engage workers from out of the province.
Price	In some cases, price is the primary consideration for procurement, which leads to out of province purchasing if local suppliers are not providing the lowest price.

Saskatchewan-headquartered companies versus Saskatchewan branches

In the above analysis, we did not distinguish between companies that are headquartered in Saskatchewan and companies with a branch office in Saskatchewan. Based on our interviews with industry participants, many companies with branches in Saskatchewan deliver their products and services using 100% Saskatchewan labour, similar to Saskatchewan-headquartered companies. Others would sometimes outsource some share of the work to the company's head office. The choice to outsource is project-specific, and sometimes based on limitations in a company's ability to hire the labour needed locally.

Overall, companies with a branch office in Saskatchewan have a similar economic footprint to those headquartered in Saskatchewan, although in some cases their impact may be slightly lower. Therefore, we did not estimate impact separately based on the company's headquarters.

Saskatchewan companies serving out of province clients

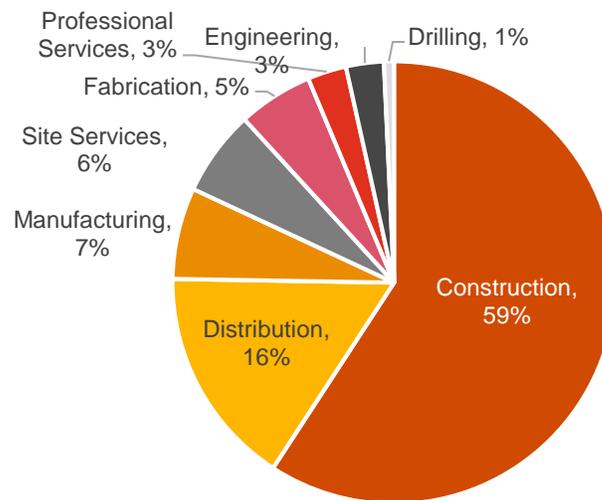
Saskatchewan suppliers also do a substantial amount of work with clients outside of Saskatchewan. 81% of SIMSA members surveyed say that they do work outside of Saskatchewan. These sales generate economic activity in Saskatchewan from resource projects based elsewhere. Every \$1 spent on Saskatchewan suppliers by out of province clients generates a total of \$1.12 in output, \$0.60 in GDP, \$0.21 in labour income, and \$0.13 in taxes including direct, indirect, and induced inputs. Every \$1 million spent generates a total of 3.8 jobs in Saskatchewan. To calculate these figures, we have assumed that Saskatchewan suppliers selling outside of Saskatchewan take the same approach as out of province suppliers serving clients in Saskatchewan, as described above.

The economic footprint of SIMSA's members

This section estimates the economic footprint of SIMSA's members. To estimate this footprint, we have relied on operational metrics reported by SIMSA's members through a survey. The result of this analysis is an estimate the footprint of the members' operations in Saskatchewan.

The following chart shows the breakdown of SIMSA members' reported revenue in Saskatchewan by sector.

Figure 5: Share of revenue by sector among SIMSA's members



Input output methodology

We estimated the economic footprint of SIMSA members using Statistics Canada's Input-Output multipliers. The multipliers allow us to estimate the relationship between SIMSA members' spending and the resulting footprint throughout the economy through multiplier effects, including demand for other goods and services and tax revenues.

The input to the Input-Output multipliers is operational metrics of SIMSA members. These metrics were collected through a survey conducted in 2018. The survey asked each member to assign a proportion of its total business to the sectors contained in the pie chart above. We allocated this spending to specific industry categories such as manufacturing, engineering, and construction, based on each member firm's activities. Refer to **Appendix B: Local economic footprint analysis** for details regarding specific industries that were directly impacted.

Through this analysis, we generated the following metrics:

- **Output** is the total gross value of all business revenue. This is the broadest measure of economic activity and indicates the total sales and transactions triggered by operations.
- **GDP** is the "value added" to the economy, i.e. the unduplicated total value of goods and services. GDP includes only final goods to avoid double counting of intermediate inputs.
- **Employment** is the number of jobs created. It is expressed as the number of equivalent full-time jobs, measured in person years.
- **Labour income** is the total gross value of wages and salaries associated with employment impacts.

- **Tax footprint** is the total revenue going to all levels of governments. It includes taxes on products i.e. trading profits, gas tax, sales taxes, and excise taxes; taxes on production at the federal, provincial and municipal levels; personal income taxes at the federal and provincial level; and corporate income tax.

The economic footprint assessment also captures the indirect and induced impacts associated with SIMSA members' activities. These categories are defined as:

- **Direct impacts** result from suppliers' spending on inputs and employees.
- **Indirect impacts** arise from the activities of the firms providing inputs to suppliers' suppliers.
- **Induced impacts** are the result of consumer spending by employees of the businesses stimulated by direct and indirect expenditures.
- The **total economic footprint** equals the sum of the direct, indirect, and induced economic footprints.

Economic footprint of SIMSA's members

Here, we estimate the economic impact of SIMSA's members based on their activities in Saskatchewan, and based on their global activities. The estimated economic footprint of SIMSA'S members' activities in in Saskatchewan is summarized in the following table.

Table 4: Economic footprint of SIMSA's members, based on Saskatchewan sales in 2018

\$ million except for employment					
Measure of economic activity	Output	GDP	Jobs (FTE)	Labour income	Total taxes
Direct impact	3,920	2,071	11,980	870	529
Indirect impact	1,038	557	3,625	212	116
Induced impact	733	480	3,022	127	100
Total impact	5,691	3,108	18,626	1,209	745

Source: PwC analysis

In total, SIMSA members support \$5.7 billion to output, \$3.1 billion to Saskatchewan's GDP, 18,626 jobs, \$1.2 billion in labour income and \$745 million in total tax revenue, based on their activities in Saskatchewan.

Below, we present estimates of SIMSA members' economic footprint based on their global sales of \$10.4 billion in 2018.

Table 5: Economic footprint of SIMSA's members, based on global sales in 2018

\$ million except for employment					
Measure of economic activity	Output	GDP	Jobs (FTE)	Labour income	Total taxes
Direct impact	10,421	5,507	20,990	1,524	1,407
Indirect impact	2,759	1,480	6,352	371	308
Induced impact	1,950	1,276	3,022	223	266
Total impact	15,130	8,263	30,363	2,118	1,981

Source: PwC analysis

Based on their global sales, SIMSA members support \$15.1 billion to output, \$8.3 billion to Saskatchewan's GDP, 30,363 jobs, \$2.1 billion in labour income and \$2.0 billion in total tax revenue.

Summary of findings

We estimated the economic impact of SIMSA's members in Saskatchewan using survey data on operational metrics collected in 2018. In 2018, SIMSA's members generated revenue of \$3.9 billion. Their business activities generated a total economic footprint of \$5.6 billion in output, \$3.1 billion in GDP, \$1.8 billion in labour income, approximately 18,600 jobs, and \$745 million in taxes.

We estimated the economic impact of Saskatchewan resource companies making purchases from local suppliers compared to purchases from out of province suppliers. Local purchases generate substantially higher economic benefits in Saskatchewan compared to out of province purchases. One dollar spent on local suppliers generates \$1.51 in total economic output, compared to \$0.39 for a dollar spent on out of province suppliers. For purchases from out of province suppliers, some economic footprint still takes place in Saskatchewan due to the need for some goods and services to be provided at the site, and therefore in Saskatchewan. The local impacts are highest for site services, which must be provided largely locally. Off-site services such as engineering would also have some local component even if the bulk of the work is done elsewhere. Purchases of goods from out of the province may have minimal impact in Saskatchewan.

Currently, resource companies make 65% of their purchases from local suppliers. If this share increased to 100%, Saskatchewan's GDP would increase by \$3.0 billion annually and tax revenue would increase by \$544 million. However, resource companies have various reasons for making out of province purchases. For example, some goods are not available in Saskatchewan and must be purchased from outside the province. In some cases, prices may be higher for local suppliers. An assessment of whether it would be feasible for resource companies to increase their local supply quotient or how this would affect their competitiveness is outside of the scope of this study.

Appendix A: Bibliography

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Statistics Canada. Table 36-10-0402-01 Gross domestic product (GDP) at basic prices, by industry, provinces and territories (x 1,000,000)

Appendix B: Economic footprint analysis

Input output methodology

The fundamental philosophy behind economic footprint analysis is that spending on goods and services has attendant impacts throughout the economy. For instance, developing a new mine site will generate demand for the inputs to this process (including labour) that in turn generates additional demand that extends beyond the initial spending. Our analysis permits the estimation of this cascading effect by using the multipliers calculated by Statistics Canada based on its input-output model of the Canadian and provincial economies.

The input-output model used for the purpose of this report estimates the relationship between a particular economic activity for a given good or service and the resulting impacts throughout the economy (including demand for other goods and services and tax revenues). For the purpose of this report, economic footprints were estimated for the following measures of economic activity:

- **Output** is the total gross value of all business revenue. This is the broadest measure of economic activity and indicates the total sales and transactions triggered by operations.
- **GDP** is the “value added” to the economy, i.e. the unduplicated total value of goods and services. GDP includes only final goods to avoid double counting of intermediate inputs.
- **Employment** is the number of jobs created. It is expressed as the number of equivalent full-time jobs, measured in person years.
- **Labour income** is the total gross value of wages and salaries associated with employment impacts.
- **Tax footprint** is the total revenue going to all levels of governments. It includes taxes on products i.e. trading profits, gas tax, sales taxes, and excise taxes; taxes on production at the federal, provincial and municipal levels; personal income taxes at the federal and provincial level; and corporate income tax.

Economic footprints are typically estimated at the direct, indirect and induced levels:

- **Direct impacts** result from suppliers’ spending on inputs and employees.
- **Indirect impacts** arise from the activities of the firms providing inputs to suppliers’ suppliers.
- **Induced impacts** are the result of consumer spending by employees of the businesses stimulated by direct and indirect expenditures.
- The **total economic footprint** equals the sum of the direct, indirect, and induced economic footprints.

Tax footprint calculations

Our estimate of tax footprint includes the following taxes.

Taxes on production are taxes that are paid by business and non-business entities, including persons, that are not linked to any productive activity.¹⁴ Indirect taxes on production are levied by all three levels of government. Examples of federal taxes include capital taxes levied against corporate entities, Canada Deposit Insurance Corporation premiums, and Canadian Dairy Commission levies. Provincial taxes include (personal and commercial) motor vehicle license fees, land transfer taxes, and capital taxes. Local taxes include real property taxes, developers lot levies, and deed transfer taxes. The taxes on production was calculated in the input-output model from Statistics Canada.

Taxes on products are the sum of taxes levied on goods and services beyond the producers’ price valuation level. They are paid by business and non-business industries on their current purchases and by final users such as households on all their expenditures. Examples include the Goods and Services Tax (GST), the Harmonized Sales Tax (HST), provincial sales taxes, federal excise taxes, import duties, and fuel taxes. The taxes on products were calculated in the input-output model from Statistics Canada.

¹⁴ For more details on these definitions, see <https://www.statcan.gc.ca/eng/nea/gloss/ia>

Corporate income tax was calculated by applying the federal and provincial corporate income tax rates to profit, which was calculated by using the share of profit and the gross operating surplus estimated in the input-output model.

Personal income tax was calculated by multiplying total labour income by average personal income tax paid as a share of total labour income in Saskatchewan.¹⁵

Approach to estimating economic footprint

Below, we describe the steps taken in order to estimate the economic footprint per dollar spent on local suppliers compared to out of province suppliers.

1. **Identified spending patterns** by Saskatchewan resource companies on different types of goods and services, using Statistics Canada’s Supply Use Tables.
2. **Classified each type of good and service** spending into one of three categories: construction, manufacturing, and professional services.
3. For each category (construction, manufacturing, and professional services), **estimated the “local quotient”** i.e. the portion of the work that would typically be done in Saskatchewan (e.g. for construction services that must be provided at the site level). These local quotients are presented below.
4. **Estimated the economic footprint of both local and out of province suppliers**, using Statistics Canada’s Input Output Tables. For out of province suppliers, impacts were scaled by the local quotients estimated in Step 3.
5. **Estimated the tax footprint of local and out of province suppliers** using additional tax data.

Below we present the local quotients used in our analysis. These represent the typical share of work that is done in Saskatchewan when an out of province supplier is engaged. We estimated these quotients based on interviews with industry participants, who provided information on the nature of the work and how they resourced work for out of province clients.

Table 6: Local quotients used in economic footprint analysis

Category	Local quotient	Notes
Construction	80%	Construction services must be provided at the site level, but in some cases crews may drive in from out of province, limiting employee spending impacts
Manufacturing	5%	This local share reflects the fact that goods, machinery, and equipment must be delivered locally, creating some economic footprint.
Professional services	20%	Professional services can be largely outsourced, but for some services (particularly engineering), some work must be done at the site to gather information and specifications.

We note that the Input-Output tables used to estimate economic footprints reflect the actual supply chains of the resource industry in Saskatchewan. Therefore if some inputs (e.g. steel) are rarely supplied in Saskatchewan, the economic footprints of both local and out of province purchases reflect this.

Details on the estimation of economic footprint of SIMSA’s members

Through a survey conducted by SIMSA in 2018, SIMSA members identified themselves as part of particular industries. We used this data to allocate revenue to the industries used in input output analysis. The following table shows the mapping between the sectors to which SIMSA’s members allocated their Saskatchewan-based revenues and the input-output industries, which were used to estimate direct, indirect and induced footprint associated with SIMSA’s members operations in the province. It also shows the revenue by industry that was used as an input to the input-output assessment.

¹⁵ Statistics Canada. Table 36-10-0224-01 Household sector, current accounts, provincial and territorial, annual

Table 7: Revenue of SIMSA members, 2018

Reported Industry	Input-Output Industry	Annual Revenue in Saskatchewan (\$M)
Manufacturing	Manufacturing	\$183
Fabrication	Forging and stamping	\$150
Engineering	Engineering construction	\$76
Distribution	Machinery, equipment and supplies wholesaler-distributors	\$441
Professional Services	Professional, scientific and technical services	\$78
Construction	Non-residential building construction	\$1,624
Site Services and Drilling	Support activities for mining	\$192
	Total	\$2,744

Appendix C: Detailed economic footprint results

This section provides detailed economic footprint results for our analysis of local vs. out of province suppliers.

Actual economic footprint of resource company purchases

Below we present the economic footprint of purchases by resource companies in Saskatchewan.

Table 8: Economic footprint of purchases by resource companies in Saskatchewan

\$ million except for employment					
Measure of economic activity	Output	GDP	Jobs (FTE)	Labour income	Total taxes
Direct impact	5,605	3,210	26,258	1,325	582
Indirect impact	1,919	1,037	8,176	446	194
Induced impact	906	590	5,365	206	224
Total impact	8,428	4,836	39,799	1,975	1,014

Source: PwC analysis

Table 9: Economic footprint of purchases by resource companies in Saskatchewan, per dollar spent

Impact per dollar spent except for employment					
Measure of economic activity	Output	GDP	Jobs (per \$1 million spent)	Labour income	Total taxes
Direct impact	0.65	0.37	3.04	0.15	0.07
Indirect impact	0.22	0.12	0.95	0.05	0.02
Induced impact	0.10	0.07	0.62	0.02	0.03
Total impact	0.97	0.56	4.60	0.23	0.12

Source: PwC analysis

All local purchases

Below we present the theoretical economic footprint if Saskatchewan resource companies made 100% of purchases from local suppliers.

Table 10: Economic footprint of purchases by Saskatchewan resource companies using 100% local supply

\$ million except for employment					
Measure of economic activity	Output	GDP	Jobs (FTE)	Labour income	Total taxes
Direct impact	8,652	4,895	38,228	1,971	841
Indirect impact	3,012	1,624	12,631	691	304
Induced impact	1,365	888	8,076	310	349
Total impact	13,024	7,407	58,995	2,970	1,557

Source: PwC analysis

Table 11: Economic footprint of purchases by Saskatchewan resource companies using 100% local supply, per dollar spent

Impact per dollar spent except for employment					
Measure of economic activity	Output	GDP	Jobs (per \$1 million spent)	Labour income	Total taxes
Direct impact	1.00	0.57	4.43	0.23	0.10
Indirect impact	0.35	0.19	1.46	0.08	0.04
Induced impact	0.16	0.10	0.98	0.04	0.04
Total impact	1.51	0.86	6.82	0.34	0.18

Source: PwC analysis

All out of province purchases

Below we present the theoretical economic footprint if Saskatchewan resource companies made 100% of purchases from out of province suppliers.

Table 12: Economic footprint of purchases by Saskatchewan resource companies using 100% out of province supply

\$ million except for employment					
Measure of economic activity	Output	GDP	Jobs (FTE)	Labour income	Total taxes
Direct impact	2,276	1,546	19,874	842	283
Indirect impact	568	318	3,128	161	62
Induced impact	506	330	3,003	116	77
Total impact	3,350	2,194	26,005	1,118	435

Source: PwC analysis

Table 13: Economic footprint of purchases by Saskatchewan resource companies using 100% out of province supply, per dollar spent

Footprint per dollar spent except for employment					
Measure of economic activity	Output	GDP	Jobs (per \$1 million spent)	Labour income	Total taxes
Direct impact	0.26	0.18	2.30	0.10	0.03
Indirect impact	0.07	0.04	0.36	0.02	0.01
Induced impact	0.06	0.04	0.35	0.01	0.01
Total impact	0.39	0.25	3.01	0.13	0.05

Source: PwC analysis

Economic footprint “divider”

Below we present the “dividers” for economic footprint, i.e. the economic footprint of local purchases divided by the economic footprint of out of province purchases.

Table 14: Economic “dividers” for resource company purchases

Divider ratio					
Measure of economic activity	Output	GDP	Jobs (FTE)	Labour income	Total taxes
Direct impact	0.26	0.32	0.52	0.43	0.32
Indirect impact	0.19	0.20	0.25	0.23	0.21
Induced impact	0.37	0.37	0.37	0.37	0.22
Total impact	0.26	0.30	0.44	0.37	0.28

Source: PwC analysis

Saskatchewan companies serving out of province clients

The table below shows the economic footprint in Saskatchewan per \$1 spent on Saskatchewan suppliers by resource companies outside of Saskatchewan.

Table 15: Economic footprint of purchases by Saskatchewan resource companies using 100% out of province supply, per dollar spent

Footprint per dollar spent except for employment					
Measure of economic activity	Output	GDP	Jobs (per \$1 million spent)	Labour income	Total taxes
Direct impact	0.74	0.39	2.13	0.13	0.07
Indirect impact	0.28	0.15	1.10	0.06	0.03
Induced impact	0.10	0.06	0.59	0.02	0.03
Total impact	1.12	0.60	3.81	0.21	0.13

Source: PwC analysis

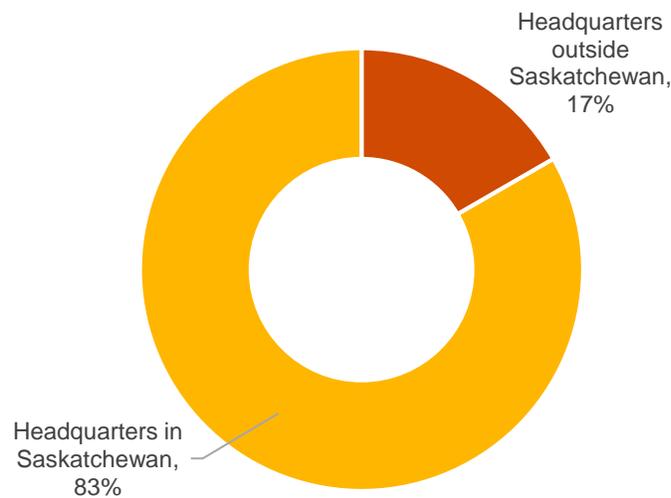
Appendix D: Survey results

This appendix presents the findings of a survey that was conducted in July and August of 2019. In total, there were 62 responses from companies representing a total of \$1.4 billion of business in Saskatchewan, and 7,447 employees. Where relevant, we have extrapolated our findings to reflect SIMSA's full membership. To do this, we have relied on a 2018 survey conducted by SIMSA.

Background on SIMSA members

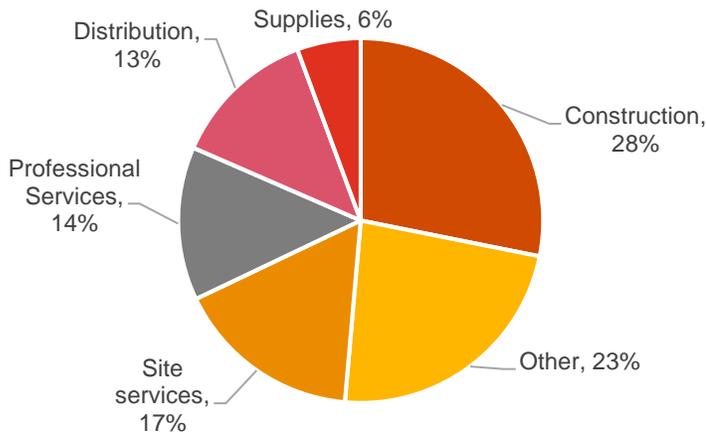
The majority of SIMSA member (83%) have their headquarters in Saskatchewan, compared to 17% who have their headquarters elsewhere.

Figure 6: SIMSA members by location of headquarters



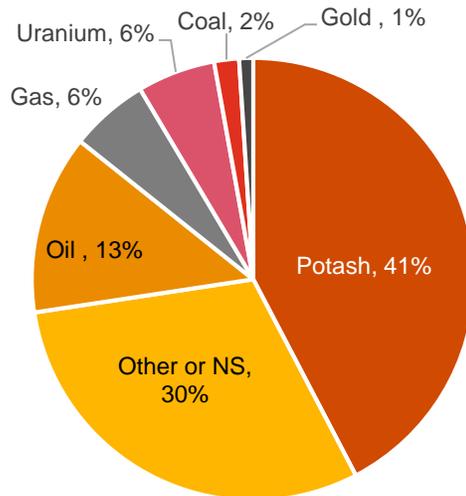
SIMSA members provide a wide range of goods and services to clients in mining and energy. The largest share is accounted for by construction (28%) followed by other (23%), site services (17%), professional services (14%), distribution (13%), and supplies (6%), as shown in [Figure 7](#). The “other” category includes repair services, laboratory services, and corporate housing.

Figure 7: SIMSA members' activities



The main sector served by SIMSA members is potash (41%) followed by other or not specified (30%), oil (13%), gas (6%), uranium (6%), coal (2%) and gold (1%). Sectors under "other" include energy, agriculture, base metals, and steel production.

Figure 8: SIMSA members' activities by resource sector



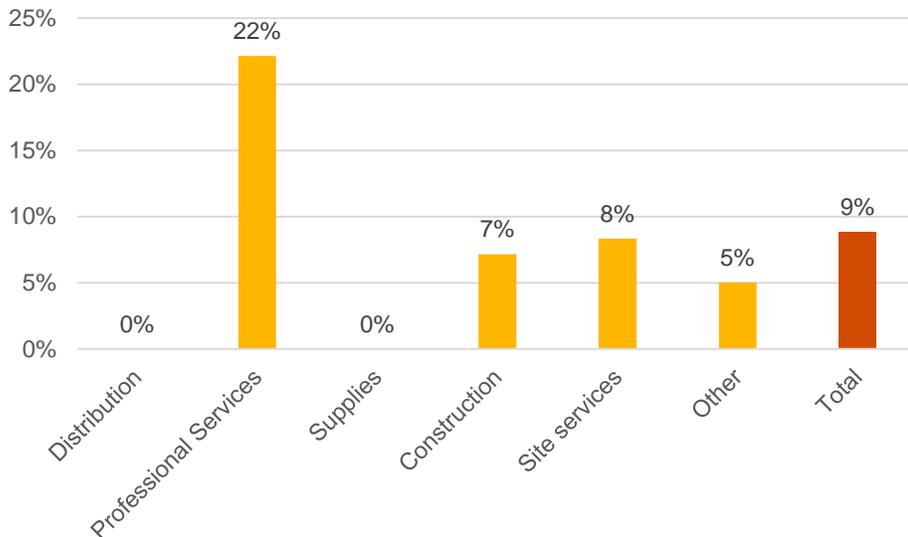
Employee demographics

This section describes the profile of SIMSA members' employees with respect to hours, gender, indigenous representation, and age. In total, 7,447 employees are represented through our survey.

The majority of SIMSA employees (91%) are working full-time, compared to 9% that are part time, as shown in

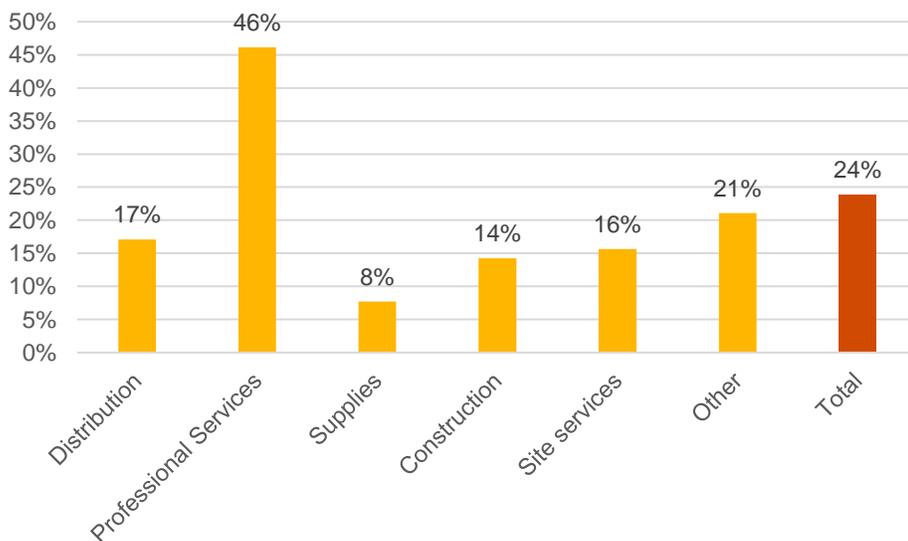
Figure 9. The sector with the highest share of part-time employees is professional services, at 22%.

Figure 9: Part time share of SIMSA members' employees



The majority of the workforce is male: women make up 24% of SIMSA members' employees. The sector with the highest female representation is professional services at 46%, and the sector with the lowest share is supplies, at 8%.

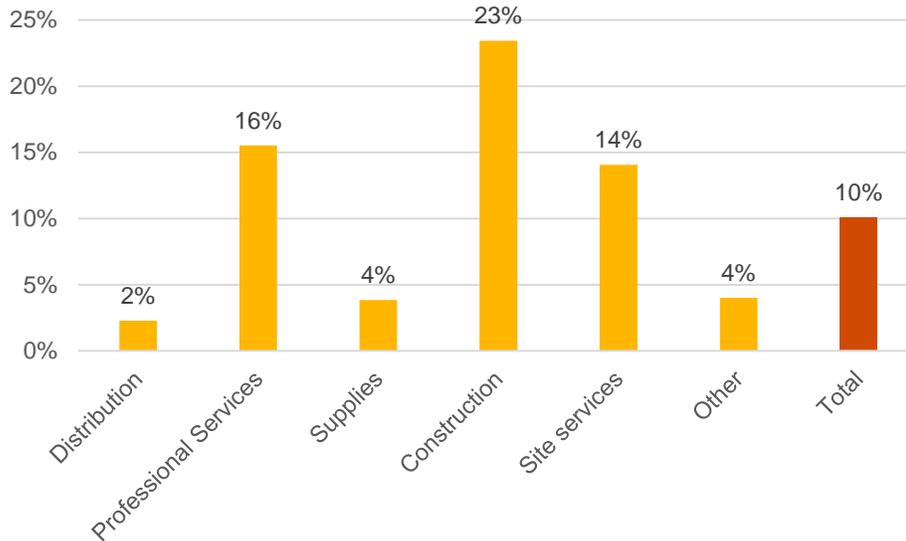
Figure 10: Female share of SIMSA members' employees



Indigenous employees make up 10% of SIMSA members' employees, as shown in

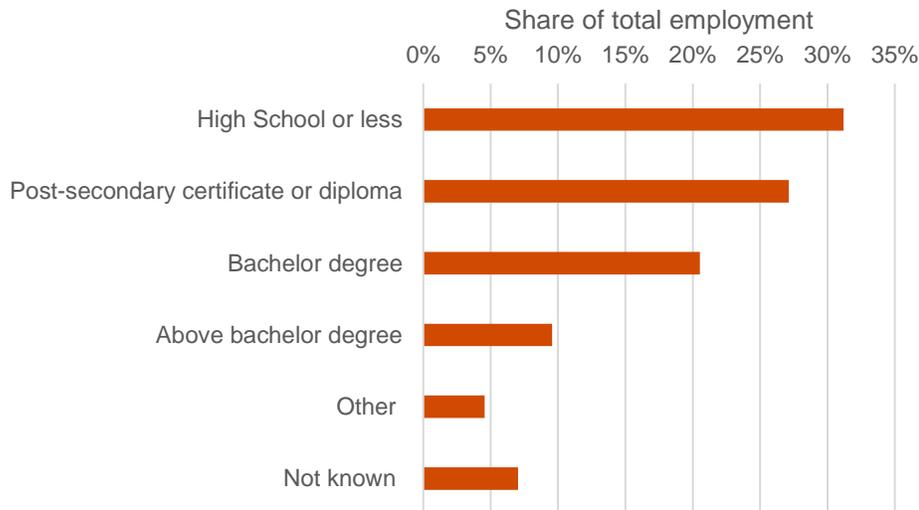
Figure 11. This figure is close to Saskatchewan's provincial average of 11% of total employment.¹⁶ The sector with the highest Indigenous representation is construction (23%) followed by professional services (16%) and site services (14%).

Figure 11: Indigenous share of SIMSA members' employees



The most common educational attainment of SIMSA members' employees is high school diploma or less (31% of employees). 27% have a post-secondary certificate or diploma, while 21% have a bachelor degree, and 10% have above a bachelor degree. The "other" category is largely made up of trade certifications.

Figure 12: SIMSA members' employees by education, % of total



¹⁶ Statistics Canada. 2018. Aboriginal Population Profile. 2016 Census. Statistics Canada Catalogue no. 98-510-X2016001. Ottawa. Released July 18, 2018.

Spending within Saskatchewan

We asked survey respondents to estimate their spending on SaskPower, as well as charitable spending in Saskatchewan. We extrapolated these figures to estimate total spending by all SIMSA members. Using this approach, we estimate total annual spending on SaskPower at \$20.4 million and total annual spending on charity at \$4.2 million, for all SIMSA members. The total revenue represented in the survey is \$1.4 billion in Saskatchewan-based revenue.

Appendix E: Limitations

Receipt of new data or facts: PwC reserves the right at its discretion to withdraw or make revisions to this report should we receive additional data or be made aware of facts existing at the date of the report that were not known to us when we prepared this report. The findings are as of August 2019 and PwC is under no obligation to advise any person of any change or matter brought to its attention after such date, which would affect our findings.

Input-output analysis: Input-output analysis (a model used to estimate Gross Domestic Product (“GDP”) and employment impact) does not address whether the inputs have been used in the most productive manner or whether the use of these inputs in this industry promotes economic growth by more than their use in another industry or economic activity. Nor does input-output analysis evaluate whether these inputs might be employed elsewhere in the economy if they were not employed in this industry at the time of the analysis. Input-output analysis calculates the direct, indirect and induced economic impacts that can reasonably be expected to affect the economy based on historical relationships within the economy. This analysis does not take into account fundamental shifts in the relationships within the economy that may have taken place since the estimation of multipliers by Statistics Canada, nor shifts that may take place in the future.

Use limitations: This report has been prepared solely for the use and benefit of, and pursuant to a client relationship exclusively with SIMSA. We understand that SIMSA may share our report with third parties. SIMSA may release this report to third parties only in its entirety and any commentary or interpretation in relation to this report that SIMSA intends to release to the public either requires PwC’s written consent or has to be clearly identified as SIMSA’s own interpretation of the report. PwC accepts no duty of care, obligation or liability, if any, suffered by SIMSA or any third party as a result of an interpretation made by SIMSA of this report.

Further, no other person or entity shall place any reliance upon the accuracy or completeness of the statements made herein. In no event shall PwC have any liability for damages, costs or losses suffered by reason of any reliance upon the contents of this report by any person other than SIMSA.

This report and related analysis must be considered as a whole: Selecting only portions of the analysis or the factors considered by us, without considering all factors and analysis together, could create a misleading view of our findings. The preparation of our analysis is a complex process and is not necessarily susceptible to partial analysis or summary description. Any attempt to do so could lead to undue emphasis on any particular factor or analysis.



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