



Web-Based Survey

Contents*

List of Tables.....	1
List of Figures.....	2
Introduction.....	3
Survey Questionnaire.....	3
Sampling Methods.....	4
Study Population.....	4
Sampling Procedures.....	5
Data Analysis Method.....	5
Data Screening.....	5
Web-Based Survey Statistics.....	6
Geographic Characteristics of Web Survey Respondent Communities.....	7
Demographic Characteristics of Web Survey Communities.....	8
Web-based Survey Representativeness.....	12
Community Needs.....	12
Business Capacity.....	20
Social Capacity.....	21
Knowledge of Co-operatives.....	24
Further Analysis.....	26
Conclusion.....	30
Endnotes.....	32

List of Tables

Table 1 Numbers of CSDs and combined CSDs in study area, 2011.....	4
Table 2 A breakdown of web survey participants, by community (with population in 2011) 6	

* Reference: Co-operative Innovation Project (January 2016), *Web-Based Survey*. Part of Co-operative Innovation Project Final Report. Centre for the Study of Co-operatives, University of Saskatchewan.



Table 3 Number of Communities covered in the study (and Margins of Error [MOE] at 95% confidence interval, based on 354 respondents)	6
Table 4 Distance to nearest urban centre (km)	7
Table 5 A comparison in population between sampled communities and the study area (n=356).....	8
Table 6 A comparison in population change from 2006-2011 (%)(n=356).....	8
Table 7 Population density in 2011 (persons/km2)	9
Table 8 A comparison in age structure (n=356).....	9
Table 9 Prevalence of low-income in 2011.....	10
Table 10 Education achievement.....	10
Table 11 A comparison of labour force (n=356)	11
Table 12 Western Canada, Top 15 Community Needs, Overall, Rural and Aboriginal (n=354)	12
Table 13 Manitoba, Top 15 needs, Overall, Rural and Aboriginal.....	14
Table 14 Saskatchewan, Top 15 Needs, Overall, Rural and Aboriginal.....	15
Table 15 Alberta, Top 15 Community Needs, Overall, Rural and Aboriginal	16
Table 16 British Columbia, Top 15 Needs, Overall, Rural and Aboriginal	17
Table 17 Strength of need, Aboriginal versus rural communities, British Columbia and western Canada (n=354).....	19
Table 18 Percentage of administrators who answered that a particular service was not provided in their communities: Manitoba, Saskatchewan and western Canada (n=354)	19
Table 19 Percentage of administrators who answered that a particular service was not provided in their communities: British Columbia and Alberta (n=354)	20

List of Figures

Figure 1 Communities represented in web-based survey. Blue stars = rural; red balloons = Aboriginal communities.....	7
Figure 2 Variables related to business capacity, western Canada, rural and Aboriginal.....	21
Figure 3 Variables related to willingness to work together.	22
Figure 4 Safety and security variables: fewer incidents of property crime and violent crime, rural and Aboriginal communities.	23
Figure 5 Perceived changes in demographic similarities	24
Figure 6 Percentage of administrators who answered either " No" or "Don't Know" to the question: "Do you know what a co-operative is?"	25
Figure 7 Percentage of administrators who answered either "No" or "Don't Know" to the question, "How many new co-operatives have started in the last 5 years in your community?"	25
Figure 8 Need for basic services vs. business capacity, willingness to work together, and sense of safety and security.....	28
Figure 9 Quality of life, vs. basic need, business capacity, willingness to work together, and sense of safety and security.....	30



Introduction

From January-June 2015, the Co-operative Innovation Project (CIP) conducted two surveys in rural and Aboriginal[†] communities across the four western provinces: Manitoba, Saskatchewan, Alberta and British Columbia. The first survey was a telephone survey, conducted from January 8-March 15, 2015, targeting community members living in the study area. The second survey was a web-based survey, conducted from January-June 2015, targeting community administrators (e.g., mayor, chief, community administrative officers).

Both surveys aimed to: (1) develop a good understanding of the current status of rural and Aboriginal communities in western Canada across four dimensions: community needs, business capacity, social capacity, and knowledge of co-operatives; (2) reveal associations among needs and business and social capacities; (3) identify the similarities and differences between Aboriginal and rural communities; (4) capture the similarities and differences across the four western provinces; and (5) see if there was a difference in the perceptions/responses between citizens and community administrators.

The two surveys were administrated through the University of Saskatchewan Social Sciences Research Laboratories, Survey and Group Analysis Laboratory. This chapter reports on the methodology and results of the web-based survey. The previous chapter reports on the methodology and results of the telephone survey, while a third chapter in this section provides some discussion and considerations drawn from the two surveys. It should be noted that there is ample opportunity for more data analysis on our raw data; if interested, please contact the Centre for the Study of Co-operatives at the University of Saskatchewan.

Survey Questionnaire

On the basis of the design of the telephone survey questionnaire, the CIP team created the web survey questionnaire (for an overview of the telephone survey, please see the previous chapter). In the web survey questionnaire, the same form was retained for almost all of the questions about community need, business capacity and knowledge of co-operatives.

The web-based questionnaire lists 16 services and programs, and asks respondents to rate them individually on a scale of poor, fair, good, and excellent. Our survey asked respondents to rate the quality of local programs and services, as a way to capture a comparative

[†] The Co-operative Innovation Project uses the term “Aboriginal” to denote Canada’s First Nations, Métis, and Inuit communities. This usage reflects contemporary census and other documentation which provide source citations throughout this project. We honour and respect the identities of each of Canada’s communities.



analysis of local need. From these results, we inferred that a poor rating represented a higher need, and a higher rating represented a lower need. The results compare well to the needs expressed during community meetings. (For an overview, please see the chapters Community Needs and Community Capacity in our final report).

In terms of the questions on social capacity, the web survey retained those that were deemed suitable for administrators to answer. A few additional questions were added where community administrators were believed to be possibly more reliable respondents than community residents (e.g., administrators would know such information as the turnout rates at local elections). In addition, administrators were also asked on the web-based survey to assess the overall need and social capacity of their communities. All demographic questions were dropped from the web survey of administrators. See the Appendix for a copy of the web survey questionnaire.

The web survey questionnaire was pretested with only minor changes made to the wording of a few questions.

Sampling Methods

Study Population

The web survey targeted administrators of rural and Aboriginal census subdivisions (CSDs) in CSDs with positive population reported by Statistics Canada in 2011. In 2011, there were 1,731 such CSDs; of these, 28% were Aboriginal (see Table 1). A rural community usually contains one CSD only (e.g., a town, a village, etc.), but an Aboriginal community may contain more than one CSD. Therefore, we combined these multiple CSDs into one single combined CSD, resulting in 1,559 combined CSDs.¹

Table 1 Numbers of CSDs and combined CSDs in study area, 2011

CSD Type		Manitoba	Saskatchewan	Alberta	British Columbia	Total
CSD	Rural	171	665	229	179	1244
	Aboriginal	72	112	59	244	487
	Sum	243	777	288	423	1731
	% Of Aboriginal CSDs	30	14	20	58	28
COMBINED CSD	Rural	171	665	229	179	1244
	Aboriginal	62	66	38	149	315
	Sum	233	731	267	328	1559
	% Of Aboriginal CSDs	27	9	14	45	20

Source: Tabulated based on Statistics Canada's Geographic Attribute File 2011 and 2011 Census of Population.



Sampling Procedures

To encourage the participation of target administrators, a three-stage recruitment procedure was used.

Stage 1: Invitation. At the end of January 2015, a personally addressed e-mail was sent out to each administrator in our study area, inviting him/her to participate in the web survey. E-mails for town and band administrators were collected manually through searches of community websites.

A unique URL and instructions of how to access the site that hosted the questionnaires were contained in the message. In the e-mail, administrators were assured that the data they provided would remain confidential and would be used only for the purpose described in the e-mail.

Stage 2: Reminders. At the end of March, the survey database was checked to determine if administrators had responded. A personalized reminder e-mail message was then sent to those who either had not responded or had started but hadn't completed the survey. After the initial invitation e-mails with the survey link were sent out, a number of e-mails bounced back as undeliverable. In communities where additional responses were required to achieve the targeted coverage, further attempts to find the correct e-mails were made by checking for typos in the e-mails, and locating alternate e-mails by using publically accessible government databases, community and regional websites, and local newspapers. Bounced e-mails that were the result of typos were taken care of by sending a new invitation e-mail to the corrected e-mail accounts.

Stage 3: Intensive Follow-up. Three weeks after the reminder e-mail was sent, the survey database was checked again. The total number and composition of respondents were checked to determine whether it was necessary to collect more respondents for a particular province or community type. Two lists of administrators were randomly generated from those who hadn't responded or hadn't completed the questionnaire: one for rural CSDs and the other for Aboriginal CSDs. Phone calls were made to check if these administrators had received the e-mail and asked if they were willing to participate. Data collection was completed by June 20, 2015.

Data Analysis Method

Data Screening

In total, 359 community administrators completed the online web survey. To calculate the response rate, respondents were placed in 361 rural and Aboriginal communities (combined CSDs) (one was removed because the CSD had zero population according to Statistics Canada in 2011). Table 2 presents the breakdown of the respondents. The number



of communities for which we have responses is about 23% of our study population, slightly higher than the CIP team’s target of 20%.²

An investigation of the response rate in individual provinces revealed that it varied greatly from 16.5% in British Columbia to 27.8% in Saskatchewan. Moreover, Aboriginal communities were underrepresented in the sample, despite additional efforts devoted to obtaining more Aboriginal responses in the second and third rounds of data collection. In particular, in Alberta, only 1 out of 38 Aboriginal communities participated in the survey. Caution is therefore necessary when generalizing results from this survey. Moreover, we cannot reliably report results broken down by both community type (rural and Aboriginal) and province, as was the case with the telephone survey.

Table 2 A breakdown of web survey participants, by community (with population in 2011)

Community Type	Indicator	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Rural	Number Of Responses	35	193	62	29	319
	Number Of Communities	171	665	229	179	1244
	Response Rate (%)	20.47	29.02	27.07	16.20	25.64
Aboriginal	Number Of Responses	5	10	1	25	41
	Number Of Communities	62	66	38	149	315
	Response Rate (%)	8.06	15.15	2.63	16.78	13.02
Sum	Number Of Responses	40	203	63	54	360
	Number Of Communities	233	731	267	328	1559
	Response Rate (%)	17.17	27.77	23.60	16.46	23.09

Source: Tabulated based on Statistic Canada’s Census of Population 2011 and Geographic Attribute File 2011.

Note: In total, there were 11 Aboriginal administrative respondents in Saskatchewan; however, 1 was placed in a community for which Statistics Canada reported a population of zero in 2011, and thus was not included in the table.

Not all respondents answered all of the questions. Similar to the treatment of the telephone survey responses, we dropped 5 web survey respondents who did not answer more than 8 key questions. The margin of error is reported in Table 3. The analysis was thus based on the responses of 354 respondents who covered 356 communities (combined CSDs) in total.

Table 3 Number of Communities covered in the study (and Margins of Error [MOE] at 95% confidence interval, based on 354 respondents)

Community Type	Manitoba	Saskatchewan	Alberta	British Columbia	Western Canada
Rural	34	190	62	28	314
Aboriginal	5	10	1	25	41
Overall	39	200	63	53	355
MOE	14.35%	5.91%	10.91%	12.34%	4.57%

Source: Web survey 2015. Note: In total, there were 11 Aboriginal administrative respondents in Saskatchewan; however, 1 was placed in a community for which Statistics Canada reported a population of zero in 2011, and thus was not included in the table.

Web-Based Survey Statistics



Geographic Characteristics of Web Survey Respondent Communities

The 354 respondents were placed in 356 communities, of which 314 were from rural communities and 42 were from Aboriginal communities. Figure 1 maps their geographic locations. Similar to the telephone survey respondents, web survey respondents were heavily concentrated in the populated southern part in each province.³

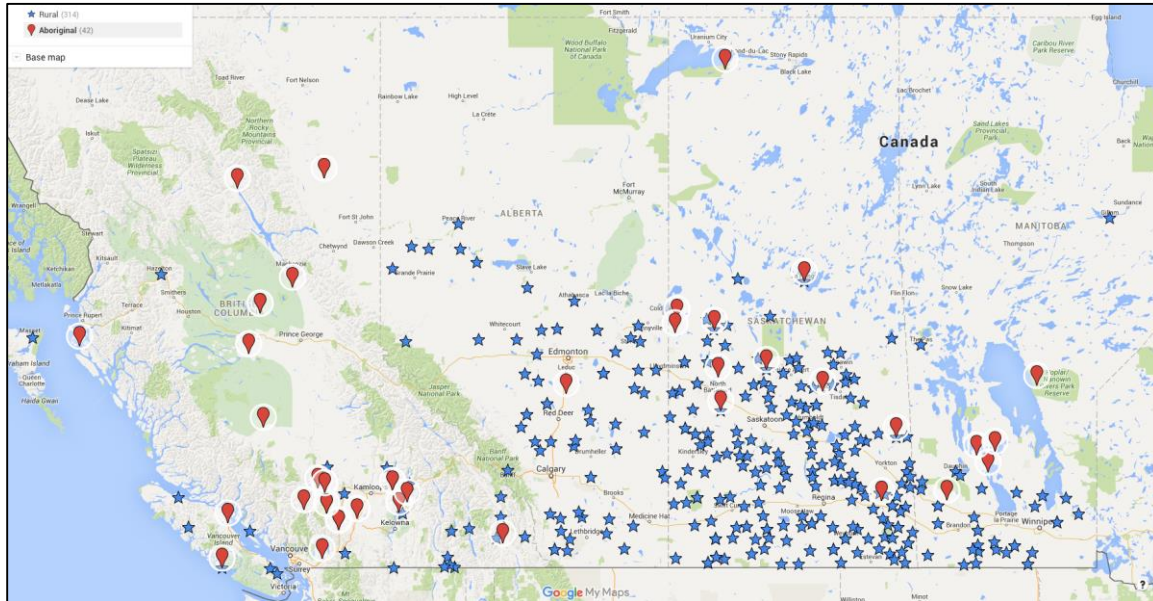


Figure 1 Communities represented in web-based survey. Blue stars = rural; red balloons = Aboriginal communities

Distance

As shown in the Table 4, the distance of the surveyed communities to the nearest Census Metropolitan Area (CMA) ranges from 43 km to 1,728 km, with a median distance of 200 km; the distance to the nearest Census Agglomeration ranges from 14 km to 472 km, with a median distance of 115 km. Overall, the surveyed communities are representative in terms of their distance to urban centers.

Table 4 Distance to nearest urban centre (km)

Item	Indicator	Manitoba	Saskatchewan	Alberta	British Columbia	Western Canada					
		Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area
To Nearest CMA	Average	214	275	209	207	224	246	363	481	234	277
	Median	199	250	195	189	196	199	266	316	201	212
	Min.	59	35	49	14	78	54	43	40	43	14
To Nearest CA	Max.	761	1082	551	1043	685	1371	1691	2009	1691	2009
	Average	128	142	125	133	112	135	136	166	125	141
	Median	111	125	118	119	100	107	122	141	114	120
	Min.	51	8	31	25	14	9	15	5	14	5

	Max.	392	457	411	903	356	1258	472	660	472	1258
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Demographic Characteristics of Web Survey Communities

Population

According to the 2011 population census, as shown in Table 5, the total population of the 356 communities covered in the survey comprised 26% of the total population in the study area. The population of these communities ranged from 5 to 12,278.⁴ The average population was 1,226, and the median population was 500. As shown in Table 5, overall, the communities covered in the survey appeared to be representative of the study area. However, it should be noted that responses in Manitoba and Alberta were slightly more representative of larger communities.

Table 5 A comparison in population between sampled communities and the study area (n=356)

	Manitoba		Sask		Alberta		British Columbia		Western Canada	
	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area
Average	1,819	1,349	563	514	2,795	2,137	1,464	1,360	1,232	1,095
Median	1,297	843	345	327	1,582	865	435	509	499	462
Min.	308	5	15	10	84	10	5	5	5	5
Max.	5,845	10,670	10,484	10,484	12,278	12,359	7,921	10,234	12,278	12,359
Sum	70,934	314,269	112,595	375,535	176,071	570,646	77,550	446,085	437,150	1,706,535
% Of Study Pop	22.57		29.98		30.85		17.38		25.62	

Note: Tabulated based on Census of Population 2011.

Population Change from 2006 to 2011

From 2006 to 2011, the communities covered in the sample experienced a population increase of 4.7%, slightly larger (2.6%) than the average population change in the study area. The median population change is also higher in the sample than in the study population.

Table 6 A comparison in population change from 2006-2011 (%) (n=356)

%	Manitoba		Saskatchewan		Alberta		British Columbia		Western Canada	
	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area
Average	3.5	3.1	6.0	2.7	4.3	2.2	1.1	2.1	4.7	2.6
Median	1.6	0.3	2.1	0.0	2.5	2.3	2.5	(1.3)	2.2	0.0
Min.	(12.2)	(100.0)	(58.3)	(100.0)	(30.8)	(82.7)	(75.8)	(100.0)	(75.8)	(100.0)



Max.	31.9	400.0	680.0	680.0	38.2	100.0	66.7	820.0	680.0	820.0
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Note: Tabulated based on Census of Population 2011.

Population Density

The sample shows a bias toward communities with high population densities. In 2011, the population density of surveyed communities varied from 0.01-1,548 persons/km². The average and median densities were 154 persons/km² and 75 persons/km², respectively, both significantly higher than those of the study area. The overrepresentation of more densely populated regions holds in Saskatchewan, Alberta and British Columbia; in Manitoba, there is no such overrepresentation.

Table 7 Population density in 2011 (persons/km²)

	Manitoba		Saskatchewan		Alberta		British Columbia		Western Canada	
	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area
Average	108	107	144	110	244	174	137	109	156	120
Median	6	11	91	43	235	145	30	20	80	31
Min.	0	0	0	0	0	0	0	0	0	0
Max.	704	704	798	798	1,548	1,548	877	2,110	1,548	2,110

Note: Tabulated based on Census of Population 2011.

Age Structure

The surveyed communities appeared to be representative in terms of the age structure of the study area. According to Statistics Canada, in 2011, the average and median percentages of population aged 15 years old and over in the surveyed communities were 81% and 82%, respectively, very close to the corresponding percentages of the study population communities.

The examination of age dependency ratios also revealed that the sample is representative of the study population. As shown in Table 8, on average, in surveyed communities, a person at working age (20-64 years old) needed to support 0.4 minors (aged below 20 years old) and 0.3 elderly persons, very close to the average level in the study area.

Table 8 A comparison in age structure (n=356)

		Manitoba		Saskatchewan		Alberta		British Columbia		Western Canada	
		Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area
% Of Total Pop. Aged 15+	Avg.	79.9	77.69	82	81.7	80.5	79.4	81	81.5	81.3	80.7
	Median	82.2	80.7	82.6	82.6	81	80.5	84	83.3	82.3	81.9
	Min.	62	56.2	55.6	55.6	58.3	53.4	66.67	55.6	55.6	53.4



Age Dependence Ratio (<20)	Max.	90.3	100	100	100	94.1	100	92.1	100	100	100
	Avg.	45.7	50.7	41.9	41.7	42.5	45.3	39.2	38.9	42.1	43.1
	Median	41.0	44.3	40.0	39.3	41.1	41.7	35.1	34.6	40.0	40.0
	Min.	24.4	-	-	-	10.0	-	18.4	-	-	-
Age Dependence Ratio (65+)	Max.	84.5	125.0	102.9	113.6	98.5	119.6	75.0	133.3	102.9	133.3
	Avg.	30.6	27.9	34.2	32.0	29.9	26.9	22.8	22.6	31.4	28.5
	Median	29.3	24.8	30.8	27.8	27.9	23.2	20.0	19.6	28.9	25.0
	Min.	3.5	-	1.8	-	5.5	0.7	-	-	-	-
Overall Age Dependence Ratio	Max.	79.3	89.9	133.3	133.3	68.4	175.0	75.6	77.8	133.3	175.0
	Avg.	76.3	78.6	76.1	73.7	72.3	72.1	62.0	61.5	73.5	71.7
	Median	77.9	77.1	73.3	70.4	70.3	70.3	61.7	60.5	70.9	69.2
	Min.	51.6	46.2	30.8	14.3	23.8	5.4	34.7	12.5	23.8	5.4
	Max.	127.6	127.6	216.7	216.7	106.6	175.0	100.0	166.7	216.7	216.7

Note: Tabulated based on Census of Population 2011.

Prevalence of Low-Income

Surveyed communities appear to be representative in terms of the proportion of low-income population. In 2011, the percentage of low-income population aged 15 years old and over in surveyed communities varied between 0 and 68.2%, with an average level of 15.1%; these numbers are very close to the situation in the study area.⁵

Table 9 Prevalence of low-income in 2011

Indicator	Manitoba		Saskatchewan		Alberta		British Columbia		Western Canada	
	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area
Average	15.6	17.6	14.7	16.2	12.9	12.6	21.5	18.8	15.1	16.2
Median	16.1	16.3	13.2	14.8	12.8	12	15.7	17.6	13.3	14.5
Minimum	3.4	2.8	0	0	2.2	2.2	4.9	4.9	0	0
Maximum	23.3	48.8	43.9	66.1	33.3	39.1	48.2	68.2	68.2	68.2
# Of Communities With Data	21	92	59	184	40	108	17	100	137	484
# Of Communities	40	233	203	731	63	267	52	328	360	1559

Note: Tabulated based on National Household Survey 2011.

Education Achievement

The surveyed communities appear to be representative in terms of the highest education achievement. In surveyed communities, on average, the population aged 15 years old and over with less than high school education was 32% in 2011; those with high school education accounted for 26%; and those with education attainment above high school accounted for 42%. These numbers are very close to those for the study area.

Table 10 Education achievement

Indicator	Manitoba	Sask	Alberta	British Columbia	Western Canada
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		Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area
Below High School	Average	36.9	45.3	31.7	33.1	28.2	33.6	32.6	35.0	32.2	35.7
	Median	32.3	36.3	30.0	31.2	27.0	29.0	31.5	33.3	29.8	31.9
	Min.	13.6	0	0	0	0	0	7.2	0	0	0
	Max.	75.4	92.9	79.8	79.8	64.8	90.1	78.6	89.3	79.8	92.9
High School	Average	26.3	21.8	25.8	26.4	27.2	24.1	24.7	26.0	26.0	25.1
	Median	27.2	22.4	25.4	25.6	27.8	25.2	25.5	26.6	26.1	25.2
	Min.	8.8	0	0	0	0	0	13.8	0	0	0
	Max.	39.9	43.6	66.7	77.8	63.2	63.2	39.1	76.5	66.7	77.8
Above High School	Average	36.8	32.9	42.4	46.5	44.6	42.3	39.9	39.0	41.8	39.2
	Median	38.9	36.6	41.3	39.0	44.6	42.9	45.6	40.0	41.7	39.8
	Min.	15.1	0	9.2	(12.5)	14.7	6.6	7.1	0	7.1	(12.5)
	Max.	64.0	100.0	100.0	100.0	100.0	100.0	71.9	72.7	100.0	100.0
# Of Communities	W. Info.	26	153	102	372	47	175	38	223	213	923
	W/O Info.	40	233	203	731	63	267	52	328	360	1,559

Note: Tabulated based on National Household Survey 2011.

Labour Force Status

Compared with the study area, in 2011, the average participation rate and employment rate of the population aged 15 years old and over in surveyed communities were slightly higher, and the average unemployment rate was lower.

Table 11 A comparison of labour force (n=356)

	Indicators	Manitoba		Saskatchewan		Alberta		British Columbia		Western Canada	
		Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area	Sampled Area	Study Area
Participation Rate	Average	61.1	57.9	65.4	63.0	66.5	62.7	56.0	58.0	63.4	60.9
	Median	62.5	59.9	65.9	63.5	68.2	66.7	56.8	59.1	63.9	62.1
	Min.	26.8	0	13.3	0	23.1	23.1	22.6	22.6	13.3	0
	Max.	81.5	90.2	100.0	100.0	85.8	96.7	80.0	90.9	100.0	100.0
Employment Rate	Average	56.7	51.2	61.8	58.3	62.3	57.7	44.5	47.4	58.2	54.4
	Median	58.9	55.6	63.5	59.4	64.6	61.9	43.9	47.8	59.9	55.8
	Min.	22.6	0	10.8	0	15.4	15.4	6.9	0	6.9	-



Unemployment Rate	Max.	81.5	88.0	100.0	100.0	81.3	100.0	65.0	82.4	100.0	100.0
	Average	7.5	11.3	4.3	6.7	5.0	7.9	20.2	18.4	7.7	10.5
	Median	3.9	5.2	0	0	4.6	5.1	18.4	13.8	3.7	5.3
	Min.	0	0	0	0	0	0	0	0	0	-
# Of Communities	Max.	47.1	58.1	55.0	8.3	29.2	46.4	57.1	70.0	57.1	83.3
	w. info.	26	153	102	372	47	175	38	223	213	923
	w/o info.	40	233	203	731	63	267	52	328	360	1,559

Note: Tabulated based on National Household Survey 2011.

Web-based Survey Representativeness

Compared to the study population, the surveyed communities were larger and had higher population densities. Otherwise, the surveyed communities are fairly representative of the study region in terms of the prevalence of low-income people, education achievement, and labour force status.⁶

Community Needs⁷

As mentioned, the web-based survey of administrators asked many of the same questions used in the telephone survey. See the Appendix for the full web survey questionnaire. Our analysis is based on the same exploratory factor analysis that was used on the telephone survey data. For a full explanation of our research design, methodology, and analysis, please see the Research Design and Methodology chapter.

In the web-based survey, from the perspective of administrators, the 15 needs were ranked from high to low. These needs, in order, were: arts and culture programs, housing, youth programs, health care, Internet access, roads, daycare, physical activity programs, seniors' programs, recycling, preschool, sanitation and waste management, high school, drinking water, and elementary school.

Table 12 Western Canada, Top 15 Community Needs, Overall, Rural and Aboriginal (n=354)

RANK	Overall			Rural			Aboriginal		
	Need	N	Average score	Need	N	Average score	Need	N	Average score
1	Overall: Arts and culture programs	268	2.65	Arts and culture programs	231	2.58	Housing	42	3.38
2	Housing	316	2.59	Youth programs	253	2.47	Recycling	34	3.32
3	Youth programs	290	2.54	Housing	274	2.47	Seniors' programs	35	3.09
4	Health care	285	2.43	Health care	243	2.39	Arts and culture programs	37	3.05



5	Internet access	349	2.36	Daycare	209	2.33	Youth programs	37	3.05
6	Roads	351	2.36	Internet access	307	2.32	Physical activity programs	39	2.97
7	Daycare	245	2.35	Roads	309	2.28	Roads	42	2.95
8	Physical activity programs	303	2.34	Physical activity programs	264	2.25	High school	25	2.84
9	Seniors' programs	295	2.34	Seniors' programs	260	2.24	Internet access	42	2.71
10	Recycling	316	2.16	Preschool	233	2.02	Health care	42	2.67
11	Preschool	268	2.05	Recycling	282	2.01	Daycare	36	2.44
12	Sanitation and waste mgt	333	1.83	Sanitation and waste mgt	291	1.75	Sanitation and waste management	42	2.43
13	High school	244	1.79	Drinking water	278	1.68	Elementary school	32	2.31
14	Drinking water	320	1.76	High school	219	1.67	Drinking water	42	2.26
15	Element'y school	279	1.70	Element'y school	247	1.62	Preschool	35	2.26
		354		Total N	312			42	

Source: CIP web-based survey of administrators, 2015.

The services/programs perceived by administrators as being most needed differed between rural and Aboriginal communities. For administrators in rural communities, arts and culture programs are the most important, followed by youth programs, housing, health care, daycare, Internet access and roads.

In comparison, as shown in Table 12, for administrators in Aboriginal communities, housing is the most important need; recycling and seniors' programs are the second and third largest needs, followed by arts and culture programs, youth programs, physical activity programs and roads.

As in the telephone survey, and contrary to expectations, youth programs were reported as a higher need in rural communities and seniors' programs as a higher need in Aboriginal communities, a finding that is somewhat contrary to demographics. However, administrators in Aboriginal communities note housing as the highest priority – a finding that reflects contemporary understanding and expectations of Aboriginal needs. However, in contrast, drinking water – an issue that captures much media attention – was found to be amongst the lowest of these priorities.

Another difference between the needs expressed by rural and Aboriginal administrators is the importance of local recycling. Responses from Aboriginal administrators place it in second as a key priority, while it falls below the top ten for rural administrators.

Manitoba. Manitoba administrators report that their communities need housing, youth programs, and arts and culture programs, followed by Internet access, health care, roads, and seniors' programs.



Table 13 Manitoba, Top 15 needs, Overall, Rural and Aboriginal

Rank	Overall			Rural			Aboriginal		
	Need	N	Avg. Score	Need	N	Avg. Score	Need	N	Avg. Score
1	Housing	37	2.49	Housing	32	2.34	Youth programs	4	3.75
2	Youth programs	34	2.41	Arts and culture programs	29	2.31	Recycling	4	3.75
3	Arts and culture programs	33	2.30	Internet access	33	2.24	Housing	5	3.40
4	Internet access	38	2.24	Youth programs	30	2.23	Seniors' programs	3	3.00
5	Health care	35	2.23	Health care	30	2.17	Roads	5	2.80
6	Roads	38	2.18	Roads	33	2.09	Health care	5	2.60
7	Seniors' programs	34	2.00	Physical activity programs	32	1.94	Arts and culture programs	4	2.25
8	Physical activity programs	37	1.97	Seniors' programs	31	1.90	Physical activity programs	5	2.20
9	Recycling	36	1.83	Daycare	27	1.81	Internet access	5	2.20
10	Daycare	32	1.81	Recycling	32	1.59	Sanitation and waste management	5	2.00
11	Sanitation and waste mgt	35	1.63	Preschool	28	1.57	High school	3	2.00
12	High school	31	1.58	Sanitation and waste management	30	1.57	Daycare	5	1.80
13	Preschool	33	1.58	High school	28	1.54	Drinking water	5	1.60
14	Drinking water	35	1.49	Drinking water	30	1.47	Preschool	5	1.60
15	Element'y school	34	1.47	Elementary school	29	1.45	Elementary school	5	1.60
	Total N	38			33			5	

Source: CIP Web-based survey of administrators, 2015.

As can be seen in Table 13, there were only five responses from Aboriginal communities, so any generalizations to this population need to be made with caution. Nonetheless, based on the data that was collected, youth programs, recycling, and housing were given the highest scores, while education (from preschool to high school, including daycare) and drinking water were given the lowest values.

Rural community administrators in Manitoba noted a high need for housing in their communities; Internet access was also critically important, ranking third on their list. As in the overall western Canadian statistics, there is a noticeable difference in how rural and



Aboriginal communities look at local recycling needs: Aboriginal communities give it a much higher priority.

Saskatchewan. Saskatchewan administrators report arts and culture programs as the most pressing local need, followed by youth programs and housing. The next four top needs are health care, physical activity programs, seniors' programs and Internet access.

Table 14 Saskatchewan, Top 15 Needs, Overall, Rural and Aboriginal

Rank	Overall			Rural			Aboriginal		
	Need	N	Score	Need	N	Score	Need	N	Score
1	Arts and culture programs	132	2.78	Arts and culture programs	122	2.75	Recycling	7	3.86
2	Youth programs	153	2.59	Youth programs	142	2.53	Housing	11	3.73
3	Housing	177	2.54	Health care	137	2.52	Seniors' programs	9	3.56
4	Health care	148	2.53	Housing	166	2.46	Physical activity programs	11	3.45
5	Physical activity programs	161	2.47	Physical activity programs	150	2.40	Youth programs	11	3.45
6	Seniors' programs	153	2.42	Internet access	186	2.38	Roads	11	3.27
7	Internet access	197	2.42	Seniors' programs	144	2.35	High school	8	3.25
8	Roads	199	2.35	Roads	188	2.29	Arts and culture programs	10	3.20
9	Daycare	124	2.27	Daycare	113	2.25	Internet access	11	3.00
10	Preschool	139	2.06	Preschool	128	2.02	Health care	11	2.73
11	Recycling	173	2.02	Recycling	166	1.94	Elementary school	10	2.70
12	Sanitation and waste mgt	185	1.89	Sanitation and waste management	174	1.84	Preschool	11	2.64
13	Drinking water	172	1.82	Drinking water	161	1.78	Sanitation and waste mgt	11	2.55
14	High school	127	1.79	High school	119	1.69	Daycare	11	2.55
15	Elementary school	146	1.75	Elementary school	136	1.68	Drinking water	11	2.45
	Total N	200			189			11	

Source: CIP web-based survey of administrators, 2015.

There are interesting differences between administrator responses from rural and Aboriginal communities. In Aboriginal communities, administrators identified recycling as the number one need, followed by housing – which more administrators (11) chose as a clear priority. In contrast, recycling was in the bottom five needs in rural communities.

Health care, the third priority for rural administrators, coded only 10th place for Aboriginal communities in Saskatchewan. For both rural and Aboriginal communities, drinking water and sanitation were lower priorities.

Alberta. Arts and culture programs, housing, and daycare were reported to be the most important needs, followed by recycling, youth programs, roads, Internet access and health care.

Table 15 Alberta, Top 15 Community Needs, Overall, Rural and Aboriginal

Rank	Overall			Rural			Aboriginal		
	Need	N	Score	Need	N	Score	Need	N	Score
1	Arts and culture programs	53	2.53	Arts and culture programs	53	2.53	Housing	1	4.00
2	Housing	54	2.52	Housing	53	2.49	Seniors' programs	1	3.00
3	Daycare	44	2.50	Daycare	43	2.49	Physical activity programs	1	3.00
4	Recycling	58	2.45	Recycling	57	2.44	Youth programs	1	3.00
5	Youth programs	54	2.44	Youth programs	53	2.43	Drinking water	1	3.00
6	Roads	63	2.24	Roads	62	2.23	Recycling	1	3.00
7	Internet access	62	2.16	Internet access	61	2.15	Roads	1	3.00
8	Health care	51	2.16	Health care	50	2.14	Health care	1	3.00
9	Physical activity programs	55	2.15	Physical activity programs	54	2.13	Internet access	1	3.00
10	Seniors' programs	58	2.07	Seniors' programs	57	2.05	Daycare	1	3.00
11	Preschool	52	2.02	Preschool	51	2.02	Sanitation and waste management	1	2.00
12	Drinking water	60	1.65	Drinking water	59	1.63	Preschool	1	2.00
13	High school	49	1.61	High school	48	1.60	Elementary school	1	2.00
14	Sanitation and waste mgt	61	1.57	Sanitation and waste management	60	1.57	High school	1	2.00
15	Elementary school	56	1.52	Elementary school	55	1.51	Arts and culture programs	0	-
	Total N	63			62			1	

Source: CIP web- based survey of administrators, 2015.

Because only one response was received from Aboriginal administrators in Alberta, the results are clearly not generalizable. However, they have been presented for completeness.



For this administrator, housing was the top priority; the next nine needs received a score of three out of four, followed by four needs that received a score of two out of four.

For rural community administrators, arts and culture scored the highest in terms of need. As in Manitoba and Saskatchewan, both drinking water and sanitation/waste management received low scores on average. Of course, in non-urban rural regions, such as municipalities, sanitation and water tends to be the farm or acreage-owner's responsibility. Similarly, waste management in rural municipalities generally translates into having an accessible dump somewhere in the municipality. These issues do not hold the same level of concern as they do in urbanized municipal regions, from hamlets to small cities.

British Columbia. Administrators in British Columbia indicated that housing is the most important community need; daycare comes next, followed by roads, seniors' programs, arts and culture programs, youth programs and recycling.

Table 16 British Columbia, Top 15 Needs, Overall, Rural and Aboriginal

Rank	Overall			Rural			Aboriginal		
	Need	N	Score	Need	N	Score	Need	N	Score
1	Housing	48	2.94	Daycare	26	2.96	Housing	25	3.20
2	Daycare	45	2.78	Housing	23	2.65	Arts and culture programs	23	3.13
3	Roads	51	2.67	Preschool	26	2.54	Recycling	22	3.09
4	Seniors' programs	50	2.66	Youth programs	28	2.50	Seniors' programs	22	2.91
5	Arts and culture programs	50	2.66	Roads	26	2.50	Physical activity programs	22	2.91
6	Youth programs	49	2.59	Seniors' programs	28	2.46	High school	13	2.85
7	Recycling	49	2.53	Health care	26	2.42	Roads	25	2.84
8	Health care	51	2.53	Internet access	27	2.33	Youth programs	21	2.71
9	Internet access	52	2.50	Arts and culture programs	27	2.26	Internet access	25	2.68
10	Physical activity programs	50	2.42	Recycling	27	2.07	Health care	25	2.64
11	Preschool	44	2.41	Physical activity programs	28	2.04	Daycare	19	2.53
12	High school	37	2.22	High school	24	1.88	Sanitation and waste management	25	2.48
13	Sanitation and waste mgt	52	2.10	Sanitation and waste management	27	1.74	Elementary school	16	2.31
14	Element'y school	43	1.93	Elementary school	27	1.70	Drinking water	25	2.28



15	Drinking water	53	1.87	Drinking water	28	1.50	Preschool	18	2.22
	Total N	53			28			25	

Source: CIP web-based survey of administrators, 2015.

The data collected from British Columbia is fairly robust, with almost as many administrators from Aboriginal communities as from rural communities completing the survey. Aboriginal communities indicate that housing is the most important need, followed by arts and culture programs and recycling. Rural communities in British Columbia note a high need for services for young families: daycare and preschool land at numbers one and three respectively on their list. Preschool was the lowest priority for Aboriginal administrators in our survey.

In British Columbia, rural and Aboriginal communities largely have different needs – the exceptions are, as in the other three provinces, drinking water, sanitation and waste management, and elementary schools that all received low scores from the respondents.

Western Canada

There are some similarities amongst the four provinces. First, housing is the most important need, as it is always amongst the top three needs in each province. In particular, although it is difficult to determine the difference between rural and Aboriginal communities in each province due to the underrepresentation of Aboriginal communities, housing is ranked amongst the top three needs in both rural and Aboriginal communities in each province, signalling its importance in both rural and Aboriginal communities.

Administrators across the four provinces indicate a high need for programs: arts and culture programs are important in Manitoba, Saskatchewan and Alberta; youth programs are important in all the four provinces to a varying extent, and seniors' programs are important in Manitoba, Saskatchewan and British Columbia. Third, educational services are less important.

The low representation of Aboriginal communities in the sample makes it difficult to reliably compare the similarities and differences in the ranking of needs between rural and Aboriginal communities in each province. Nevertheless, as was found in the telephone survey, respondents from Aboriginal communities give higher scores to the needs than do respondents from rural communities. In particular, respondents from Aboriginal communities tend to exhibit a higher level of need for all of the 15 listed services/programs, except daycare and preschool services, where no difference between rural and Aboriginal communities is found. Due to unequal sample sizes and low representation of Aboriginal communities in Alberta, Saskatchewan and Manitoba, we only examined differences in needs between rural and Aboriginal communities separately by province in British Columbia. The pattern in British Columbia is similar to the overall pattern, where Aboriginal communities exhibit higher needs in general (see Table 17).



Table 17 Strength of need, Aboriginal versus rural communities, British Columbia and western Canada (n=354)

Need	British Columbia	Western Canada
Need for Programs:		
1. Seniors' Programs	Higher	Higher
2. Arts and Culture Programs	Higher	Higher
3. Physical Activity Programs	Higher	Higher
4. Youth Programs	No Difference	Higher
Need for Basic Services:		
1. Drinking Water	Higher	Higher
2. Sanitation and Water Management	Higher	Higher
3. Recycling	Higher	Higher
4. Roads	No Difference	Higher
5. Housing	Higher	Higher
6. Health Care	No Difference	Higher
7. Internet Access	No Difference	Higher
Need for Educational Services:		
1. Daycare	No Difference	No Difference
2. Preschool	No Difference	No Difference
3. Elementary School	Higher	Higher
4. High School	Higher	Higher

Source: CIP web-based survey of administrators, 2015.

Absence of Services

Not all the above services and programs are being provided in each community. Although lack of availability does not necessarily translate into a need or dissatisfaction with the service (because people may be able to get their needs met in a nearby community), an analysis of lack of availability is worthwhile. The following table summarizes the lack of availability of selected services and programs.

Table 18 Percentage of administrators who answered that a particular service was not provided in their communities: Manitoba, Saskatchewan and western Canada (n=354)

Selected Service / Program	Manitoba			Saskatchewan			Western Canada		
	Rural	Abor.	Overall	Rural	Abor.	Overall	Rural	Abor.	Overall
Post-Secondary Training	63.6	60	63.2	81	9.1	77	69.9	28.6	65
High School	15.2	40	18.4	37	27.3	36.5	29.8	40.5	31.1
Daycare	18.2	0	15.8	40.2	0	38	33	14.3	30.8
Preschool	15.2	0	13.2	32.3	0	30.5	25.3	16.7	24.3
Arts and Culture Programs	12.1	20	13.2	34.9	9.1	33.5	25.6	11.9	24
Elementary School	12.1	0	10.5	28	9.1	27	20.8	23.8	21.2
Youth Programs	9.1	20	10.5	24.9	0	23.5	18.9	11.9	18.1



Seniors' Programs	6.1	40	10.5	23.8	18.2	23.5	17.6	16.7	17.5
Physical Activity Programs	3	20	5.3	20.1	0	19	16	2.4	14.4
Recycling	3	20	5.3	12.2	36.4	13.5	9.6	19	10.7
Housing	3	20	5.3	12.2	36.4	13.5	9.6	19	10.7
Health Care	3	0	2.6	12.2	0	11.5	12.2	0	10.7

Source: CIP web-based survey of administrators, 2015.

Table 19 Percentage of administrators who answered that a particular service was not provided in their communities: British Columbia and Alberta (n=354)

Selected Service/Program	British Columbia			Alberta		
	Rural	Aboriginal	Overall	Rural	Aboriginal	Overall
Post-Secondary Training	28.6	32	30.2	58.1	0	57.1
High School	14.3	48	30.2	22.6	0	22.2
Daycare	7.1	24	15.1	30.6	0	30.2
Preschool	7.1	28	17	17.7	0	17.5
Arts and Culture Programs	3.6	8	5.7	14.5	100	15.9
Elementary School	3.6	36	18.9	11.3	0	11.1
Youth Programs	0	16	7.5	14.5	0	14.3
Seniors' Programs	10.7	12	11.3	8.1	0	7.9
Physical Activity Programs	10.7	0	5.7	12.9	0	12.7
Recycling	3.6	12	7.5	8.1	0	7.9
Housing	3.6	12	7.5	8.1	0	7.9
Health Care	17.9	0	9.4	14.5	0	14.3

Post-secondary training, as a service, was cited the most frequently (65%) as being not available in the community, followed by high school (31.1%), daycare (30.8%), preschool (24.3%), arts and culture programs (24%), and elementary school (21.2%). The four provinces exhibit similar patterns, but the lack of availability of post-secondary training is much greater in Saskatchewan, followed by Manitoba and Alberta, than British Columbia.

Business Capacity

According to administrators, rural and Aboriginal communities differ significantly in their business capacities. As shown in Figure 2, rural communities have strengths in financing, general business skills and labour, and have weaknesses in post-secondary training, technology and networking opportunities. In comparison, Aboriginal communities have strengths in post-secondary training and labour, and weaknesses in general business skills and financing.

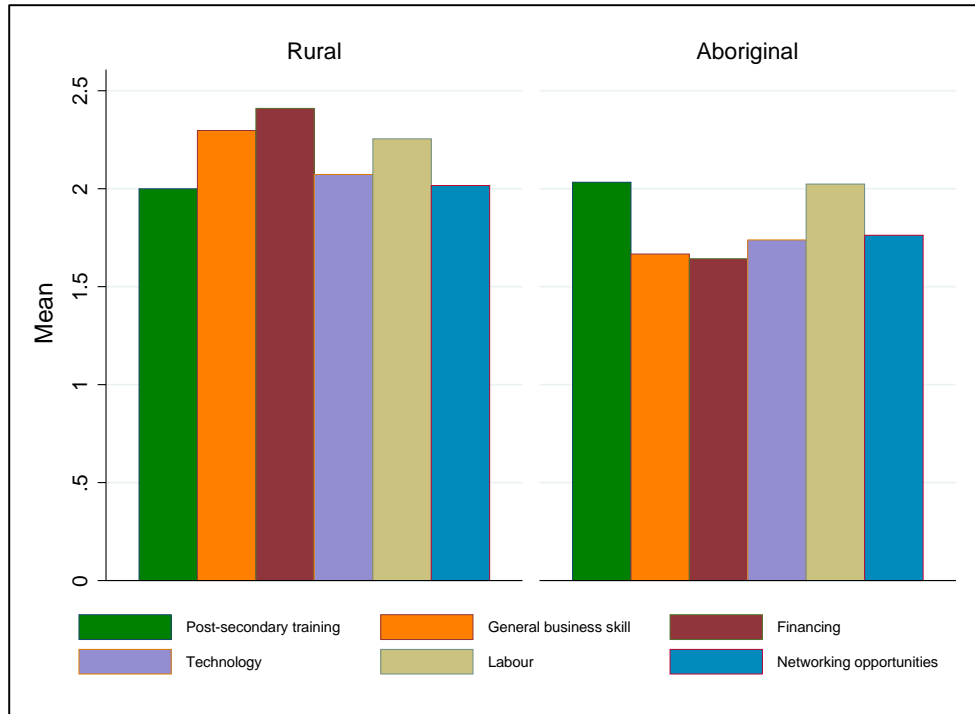


Figure 2 Variables related to business capacity, western Canada, rural and Aboriginal

Source: CIP web-based survey of administrators, 2015.

As shown in Figure 2, the administrators' ratings of business capacity variables are not high on average, taking on values between 1.6 and 2.5. Rural communities are perceived by their administrators to have greater business capacity than Aboriginal communities. The one exception is post-secondary training, where administrators from the two communities had similar perceptions about the level of capacity. The perceived difference in the capacity perceptions in the two communities was largest in the ability to finance business ventures.

Social Capacity

As shown in Figure 3, administrators in rural and Aboriginal communities indicate a range of perceptions about social capacity variables in their community. The variables receiving the highest score are the willingness of people to work together, the willingness to work with other communities and the willingness to adopt a new mindset. Administrators in rural communities gave the lowest score to the willingness to take on new projects, while administrators in Aboriginal communities gave the lowest score to volunteerism.

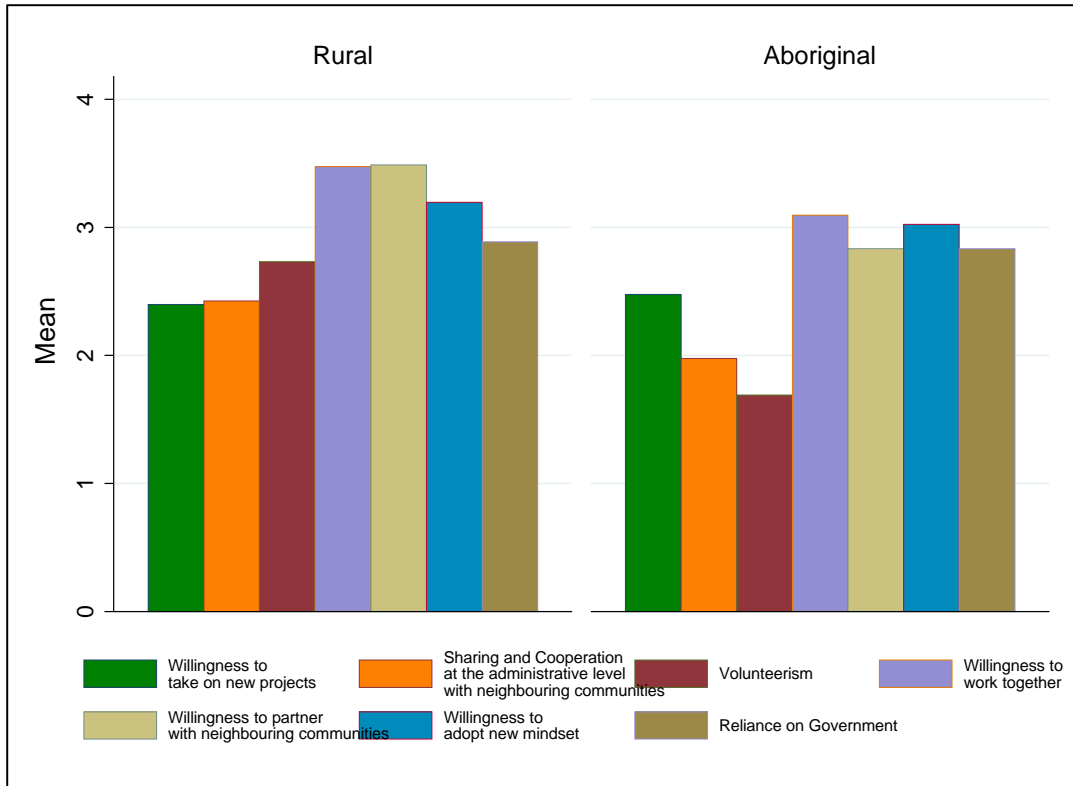


Figure 3 Variables related to willingness to work together.

Source: CIP web-based survey of administrators, 2015.

As noted in Figure 3, administrators in rural and Aboriginal communities report similar scores for the willingness to take on new projects, the willingness to take on new mindsets and the reliance on government. They differ most dramatically in the sharing and co-operation with neighbouring communities and in volunteerism, with administrators of Aboriginal communities reporting lower scores on these two measures.

A community’s social capacity can also be affected by issues of local safety and security. As Figure 4 illustrates, rural and Aboriginal communities on average are perceived by their administrators to be safe, given the infrequent occurrence of property and violent crimes (this pattern holds for all four western provinces). Nevertheless, administrators from Aboriginal communities report somewhat lower levels of security.

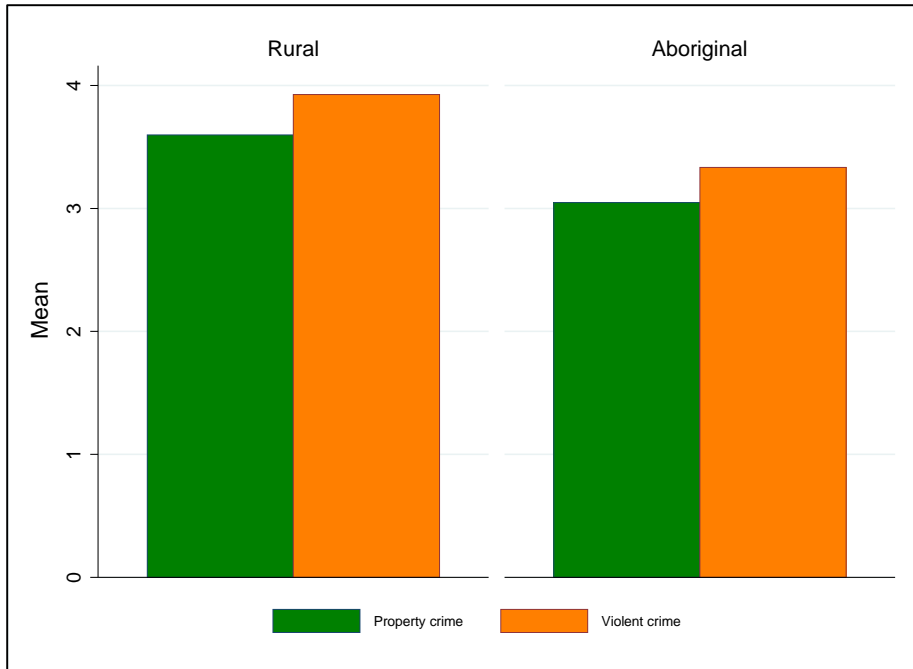


Figure 4 Safety and security variables: fewer incidents of property crime and violent crime, rural and Aboriginal communities.

Community change and continuity, including issues of diversity, can also have an impact on community social capacity. According to administrators in both rural and Aboriginal communities, there have been some demographic changes in their jurisdictions. Overall, administrators in rural communities indicate a growing heterogeneity, indicating increasing differences in community members' age and income, while administrators in Aboriginal communities indicate that their communities have become more heterogeneous in age, but more homogeneous, similar in language and religion.

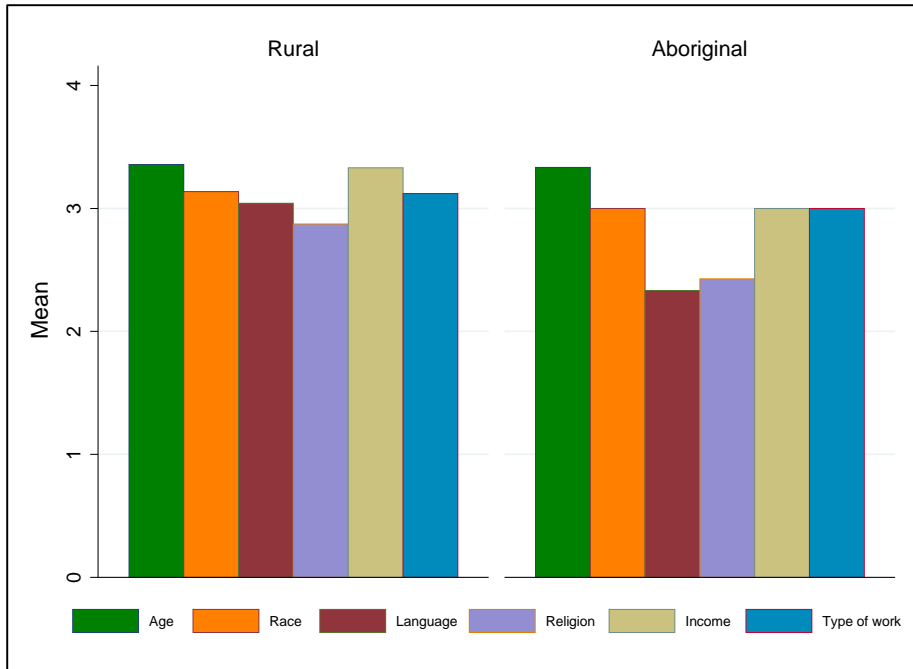


Figure 5 Perceived changes in demographic similarities

Source: CIP web-based survey of administrators, 2015.

Knowledge of Co-operatives

A significant factor in developing new co-operatives, or growing and supporting existing co-operatives, lies in the degree of co-operative knowledge. When administrators were asked “Do you know what a co-operative is?”, out of 354 administrators, 322 (91%) answered “Yes”, and 32 answered either “No” or “Don’t Know”, (about 9%). The situation is similar across provinces and different types of communities. Thus, rural and Aboriginal administrators appear to have some understanding of co-operatives, with Saskatchewan administrators reporting the most knowledge, and administrators in British Columbia reporting the least.

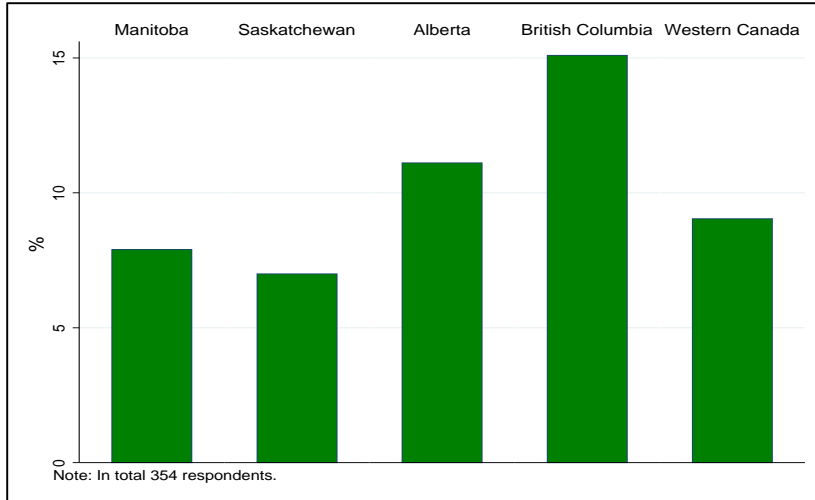


Figure 6 Percentage of administrators who answered either "No" or "Don't Know" to the question: "Do you know what a co-operative is?"

When asked a follow-up question, "Are there currently co-operatives and/or credit unions in your community?", out of the 322 administrators who indicated that they knew what a co-operative was, 217 (67%) answered "Yes", and 103 (33%) answered either "No" (32%) or "Don't Know" (0.6%). The difference between provinces is insignificant.

There was, however, a significant difference between Aboriginal and rural communities: only 26% of administrators from rural communities provided a negative answer to this question; in contrast, 84% of administrators from Aboriginal communities expressed that there were no co-operatives in operation in their communities.

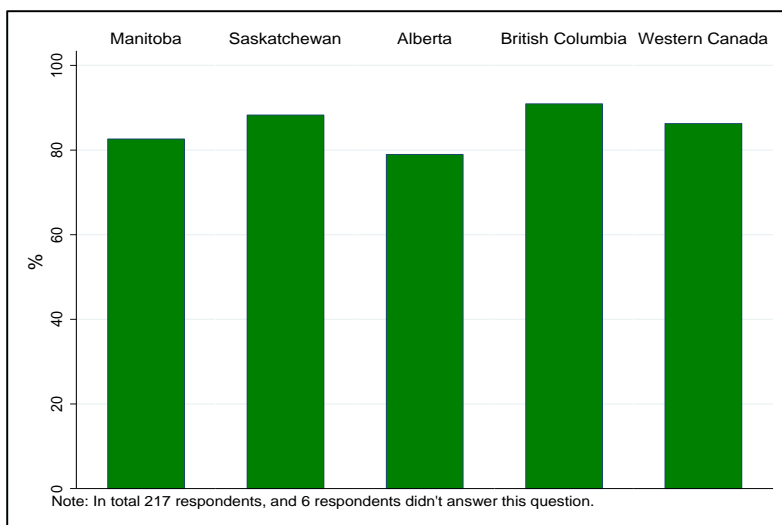


Figure 7 Percentage of administrators who answered either "No" or "Don't Know" to the question, "How many new co-operatives have started in the last 5 years in your community?"



In surveyed communities with co-operatives in operation, 182 (86%) indicated that they do not have any new co-operatives that formed within the past five years; 25 (12%) indicated that they have one new co-operative. In Saskatchewan, three (1.4%) communities indicated they have two new co-operatives and in Manitoba one community indicated it had five new co-operatives. The findings were similar across the four study provinces.

Further Analysis

The Co-operative Innovation Project team also undertook an exploratory factor analysis of the data. In a factor analysis, a set of variables is examined to see which ones are most strongly correlated with each other. The variables that are grouped together are known as a factor. These factors are important because they provide a way of summarizing, via a factor, a set of variables that are closely connected.

A detailed overview of the technical aspects of these tests, including a table that shows the statistical results, can be found in the Research Design and Methodology chapter.

Community Need Factors

In the examination of community need, three factors were identified – one to do with the need for programs, one to do with the need for basic services, and one to do with the need for educational services. For each factor, a score was calculated that indicated the importance that respondents attached to the variables that made up the factor.

Need for Programs. Our survey asked questions about a variety of local programs, such as youth or seniors' programs, arts and culture programs, and so forth. The average score for this factor is 2.48, indicating an overall fairly high need for programs by the administrators in the surveyed communities. Moreover, the need is significantly higher in surveyed Aboriginal communities compared with rural. In addition, the need differs among the four provinces: administrators in Saskatchewan and British Columbia expressed higher needs for programs than those in Manitoba and Alberta.

Need for Basic Services. Basic services, in our survey, included such issues as water, sanitation, housing and health care. The average score for this factor is 2.21, indicating a relatively high need as expressed by the administrators in the surveyed communities. Similarly, the need is significantly higher in surveyed Aboriginal communities. There are differences across the provinces: the need for basic services is the highest in British Columbia, followed by Saskatchewan; it is the lowest in Manitoba and Alberta.

Need for Educational Services. Questions regarding preschool, elementary and high school, for example, scored the lowest as a local need. The average score for this factor is 1.96, indicating a somewhat lower need for these services. The administrators in Aboriginal communities expressed a higher need for such services. There are differences across the provinces: the need for educational services is the highest in British Columbia, followed by Saskatchewan, Alberta, and Manitoba.



Of these three kinds of needs, community administrators reported the highest need for programs, followed by a slightly lower need for basic services. The need for educational services was at the bottom of the priority list, possibly reflecting current adequate local educational opportunities, at least up to the high school level. These results mirror what community-level respondents told us during the telephone survey.

Business Capacity

The average score for this factor is 2.15, indicating a somewhat low level of business capacity in surveyed communities. There is some variation across the provinces, with scores varying from 1.96 (British Columbia) to 2.38 (Manitoba). The business capacity of the surveyed Aboriginal communities is significantly lower than that of the surveyed rural communities (the difference between the two means is 0.39).

Social Capacity

Willingness to Work Together. The average score for this factor is 2.90, suggesting that in the view of administrators, the people in the surveyed communities are willing to take group action. The willingness differs amongst the four provinces: it is highest in Alberta, followed by Manitoba, Saskatchewan and British Columbia. The willingness to work together is relatively weaker in Aboriginal communities.

Sense of Safety and Security. The average score for this factor is 3.69, suggesting that surveyed communities feel safe. There is a significant difference between rural and Aboriginal communities: administrators in Aboriginal communities indicate that crimes occur more frequently than in rural communities. There is no significant difference among the four western provinces.

Demographic Similarities. The average score for this factor is 3.11, suggesting that surveyed communities have become more heterogeneous (diverse and varied) over time. Rural and Aboriginal communities differ from each other: rural communities overall have become more heterogeneous (3.15), while Aboriginal communities overall have become more homogeneous (where the people within the community have become more similar to one another)(2.85). There are also differences among the four provinces: according to their administrators, communities in Manitoba, Saskatchewan and Alberta have become more diversified, while those in British Columbia have become more homogeneous over time.

Correlations between Seven Factors

One of the starting points for the CIP research was to investigate whether there are any connections between community need, business capacity and social capacity – i.e., do communities that score high on one element tend to score high (or low) on another element. To examine this question, the correlations between the various factors were explored.

It is important to note that the presence of correlations does not indicate direct causation. For instance, a correlation between business capacity and social capacity could be the result of a direct link from social capacity to business capacity, a direct link from business capacity



to social capacity, the presence of other variables that influence both social capacity and business capacity, or any combination of these possibilities.

The seven factors we investigate are: need for programs, need for basic services, need for educational services, business capacity, willingness to work together, sense of safety and security, and community similarity. Please view the chapter on Research Design and Methodology for a more complete explanation of these techniques, including factor tables.

a. Need vs. Business Capacity

The need for programs and the need for basic services factors are moderately negatively correlated with the business capacity factor.⁸ Using the need for basic services as an example, the following figure shows the following: communities with a high need tend to have lower business capacity, and vice versa.⁹ Furthermore, there is no difference in this relationship between rural or Aboriginal communities.¹⁰

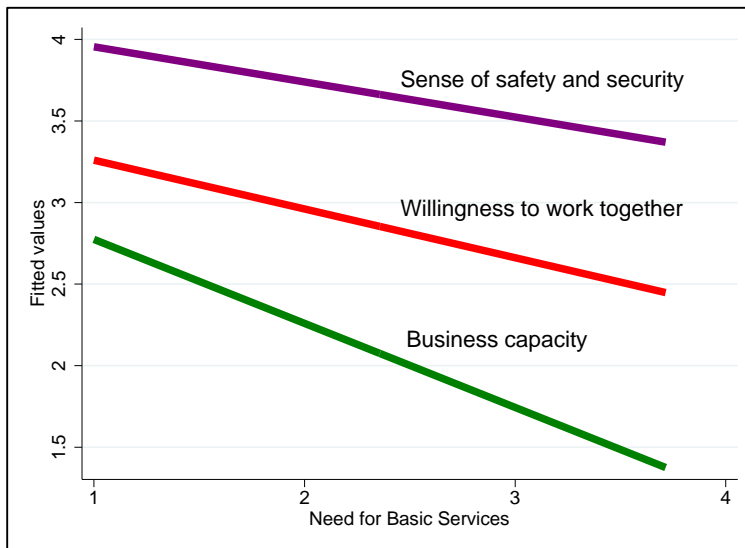


Figure 8 Need for basic services vs. business capacity, willingness to work together, and sense of safety and security.

b. Need vs. Social Capacity

As shown in Figure 8, need factors and social capacity factors are negatively correlated with each other, suggesting that a community with a high need tends to have low social capacity, and vice versa. It should be noted that these negative correlations are weak; high needs are not greatly associated with a lower sense of safety or willingness to work together in a community.

Interestingly, for surveyed Aboriginal communities, the correlation coefficient between need for basic services factor and willingness to work together factor is *positive* (although low in size), instead of negative as in rural communities. In other words, as the basic need for services in a community rises, the willingness to work together also rises (or vice versa)



This could mean that Aboriginal communities have the potential to take collective action to address their needs as these needs become stronger.¹¹

The negative associations between need factors and the business capacity factor are much stronger than the associations between need factors and social capacity factors.

c. Business Capacity vs. Social Capacity

Business capacity and social capacity are positively correlated with each other; when one rises, so does the other. Business capacity is moderately correlated with the willingness to work together, and weakly correlated with the sense of safety and security, and demographic similarities.

There are no differences in these correlations between rural and Aboriginal communities.

Quality of Life

The survey asked administrators to rate the quality of life in their community, on a scale of one to four. The average score of quality of life is 2.63, indicating a relatively high quality of life in surveyed communities. However, the difference between rural and Aboriginal communities is quite large: the average score for rural communities is 2.74, while the average score for Aboriginal communities is only 1.76. Among the four provinces, the reported quality of life is relatively higher in Manitoba, Saskatchewan and Alberta, and lower in British Columbia.

The following graph depicts the relationship between quality of life and different factors. First, as expected, quality of life is negatively correlated with basic needs, meaning that a community with high needs tends to have a low quality of life, and vice versa. Second, quality of life is positively correlated with the business capacity and social capacity factors: communities where members have a high stock of business know-how, skills, and experiences, and are also willing to cooperate with each other, are likely to experience a higher quality of life.

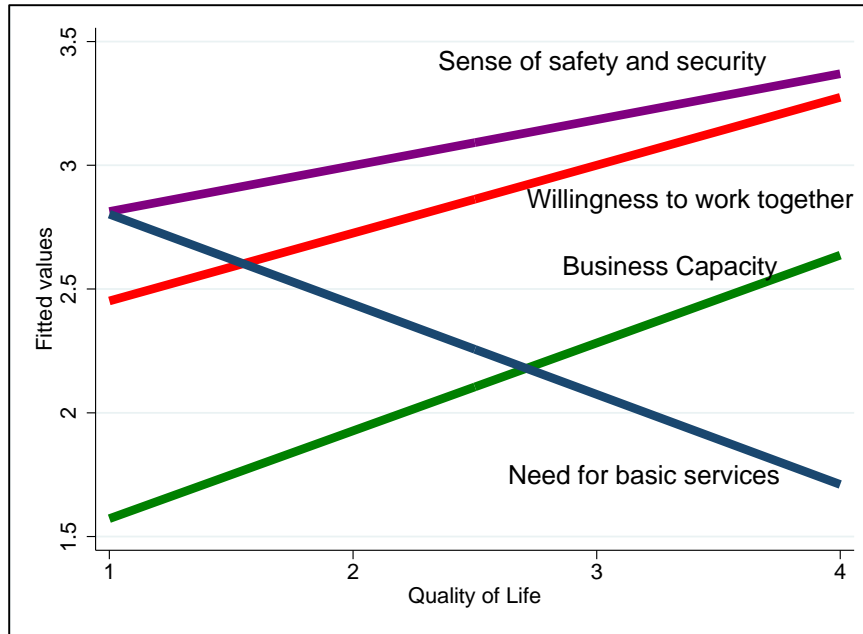


Figure 9 Quality of life, vs. basic need, business capacity, willingness to work together, and sense of safety and security.

Conclusion

The Co-operative Innovation Project conducted an extensive web-based survey, aimed at collecting rural and Aboriginal community administrators' perceptions of their communities across western Canada. This survey was conducted between January and June 2015 and asked a series of pre-set questions regarding potential needs in rural and Aboriginal communities in western Canada, as well as other factors. These questions closely mirrored those that were used in the telephone survey, so that some comparisons could be made across the results.

In total, 359 administrators completed the survey, representing 23% of our target study communities. While the overall response rate was good, the low response rate from Aboriginal administrators is a problem for drawing broad generalizations. We analyzed only those responses that contained a complete or fairly complete set of answers (in other words, there were few questions left unanswered in the survey). The final respondent sample was 354, of which 314 were from rural communities and 42 were from Aboriginal communities. Our surveyed communities were slightly larger than the overall study communities in western Canada, but otherwise were fairly representative of rural and Aboriginal communities in western Canada.

The results of this survey reveal some interesting responses about what administrators feel are the most important community needs across western Canada, and provide a broadly comparative perspective between the four western provinces, and between rural and Aboriginal communities.



Overall, the top fifteen needs noted by administrators, from high to low, were: arts and culture, housing, youth programs, health care, internet access, roads, daycare, physical activity programs, seniors' programs, recycling, preschool, sanitation and waste management, high school, drinking water, and elementary school.

From a co-operative development perspective, community administrators on average know about the co-operative model: 91% answered yes, they know what a co-operative is. When asked if there are current co-operative businesses in their community, 67% said yes. The experience with co-operatives, however, is mostly confined to rural communities – 84% of administrators from Aboriginal communities said that there were no co-operatives in operation in their communities.

Finally, our survey revealed interesting correlations between a community's business and social capacity, and its local needs. Administrators that report higher local needs also tend to report lower business capacity, similarly, administrators that report higher needs also tend to report lower social capacity. In Aboriginal communities, administrators that report a higher willingness to work together also tend to report higher needs.

The administrators who responded to our survey report a relatively positive quality of life in their communities, although those from Aboriginal communities report a lower quality of life than rural administrators. Administrators that report a higher quality of life tend to report fewer needs for basic services. Similarly, administrators reporting a higher quality of life tend to report a higher business capacity, a higher sense of safety and security, and a greater willingness to work together.



Endnotes

¹ Note that this was done based on community name only. CSDs usually represent an independent governing body – however, some Aboriginal CSDs with the same community name may have multiple chiefs, and there may be situations where the reverse is true, reflecting the often complex governing arrangements in Aboriginal communities. The preferred alternative, which we were not able to do due to time limitations, would be to separately research each of 172 CSDs to determine the governance arrangement.

² The overall response was calculated as: completed survey and placed in communities with non-zero population in 2011 (360)/total number of communities (combined CSDs) in the study area with non-zero population in 2011 (1,559). The response rate was likely higher than this because we were not able to get e-mails for all study population communities, as a number of e-mails bounced back and we were not able to find contact information for administrators in these communities.

³ Note that the Google Maps software used did not recognize postal codes for five communities, and so these are not represented on the map. These communities are: Broadview, SK; Edberg, AB; Fisher, MB; Fraser-Fort George, BC; and Massett, BC.

⁴ There was one community in the survey with unknown population in 2011.

⁵ However, missing data is a serious problem for income indicators. In 2011, out of 1,559 rural and Aboriginal communities in the study area, Statistics Canada only released the information of 484 communities (in particular, none of them are Aboriginal communities).

⁶ All comparisons of our sample with characteristics of the study population using the 2011 National Household Survey should be interpreted with caution due to the substantive problems that exist with missing data for communities in the 2011 NHS.

⁷ Descriptive Statistics. Before computing descriptive statistics, we reversed the scores for 15 need variables, and recoded them as: 1 for a very low need, 2 for a low need, 3 for a high need and 4 for a very high need. Similarly, the scores for two variables related to the occurrence of property and violent crimes were reversed, and recoded as: 1 for not safe at all, 2 for somewhat unsafe, 3 for somewhat safe, and 4 for very safe. All the “Not Available”, “Don’t Know” and “Refused” responses were treated as missing. The variable measuring reliance on government to solve problems was reversed and recoded as 1 for very high, 2 for somewhat high, 3 for somewhat low and 4 for very low.

⁸ The correlation between the need for educational services factor and business capacity factor is negative but weak.

⁹ There is a negative association between need factors and business capacity factor.

¹⁰ The correlation coefficient between need factors and business capacity factor does not vary with the type of communities (rural or Aboriginal), suggesting a relatively stable association between the factors.

¹¹ This result could also be due to the lower variation in the web survey on this question, and the lower reliability of the constructed factor.