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Manufacturing Employment in Resource Value Chains: a Rural-urban Comparison from 2001 to 2008

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Highlights

- Employment in manufacturing in Canada has fluctuated over recent decades. The level reached a historically high in 2004 and has been declining since that time.
- In 2008, over one-half (54%) of all Canadian manufacturing workers were employed in the value chain of a resource sector.
- In 2008, resource sector manufacturing employment was relatively more important in rural and small town areas (69% of manufacturing employment and 9% of total employment) compared to larger urban centres (50% of manufacturing employment and 6% of total employment).
- In the 2001 to 2008 period at the Canada level, resource manufacturing employment became a larger share of total manufacturing employment (up from 51% to 54%) because resource manufacturing employment declined less (-6%) compared to the decline of all “other” manufacturing employment (-18%).
- Also, in the 2001 to 2008 period, resource manufacturing employment become relatively more important in rural and small town areas as the decline (-3%) was smaller in rural and small town areas compared to the decline in larger urban centres (-7%).
- Within rural and small town areas at the Canada level, 9% of total employment in 2008 was resource sector manufacturing employment. This ranged from 14% within the rural and small town areas of Quebec to 2% within the rural and small town areas of Saskatchewan.
- Within rural and small town areas in 2008, employment in wood processing accounted for the largest share of resource sector manufacturing employment (43%).



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Symbols

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.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0 ^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
p	preliminary
r	revised
x	suppressed to meet the confidentiality requirements of the Statistics Act
E	use with caution
F	too unreliable to be published

Introduction

Traditionally, the resource sectors (agriculture, fishing, forestry, mining and energy) have employed a relatively large share of the rural workforce. In the late 1800s and early 1900s, these sectors were the driving force behind the expansion of rural settlements in Atlantic coastal communities, on the Prairies and in the northern areas of British Columbia, Ontario and Quebec.

In recent decades the resource sector has seen many changes as employment has shifted from primary commodity production to manufacturing and then to the service sectors. For instance, employment has shifted from farming and log harvesting to food processing and wood processing. Similar to the patterns in other sectors, employment in resource sectors has become more knowledge intensive. Thus, there is the need for technical training which is not always available in rural areas. Related to this is the increased importance of various ancillary services (such as research, input services and marketing). In addition, some economic activities traditionally associated with the production process in resource sectors have been relocated. Some of this relocation has been from rural to urban areas in Canada and some relocation has occurred on a global scale.

This bulletin reviews employment in resource sector manufacturing (or resource sector processing). To place this activity in context, we use the concept of a value chain. This concept focuses on the structure, nature and governance of economic activities associated with the transformation of a raw commodity (in our case) into a consumer item. Part of the analysis of a value chain includes a review of the geographic location (and the change over time) of each stage of the value chain. This contributes to the analysis of economic development options for a rural community as well as providing a better understanding of the role of the rural economy in the national economy.

One major finding of this bulletin is that employment in the manufacturing or processing of raw products from the resource sector is declining generally everywhere in Canada, but more slowly than “other” manufacturing employment—and it is declining more slowly in rural and small town areas which are relatively more dependent on resource sector manufacturing, compared to urban areas.

Alasia and Hardie (forthcoming) show the level and the change in employment during the 1990s throughout the entire value chain associated with resource production in Canada. Our bulletin focuses only on the resource manufacturing part of the value chain and we focus specifically on the 2001 to 2008 period.

Resource manufacturing is divided into four sub-sectors:

- Food processing (as part of the agricultural and fishing value chain)
- Wood processing (as part of the forestry value chain);
- Petroleum processing (as part of the oil and gas value chain); and
- Metal processing (as part of the mining value chain).

All other manufacturing sub-sectors are grouped together as non-resource or “other” manufacturing. See Appendix Table 1 for the list of the sub-sectors assigned to each resource manufacturing value chain and the sub-sectors assigned to “other” manufacturing.

Using our delineation of resource sectors, we have tabulated data from Statistics Canada’s Labour Force Survey (Box 1) to profile the manufacturing or processing employment in the value chain of these resource sectors. We compare rural and small town areas and larger urban centres (Box 2). As well, we compare the level of manufacturing employment over time (2001 to 2008); we show

the change in the share of rural and small town manufacturing that is contributed by resource manufacturing; and we show the role of rural and small town areas in Canada’s overall resource manufacturing sector.

However, first, we review manufacturing employment trends over the past 30 years in order to place the 2001 to 2008 period in historical context.

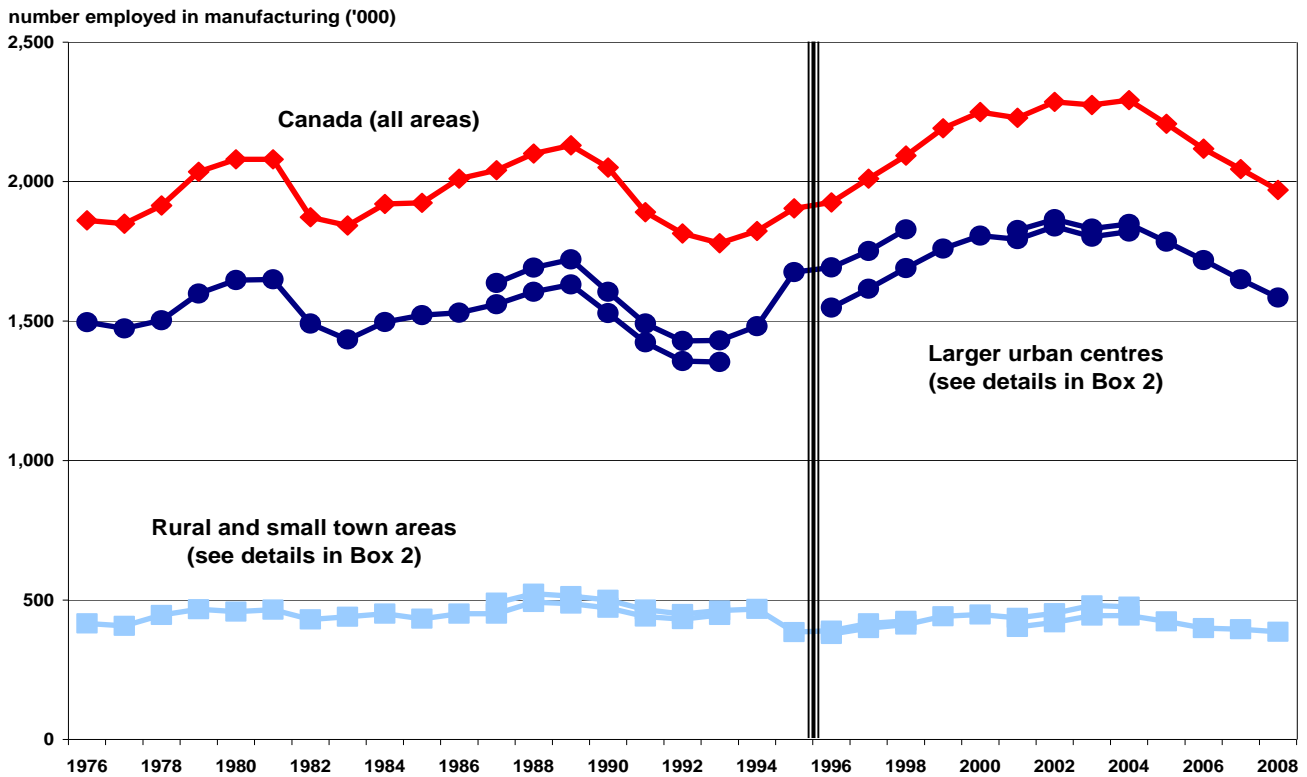
Manufacturing employment has fluctuated during the past 30 years

Since 1976 in Canada, the level of employment in manufacturing reached historically high levels in

1980 and 1981 (2.1 million workers), in 1989 (2.1 million workers) and again in 2004 (2.3 million workers) (Figure 1). But manufacturing employment, as a percent of total employment, has declined. At each historically high level, the share of the total workforce that was employed in manufacturing was lower (1981: 19%; 1989: 17%; 2004:14%). In 2008, manufacturing employment had declined to 2.0 million workers – representing 12% of Canada’s workforce (Bernard, 2009).

Rural and small town (RST) areas have been losing manufacturing jobs since 2004. This mirrors the pattern of decline in larger urban centres (LUC) over the same time period.

Figure 1 In 2008, 386,000 workers were employed in manufacturing in rural and small town areas, Canada

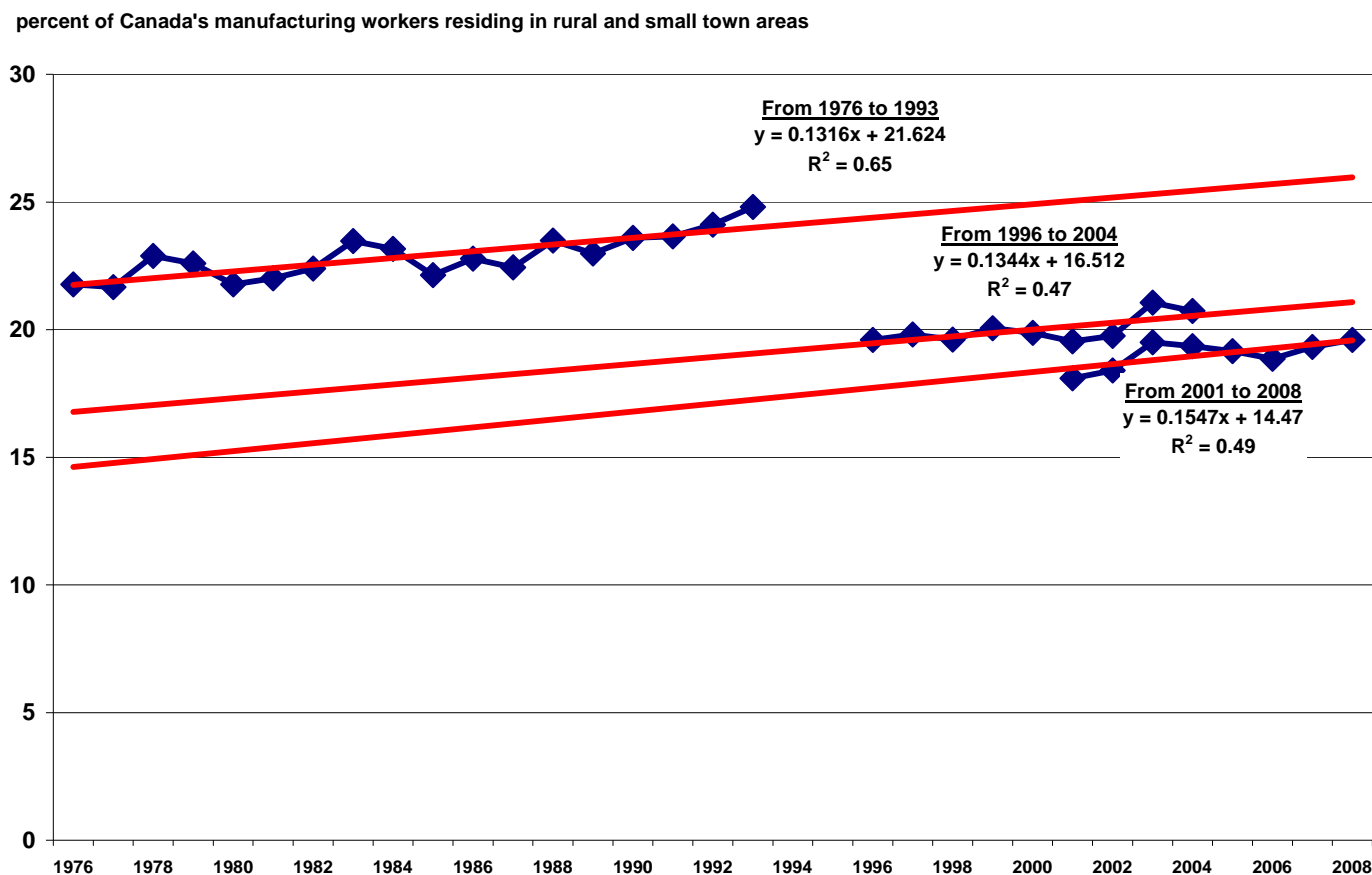


Note: Some of the change in 1995 is due to a change in the sample design.
 Source: Statistics Canada, 1976 to 2008, Labour Force Survey.

Generally, however, when overall manufacturing employment is increasing, it increases faster in RST areas and when manufacturing employment is declining, it declines more slowly in RST areas. Over time, the share of Canada’s total manufacturing employment located in RST areas

has been increasing (Figure 2). In the sense that RST areas are increasing their share of Canada’s manufacturing employment relative to LUCs, RST areas are therefore ‘competitive’ in terms of employment in manufacturing jobs, relative to LUCs¹.

Figure 2 Rural and small town Canada has been gaining manufacturing employment, relative to Canada as a whole



Note: As noted in Box 2, the data for the 1976 to 1993 period uses data for “non-self representing units” in the Labour Force Survey and, for this period, we show a trend line and we show the regression coefficients for this trend line. Similarly, we use the 1996 delineation of rural and small town areas for the data from 1996 to 2004 along with a trend line for this period and the regression coefficients for this trend line. Finally, we use the 2001 delineation of rural and small town areas for the data from 2001 to 2008 and again we show a trend line and the regressions coefficients for this trend line.

The delineation of rural and small town areas changed in 1995 in the Labour Force Survey.

Source: Statistics Canada, 1976 to 2008, Labour Force Survey.

1. For the 2001 to 2008 period, the simple regression line (Figure 2) indicates that if the year advances by one year (reported as “x” in the equation), the percent of Canada’s manufacturing employment located in RST areas has increased by 0.1547 percentage points. The trend line, when extended back to 1976,

starts at 14.47 percentage points. The R² indicates that 48.75% of the variation in the data is “explained” by the “x” (i.e. by the passage of time), which implies a relatively strong relationship. Thus, 51.25% of the variation in the data may be attributed to other factors.

Despite a rising Canadian economy, there was a decline in overall manufacturing employment in the 2001 to 2008 period

In Canada between 2001 and 2008, a strong economy emerged with an employment increase of 15%—representing a 2.2 million employment increase over this period. This growth occurred during a period of rising commodity prices, increasing energy prices and expanding domestic demand for goods and housing in a milieu of

historically low levels of inflation and interest rates and government current account surpluses.

However, manufacturing did not keep pace with this employment growth. During the mid to late 1990s, manufacturing was the major contributor to increasing employment. But this ended in 2001 when the high-tech melt down led to major layoffs from which the high-tech manufacturing sector never recovered (Ferrao, 2006).

Box 1 Data sources

Labour Force Survey (LFS)

This study uses annual data from Statistics Canada’s Labour Force Survey (LFS) from 2001 to 2008. The LFS provides estimates of employment and unemployment.

The LFS covers the civilian, non-institutionalized population 15 years of age and over and excludes persons living on reserves and other Aboriginal settlements in the provinces, full-time members of the Canadian Armed Forces and the institutionalized population.

Since the LFS is a sample survey, all LFS estimates are subject to sampling variability such as sampling errors and non-sampling errors. Sampling errors associated with survey estimates are measured using coefficients of variation (CVs), which express the standard error as a percent of the estimate itself. The CV is used to give an indication of the uncertainty associated with the estimate. At the Canada and provincial level, the approximate coefficient of variation can be obtained from tables provided in Statistics Canada (2008).

All the data reported in this bulletin is defined as acceptable or better, that is with a CV of 15% or less. For employment in resource manufacturing and “other” manufacturing at the provincial level of geography, much of the year-to-year change in employment levels or the change in employment from the peak year to the level in 2008 had a CV between 15% and 30% and is indicated with an ‘E’—data should be used with caution; or had a CV of 30% or greater and is indicated with an ‘F’—the sample size is too small to produce reliable estimates and thus were not statistically significant.

North American Industry Classification System (NAICS)

This classification system is used for organizing economic data by industry, and is used by Canada, Mexico and the United States. It is designed to provide common definitions of the industrial structure of the three countries and a common statistical framework to facilitate the analysis of the three economies.

In this study, the manufacturing sector (NAICS code 31 to 33) has been disaggregated into resource manufacturing and “other” manufacturing sub-sectors. See Appendix 1 for a detailed list.

For more information about NAICS, see Statistics Canada (2007).

Also, at this time, there was the attack on the World Trade Center in New York City and a USA recession when the economy contracted and factories ran below capacity (Bowlby, 2002).

The years 2002 and 2004 were the only two years during the 2001 to 2008 period when total manufacturing in Canada saw employment gains. During 2002, Canada's economy strengthened further as housing and exports picked up considerably. Manufacturing had the largest employment gains (5.6%) of all industries, mainly seen in food and machinery (Bowlby, 2003).

Canada also saw a manufacturing employment gain in 2004, albeit a slight gain of 0.7%. Manufacturing exports increased despite a continuing rise in the Canadian dollar that made Canadian goods more expensive for American buyers. The strongest growth in manufacturing exports was for steel and wood products, the latter due largely to USA housing construction demand. Overall, in 2004, Canada saw economic growth of 5.1% which was the largest rate of growth in 27 years (Cross, 2005).

However, by 2005, the increasing value of the Canadian dollar caught up to manufacturing and factories trimmed their workforce to remain competitive. This was a significant period of manufacturing employment contraction with a 174,400 employment decline over the 2004 to 2006 period. These two years represented the two largest annual average declines in manufacturing employment since 1992, a year in the midst of a recession (Kowaluk, 2006).

After 2005, overall manufacturing employment declined. By 2008, manufacturing employment was 12% lower compared to 2001 (1.97 million compared to 2.22 million). From the employment peak year of 2004 (with 2.29 million employed), manufacturing employment had declined by 14%.

This pattern of change in manufacturing employment occurred in the context of an overall

employment increase of 15% for all industries in Canada between 2001 and 2008. The employment increase for all sectors excluding manufacturing was 19% from 2001 to 2008.

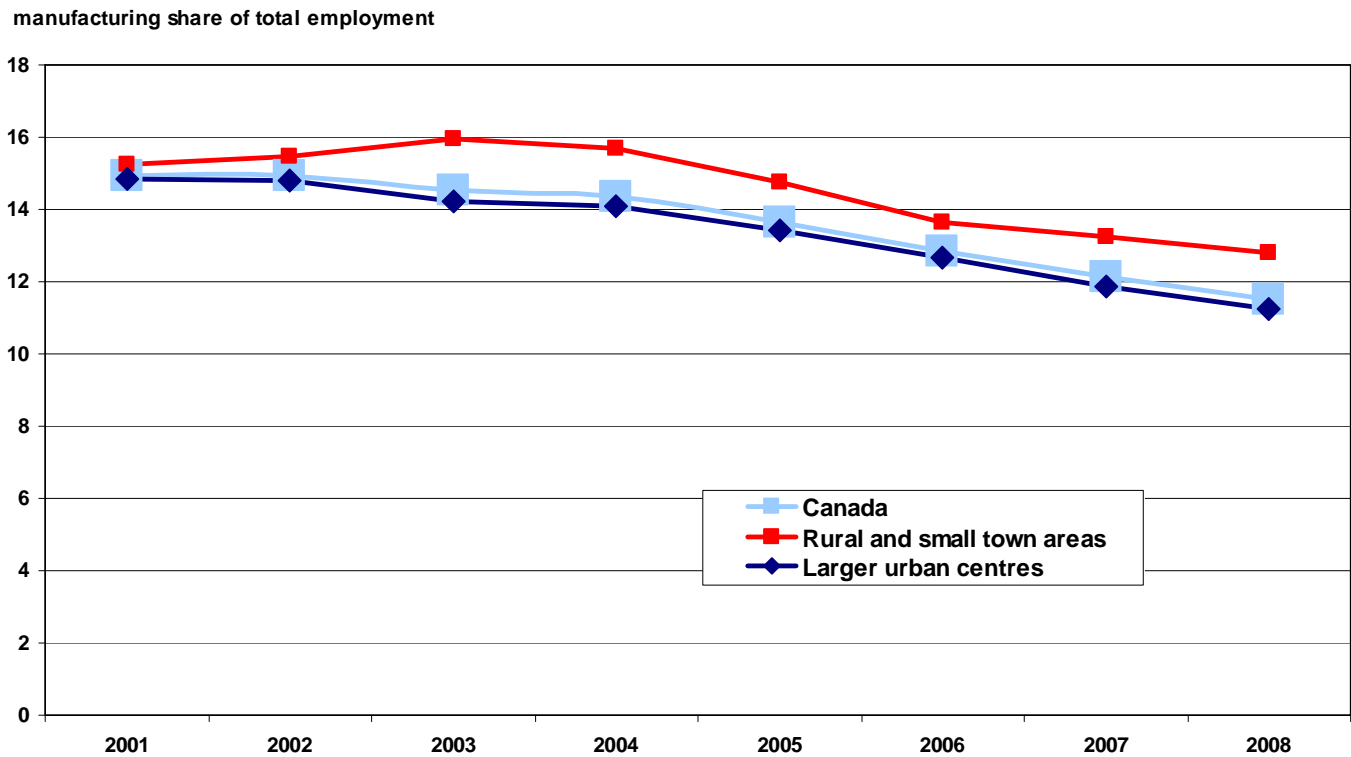
From 2001 to 2004, rural and small town areas had stronger growth of manufacturing employment compared to larger urban centres; after 2004, it declined similarly to the decline in larger urban centres

Between 2001 and 2008, manufacturing employment as a percent of total employment in Canada dropped from 15% to less than 12%² (Figure 3)—due both to an overall increase in employment levels and a 12% decline in manufacturing employment. RST areas saw their manufacturing employment decline as a share of their total employment from 15% to 13%. Similar to the situation at the Canada level, this decline in share was due to an overall increase in employment in all sectors, but also a decline (-4%) in the number employed in manufacturing.

However, between these years, RST areas had greater employment variability. In 2004, RST manufacturing employment peaked with a 10% increase over the 2001 level. LUC manufacturing employment also peaked in 2004 but it was only 1% higher than the 2001 level.

2. For more information on manufacturing employment trends in Canada, see Bernard 2009.

Figure 3 Rural and small town areas had a greater share of their total employment in manufacturing employment, 2001 to 2008



Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

From 2004 to 2008, RST manufacturing employment had a drop of 14%, equal to the decline in LUCs over this period.

Despite the variability in manufacturing employment, RST areas maintained a slightly increasing share of Canada’s total manufacturing employment—approaching 20% in 2008³ (Figure 2 and Table 1).

Resource manufacturing employment is larger than “other” manufacturing employment

Using the concept of a value chain for each resource sector, we assigned manufacturing sub-

sectors to the value chain of each resource sector, as follows:

- Food processing (as part of the agricultural and fishing value chain);
- Wood processing (as part of the forestry value chain);
- Petroleum processing (as part of the oil and gas value chain); and
- Metal processing (as part of the mining value chain).

As a group, they are referred to as resource manufacturing and all other manufacturing is referred to as “other” manufacturing (see Appendix Table 1 for details).

3. The data for 2001 to 2008 are presented using the 2001 delineation of rural and small town areas (Box 2).

Box 2 Geography definitions

This paper uses a geographical concept of Rural and Small Town Canada that is a component of Statistics Canada's "Statistical Area Classification" (Statistics Canada 2007a, 2007b). This classification was developed to provide a functional grouping of individuals according to the type of labour market in which they live.

Rural and small town (RST) areas include towns or municipalities (defined by census subdivisions or CSDs) outside of larger urban centres.

Larger urban centres (LUCs) include both census metropolitan areas (CMAs) and census agglomerations (CAs).

Census metropolitan areas (CMAs) have an urban core with a population of at least 100,000. (This definition changed marginally in 2006 but the data from the Labour Force Survey used in this bulletin is based on the 2001 delineation.)

Census agglomerations (CAs) have an urban core population of at least 10,000.

To approximate the functional labour market around their urban core, both CMAs and CAs include all neighbouring municipalities where 50% or more of resident employed individuals commute to the urban core. Commuting flows are a proxy for the economic and social integration between the urban core and the surrounding municipalities (For details on definitions and the delineation methodology, see Statistics Canada [2007a, 2007b]).

In Figures 1 and 2, the data shown for 1976 to 1993 use non-self representing units (NSRU) to proxy RST areas. NSRU areas are smaller municipalities (with a population generally less than 10,000 inhabitants). The data for 1987 to 1998 use the 1986 delineation of CMA/CA and non-CMA/CA areas. The data for 1996 to 2004 use the 1996 delineation of CMA/CA and non-CMA/CA areas. The data for 2001 to 2008 use the 2001 delineation of CMA/CA and non-CMA/CA areas.

Rural and Small Town Canada Analysis Bulletins address issues of interest to rural Canada such as employment trends, education levels, health status, Internet usage and number of firms by type, among others. There are a number of alternative ways to represent urban and rural areas (Puderer 2009, du Plessis et al. 2001). Analysts are encouraged to choose the geographic grid that best meets the requirements of the issue being considered and should bear this in mind when reviewing this study.

In 2001 in Canada, both resource manufacturing and "other" manufacturing were almost evenly split in terms of their employment levels, each with about 1.1 million workers (Figure 4 and Table 1). By 2004, resource manufacturing employment increased by 92,000 or 8%, but by 2008, employment had decreased by 66,000 (-6%) returning to an employment level of about 1.1 million.

"Other" manufacturing had a less variable and steady employment decline of 205,000 (-18%) from 2002 to 2008. By 2008, Canadian employment in "other" manufacturing had declined to 905,000. Thus, by 2008, resource manufacturing accounted for slightly more than half of all manufacturing jobs at the Canada level (54%).

Table 1 Within rural and small town areas, resource manufacturing employment is larger than “other” manufacturing employment

		2001	2002	2003	2004	2005	2006	2007	2008	Employment difference, 2001 to 2008 number ('000)	Percent difference, 2001 to 2008 %	Peak employment year	Employment difference, peak year to 2008 number ('000)	Percent difference, peak year to 2008 %
Canada	Total industries	14,946	15,310	15,672	15,947	16,170	16,484	16,866	17,126	2,180	15	2008	..	..
	Total manufacturing	2,229	2,286	2,275	2,292	2,208	2,118	2,045	1,970	-259	-12	2004	-322	-14
	Resource manufacturing	1,132	1,176	1,185	1,225	1,202	1,149	1,097	1,066	-66	-6	2004	-159	-13
	"Other" manufacturing	1,097	1,110	1,090	1,067	1,006	969	948	905	-193	-18	2002	-205	-18
	Total industries	2,642	2,715	2,781	2,825	2,862	2,924	2,985	3,015	373	14	2008	..	..
Rural and small town areas	Total manufacturing	403	421	444	444	423	399	395	386	-17	-4	2003	-58	-13
	Resource manufacturing	275	288	308	311	294	276	264	266	-9 F	-3	2004	-45	-14
	"Other" manufacturing	129	132	136	133	129	124	131	120	-8 F	-6	2003	-16	-12
	Total industries	12,304	12,595	12,891	13,123	13,307	13,560	13,882	14,111	1,807	15	2008	..	..
Larger urban centres	Total manufacturing	1,826	1,865	1,831	1,849	1,785	1,718	1,650	1,584	-242	-13	2002	-281	-15
	Resource manufacturing	857	888	877	914	908	873	833	800	-57	-7	2004	-114	-12
	"Other" manufacturing	969	977	954	935	877	845	817	784	-184	-19	2002	-193	-20

Table 1 Within rural and small town areas, resource manufacturing employment is larger than “other” manufacturing employment (continued)

		2001	2002	2003	2004	2005	2006	2007	2008
		%							
Canada	Manufacturing share of total industries	15	15	15	14	14	13	12	12
	Resource manufacturing share of total manufacturing	51	51	52	53	54	54	54	54
	"Other" manufacturing share of total manufacturing	49	49	48	47	46	46	46	46
Rural and small town areas	Manufacturing share of total industries	15	15	16	16	15	14	13	13
	Resource manufacturing share of total manufacturing	68	69	69	70	70	69	67	69
	Other manufacturing share of total manufacturing	32	31	31	30	30	31	33	31
	Resource manufacturing share of total economy	10	11	11	11	10	9	9	9
	"Other" manufacturing share of total economy	5	5	5	5	4	4	4	4
Larger urban centres	Manufacturing share of total industries	15	15	14	14	13	13	12	11
	Resource manufacturing share of total manufacturing	47	48	48	49	51	51	50	50
	Other manufacturing share of total manufacturing	53	52	52	51	49	49	50	50
	Resource manufacturing share of total economy	7	7	7	7	7	6	6	6
	"Other" manufacturing share of total economy	8	8	7	7	7	6	6	6

Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

Employment in resource manufacturing is more important within rural and small town areas, compared to larger urban centres

The net losses in Canadian resource manufacturing employment mainly occurred in LUCs, rather than in RST areas (Figure 4 and Table 1).

In 2001, the level of resource manufacturing employment was 275,000 in RST areas. This was followed by an employment gain of 36,000 (13%) to a 311,000 employment peak in 2004. The following four years saw a 45,000 employment loss (-14%). By 2008, resource manufacturing employment in RST areas was 266,000.

Resource manufacturing followed a similar employment pattern in LUCs with an employment level of 857,000 in 2001, a 2004 employment peak 914,000 jobs (or a gain of 7%) followed by a four year employment loss of 114,100 but with a slightly smaller rate of decline (-12%), compared to RST areas. By 2008, resource manufacturing employment was 800,000 in larger urban centres.

Therefore, both RST areas and larger urban centres gained and lost resource manufacturing employment and by 2008, there was a net loss of resource manufacturing employment for both. But the rate of decline over the study period was relatively less in RST areas (-3%⁴) compared to the decline in larger urban centres (-7%).

In RST areas, the employment in “other” manufacturing ranged from a 2003 peak of 136,000 to a low in 2008 of 120,000 which was a decline of 12%⁵. However, for LUCs, employment in “other” manufacturing decreased by 20%, which corresponds to an employment decline of 193,000 since 2002.

In RST areas, resource manufacturing was relatively more important than “other” manufacturing (Figure 4); in fact, in 2008, resource manufacturing represented over two-thirds of total RST manufacturing employment. This share was essentially maintained during the study period. Resource manufacturing also represented 9% of rural employment in all sectors in 2008, a drop of 2 percentage points since 2004 (Appendix Table 2A). Employment in “other” manufacturing represented 4% of the total rural employment and essentially remained unchanged throughout the study period.

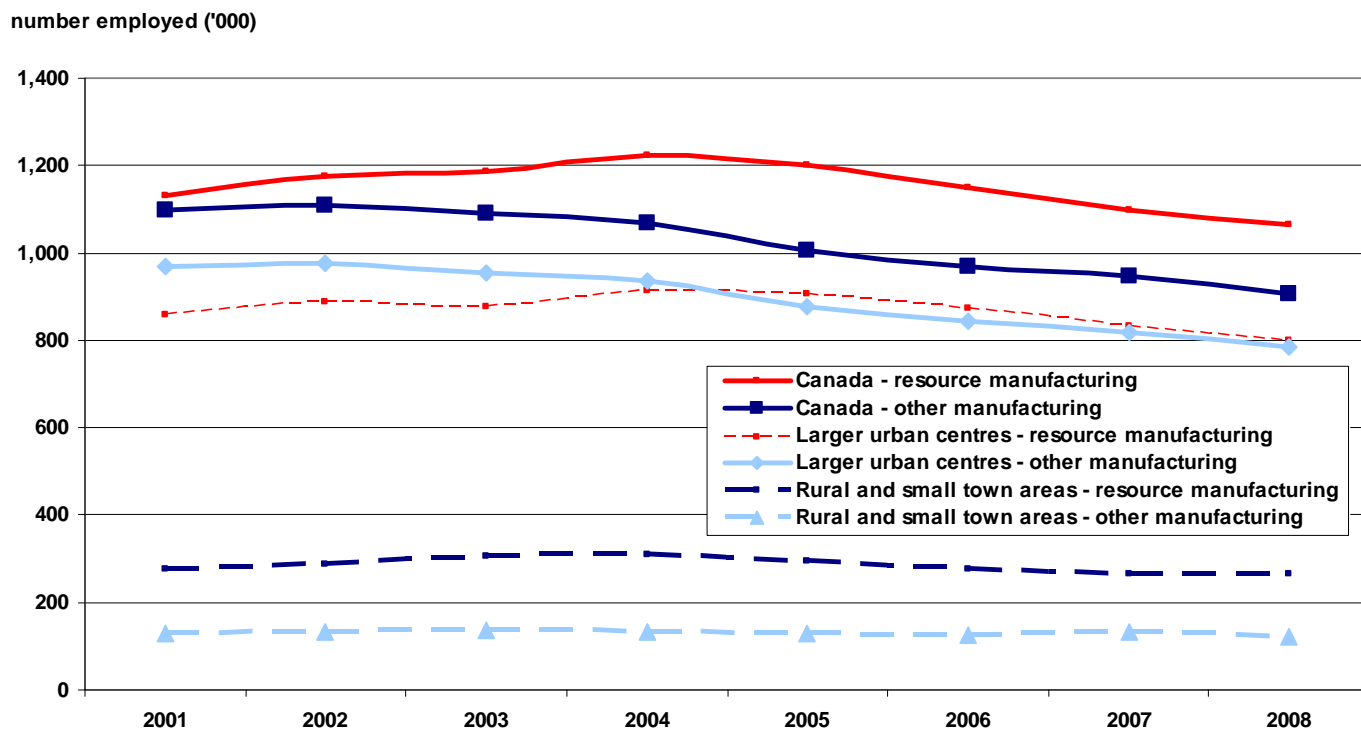
In 2001 in LUCs, resource manufacturing employment represented 47% of their total manufacturing employment. By 2008, it had increased to 50% of manufacturing employment in LUCs. In regard to total employment in larger urban centres, both resource manufacturing and “other” manufacturing employment marginally lost employment share (1 to 2 percentage points). By 2008, resource manufacturing and “other” manufacturing provided an equal share (6%) of total LUC employment.

To summarize, the contraction of the number employed over the 2001 to 2008 period in resource manufacturing in RST areas was small (-3%) (this is statistically insignificant) compared to the decline in LUCs (-7%). Within RST areas over this period, resource manufacturing employment provided more jobs than “other” manufacturing. In 2008, resource manufacturing represented 69% of all manufacturing employment and 9% of total employment within RST areas. Within larger urban areas, resource manufacturing employment was relatively less important. In 2006, it represented half of those employed in manufacturing and 6% of overall employment in LUCs.

4. This loss was statistically insignificant using a coefficient of variation of 15%.

5. While the 2003 to 2008 percent decrease is statistically significant, the year-to-year decreases are not.

Figure 4 Employment in resource manufacturing peaked in 2004 in Canada



Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

In rural and small town areas, wood processing provides the most employment within the resource manufacturing group

In 2008 in RST areas, the level of employment in wood processing (114,000) represented 43% of RST resource manufacturing employment (Figure 5 and Appendix Table 2A). Food processing accounted for 26% (69,000 employed) and metal processing another 23% (with 61,000 employed) of resource manufacturing jobs. Lastly, 8% (22,000) of the employment in resource manufacturing was contributed by petroleum processing.

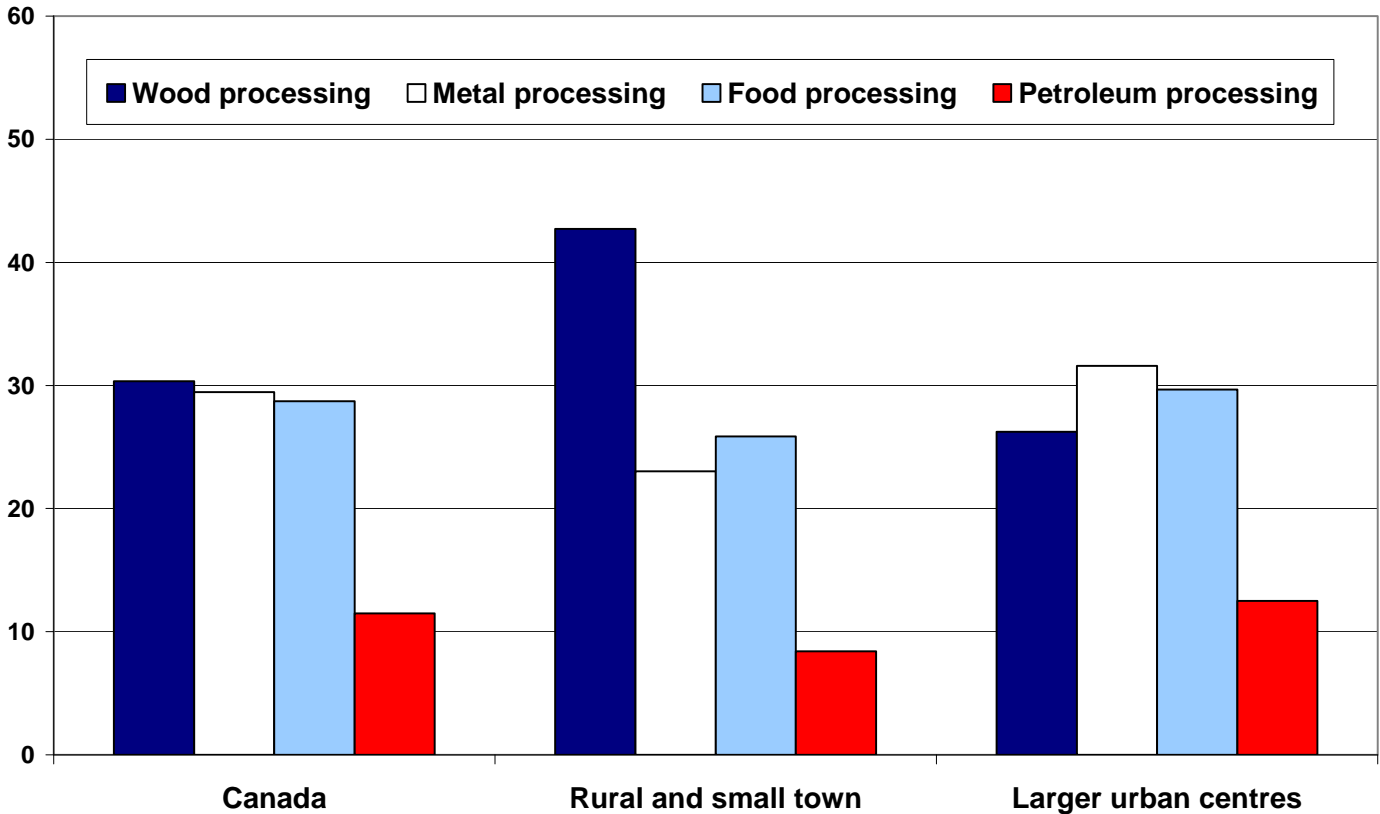
From 2001 to 2008, in RST areas, when we look across the four resource manufacturing groups,

only metal processing had an increasing employment trend⁶ (Appendix Table 2A). Nationally and in LUCs, only food processing had a positive employment trend.

6. Only trends can be referred to here for RST as the change from 2001 to 2008 and the year-over-year change for most resource manufacturing sub-sectors is not statistically significant with a CV of 15%.

Figure 5 In rural and small town areas in 2008, wood processing provided 43% of resource manufacturing employment

percent distribution of resource manufacturing employment, 2008



Source: Statistics Canada, 2008, Labour Force Survey.

In three provinces, over one-half of resource manufacturing employment is found in rural and small town areas

Across Canada as a whole, 25% of resource manufacturing employment was found in RST areas in 2008 (Figure 6). This is a slightly higher intensity than the RST share of Canada’s total employment (21%). However, there was considerable variation across the provinces

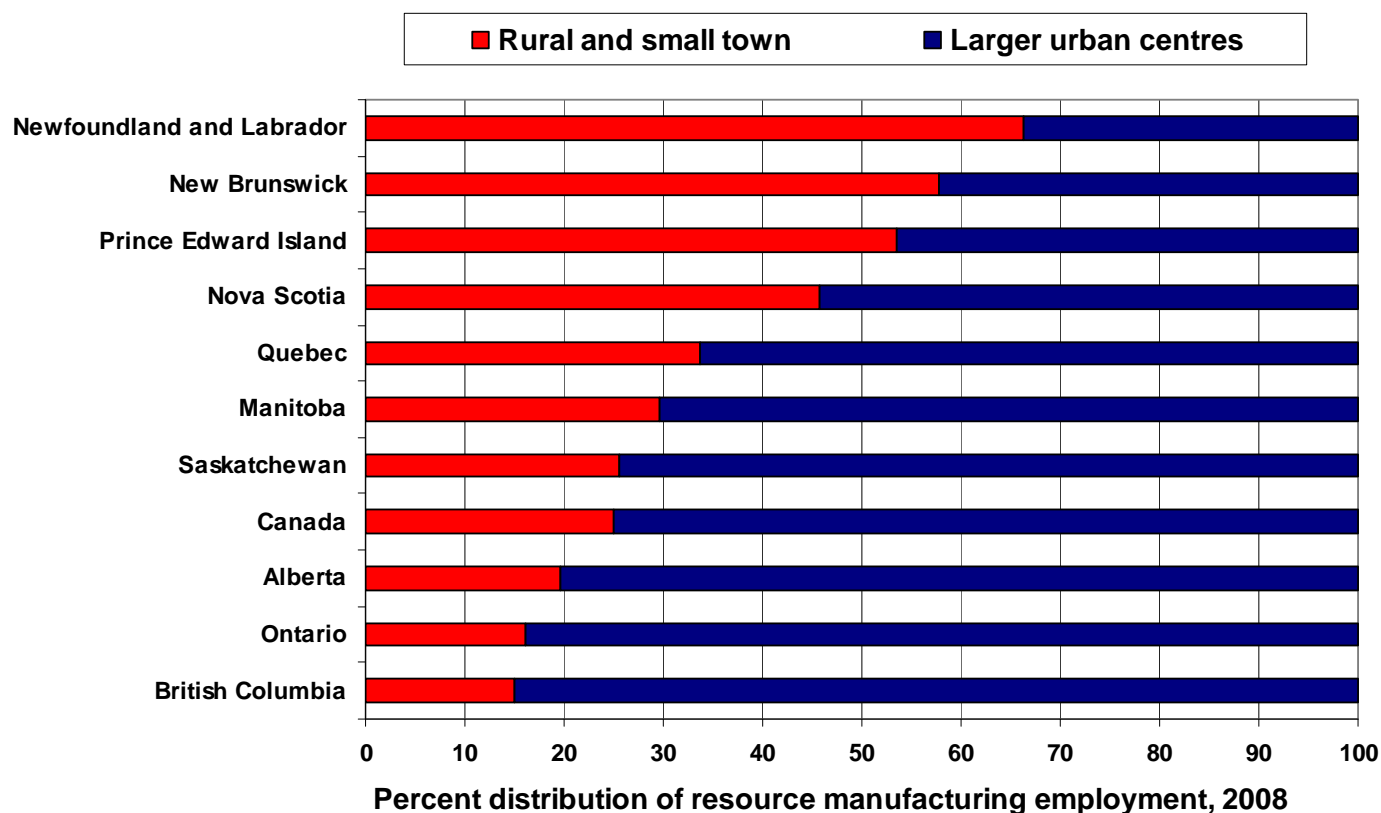
Atlantic Canada has a particularly high share of their resource manufacturing employment located in their RST areas. Newfoundland and Labrador (66%), New Brunswick (58%) and Prince Edward

Island (53%) had more than one-half of their resource manufacturing employment in RST areas.

Only three provinces had a lower share of resource sector jobs in RST areas compared to Canada as a whole – Alberta (20%), Ontario (16%) and British Columbia (15%).

In absolute numbers, Quebec had the largest number of resource manufacturing workers in RST areas (104,000 workers) (Appendix Table 2F) followed by Ontario (66,000 workers) (Appendix Table 2G).

Figure 6 In Newfoundland and Labrador, 68% of resource manufacturing employment was located in rural and small town areas, 2008



Source: Statistics Canada, 2008, Labour Force Survey.

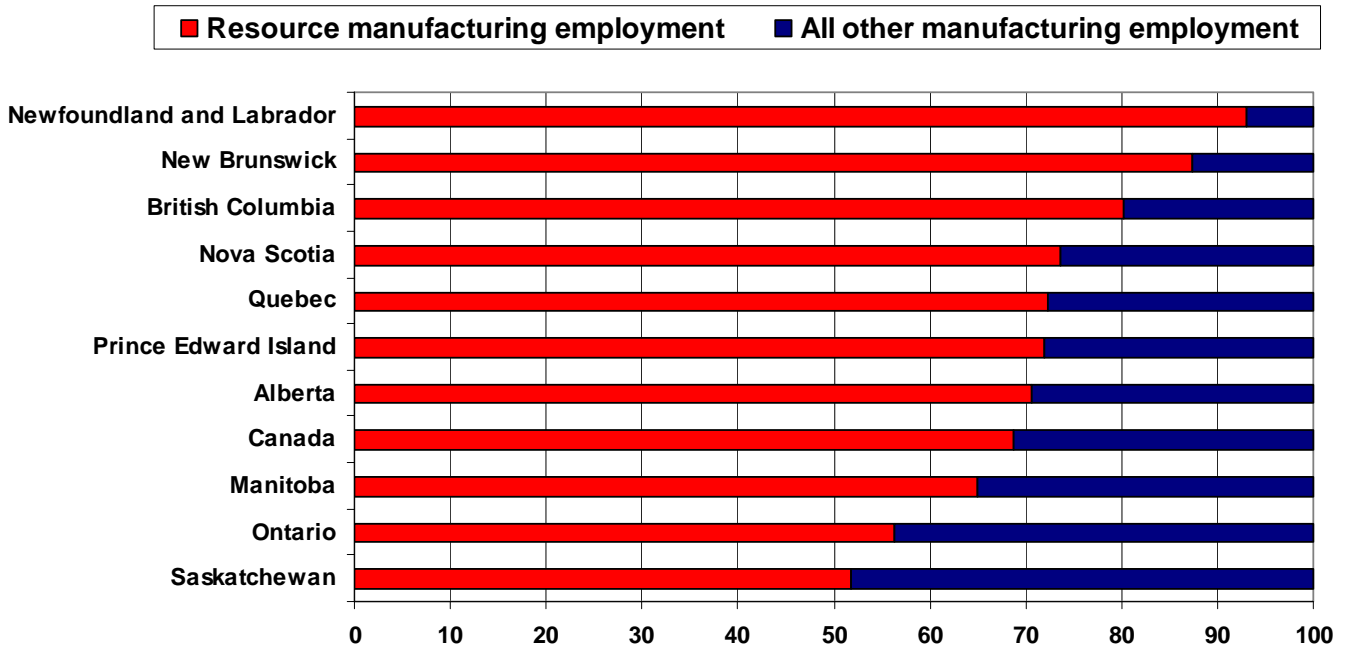
Rural and small town manufacturing employment is relatively dependent on resource manufacturing

Above, Figure 6 showed that, within some provinces, a relatively small share of resource manufacturing is located in RST areas. However, within RST areas in Canada, resource manufacturing contributes more than two-thirds (69%) of the total manufacturing employment (Figure 7).

With the RST area of each province, resource manufacturing accounted for more than one-half of all manufacturing employment, ranging from a

high of 87% in RST Newfoundland and Labrador to a low of 53% in the RST areas of Saskatchewan.

Figure 7 In the rural and small town areas of three provinces, over 80% of manufacturing employment was in resource manufacturing, 2008



Percent distribution of manufacturing employment within rural and small town areas, 2008

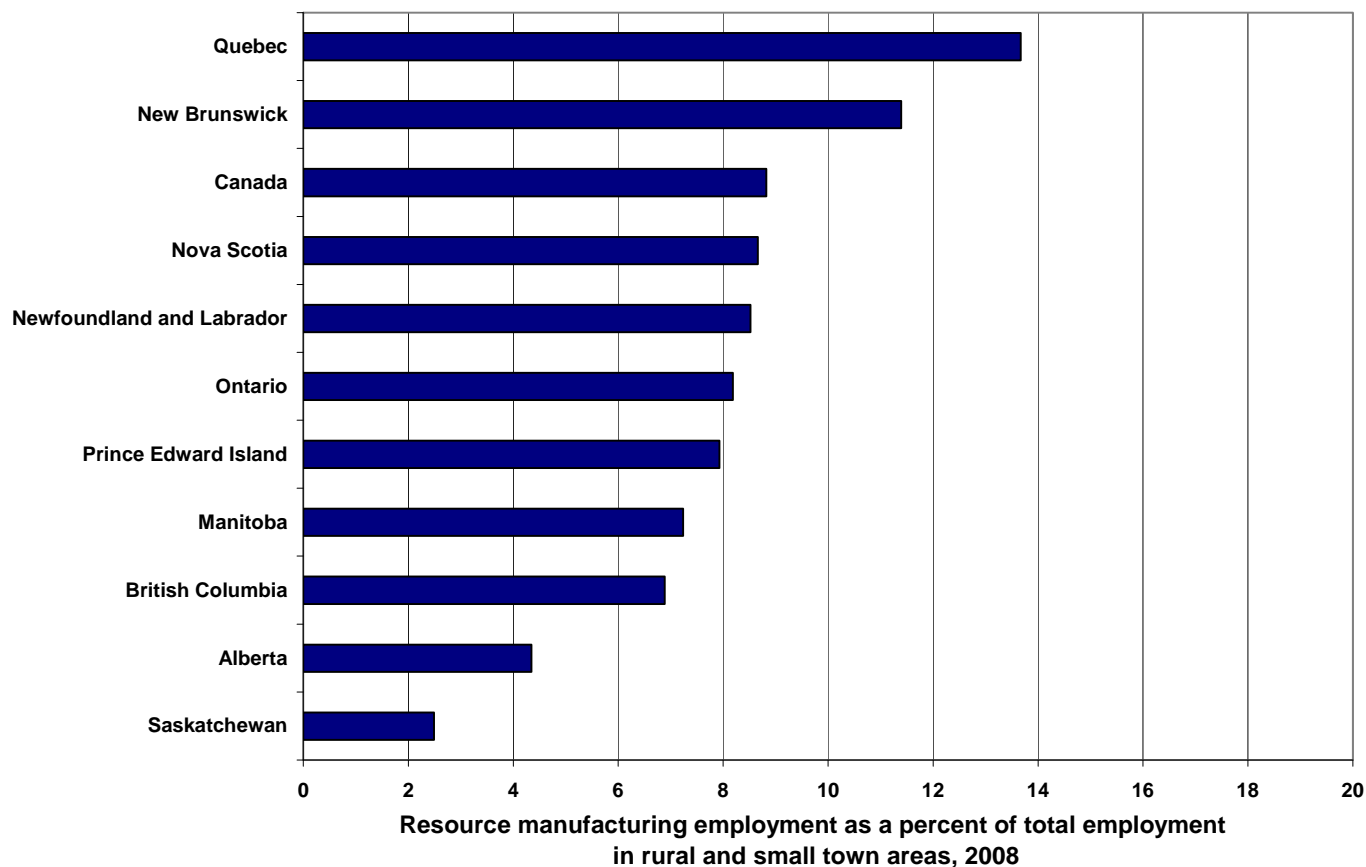
Source: Statistics Canada, 2008, Labour Force Survey.

Moreover, resource manufacturing employment is also important in LUCs. In 2008, 50% of manufacturing employment in LUCs was in resource manufacturing. Nine provinces had over 50% of larger urban centres manufacturing employment involved in resource manufacturing—ranging from 82% in the LUCs of New Brunswick (Appendix Table 2E) to 52% in the LUCs of Quebec (Appendix Table 2F). Only Ontario had a minority (44%) in their LUCs (Appendix Table 2G).

Resource manufacturing contributed less than 10% to the total rural and small town employment in most provinces, in 2008

In regard to the total employment in RST areas, resource manufacturing is most important in Quebec. In this province, resource manufacturing contributed 14% of the total RST employment (Figure 8). New Brunswick followed with an 11% employment contribution from resource manufacturing. All the other provinces’ resource manufacturing employment contributions in RST areas were below the Canada average of 9%. In Saskatchewan, 2% of RST employment was in resource manufacturing.

Figure 8 In rural and small town Quebec, resource manufacturing contributed 14% of total employment, 2008



Source: Statistics Canada, 2008, Labour Force Survey.

Summary

Over the last 30 years, the highest peak in manufacturing employment in Canada occurred in 2004. This sector has been declining since then in both rural and small town areas and in larger urban centres. In recent decades, rural and small town manufacturing employment has grown faster than or declined slower than manufacturing employment in larger urban centres. Over time, rural and small town areas have increased their share of Canada’s manufacturing employment.

Within rural and small town areas in 2008, manufacturing employment represented 13% of

total employment. Within the rural and small town areas of each province, the range was from 19% in Quebec to 5% in Saskatchewan.

In order to learn more about the manufacturing activities in rural and small town areas with an emphasis on resource sector manufacturing, two groups of manufacturing sub-sectors were created: resource sector manufacturing and “other” manufacturing. Resource sector manufacturing was created by combining the sub-sectors in four sets of value chains: food processing (as part of the agricultural and fishing

value chain); wood processing (as part of the forestry value chain); petroleum processing (as part of the oil and gas value chain) and metal processing (as part of the mining value chain). “Other” manufacturing includes the remaining manufacturing sub-sectors.

Employment in resource manufacturing is important to rural and small town areas. Directly linked to natural resources, rural and small town areas have a locational advantage and are often home to the next step in the processing of the natural resources.

In 2008, among manufacturing employment, resource sector manufacturing was a prominent employer in Canada’s rural and small town areas, where it contributed more than two-thirds (69%) of Canada’s total manufacturing employment in rural and small town areas.

Within rural and small town areas of each province, from 52% to 92% of total manufacturing employment was comprised of resource manufacturing.

As a percent of total employment in rural and small town areas, resource sector manufacturing employment contributed 9% of total employment at the Canada level. This ranged from 14% in Quebec to 2% of total employment in the rural and small town areas in Saskatchewan.

Over the 2001 to 2008 period in Canada, resource sector manufacturing declined more slowly than “other” manufacturing. During the same time, resource sector manufacturing declined more slowly in rural and small town areas compared to resource manufacturing employment in larger urban centres.

Thus, resource sector manufacturing employment has continued to provide a large share of total manufacturing employment in rural and small town areas. In recent years, resource sector manufacturing employment has become a higher

share of total manufacturing employment across Canada, and to a greater degree in rural and small town areas compared to larger urban centres.

However, while rural and small town areas are not losing their employment in resource manufacturing as fast as larger urban centres, they are nevertheless still reporting an employment decline.

Resource manufacturers tend to be relatively close to the resources they process. However, in our globalized economy, this may not economically sustain communities. Other considerations include: modernization and innovation to decrease cost and to diversify the production line; and the enhancement of their urban and international markets (Freshwater 2003). Given that a dependency on resource manufacturing may always be a reality for many rural communities, many of the present challenges driving the decline in resource manufacturing employment may be on-going.

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Appendix Table 1 List of industrial sectors according to the North American Industry Classification System, 2007

	North American Industry Classification System, 2007
Manufacturing sector	31-33
Resource manufacturing sub-sectors¹	
Food processing (as part of the agricultural and fishing value chain)	
Food Manufacturing	311
Beverage and Tobacco Product Manufacturing	312
Leather & Allied Product Manufacturing	316
Wood processing (as part of the forestry value chain)	
Wood Product Manufacturing	321
Paper Manufacturing	322
Furniture and Related Manufacturing	337
Petroleum processing (as part of the oil and gas value chain)	
Petroleum and Coal Product	324
Plastics and Rubber Manufacturing	326
Metal processing (as part of the mining value chain)	
Non-Metallic Mineral Manufacturing	327
Primary metal manufacturing	331
Fabricated Metal Product Manufacturing	332
“Other” manufacturing sub-sectors¹	
Textile mills	313
Textile product mills	314
Clothing Manufacturing	315
Printing Manufacturing	323
Chemical Manufacturing	325
Machinery Manufacturing	333
Computer and Electronic Manufacturing	334
Electric Equipment appliance Manufacturing	335
Transportation Equipment Manufacturing	336
Miscellaneous Manufacturing	339
Other sectors	
Agriculture Forestry Fishing and Hunting	11
Mining and Oil and Gas Extraction	21
Utilities	22
Construction	23
Wholesale Trade	41
Retail Trade	44-45
Transportation and Warehousing	48-49
Information and Cultural Industries	51
Finance and Insurance	52
Real Estate Rental and Leasing	53
Professional Scientific and Technical Services	54
Management of Companies and Enterprises	55
Administrative and Support	56
Educational Services	61
Health Care and Social Assistance	62
Arts Entertainment and Recreation	71
Accommodation and Food Services	72
Other Services (except Public Administration)	81
Public Administration	91

1. We assign 3-digit NAICS codes to the subsectors because the Labour Force Survey is coded at the 3-digit level.
Source: Statistics Canada, 2007b.

Appendix Table 2A Employment in manufacturing in the resource sector value chain, Canada, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
All areas											
Total employment ('000)	14,946	15,310	15,672	15,947	16,170	16,484	16,866	17,126	15	2008	..
Manufacturing: number employed ('000)	2,229	2,286	2,275	2,292	2,207	2,118	2,045	1,970	-12	2004	-14
Manufacturing: as a percent of total employment	15	15	15	14	14	13	12	12	..	..	..
Resource¹ manufacturing: number employed ('000)											
Food processing ²	281	300	306	318	312	294	301	306	9	2004	-4
Wood processing ³	383	400	411	417	384	370	343	323	-16	2004	-22
Petroleum processing	138	146	149	156	162	147	139	122	-11	2005	-25
Metal processing	330	330	319	334	344	338	313	314	-5	2005	-9
Resource ¹ manufacturing (subtotal)	1,132	1,176	1,185	1,225	1,202	1,149	1,097	1,066	-6	2005	-13
Resource¹ manufacturing: as a percent of total employment											
Food processing ²	2	2	2	2	2	2	2	2	..	..	..
Wood processing ³	3	3	3	3	2	2	2	2	..	..	..
Petroleum processing	1	1	1	1	1	1	1	1	..	..	..
Metal processing	2	2	2	2	2	2	2	2	..	..	..
Resource ¹ manufacturing (subtotal)	8	8	8	8	7	7	7	6	..	..	..
Resource¹ manufacturing: as a percent of total manufacturing employment											
Food processing ²	13	13	13	14	14	14	15	16	..	..	..
Wood processing ³	17	18	18	18	17	17	17	16	..	..	..
Petroleum processing	6	6	7	7	7	7	7	6	..	..	..
Metal processing	15	14	14	15	16	16	15	16	..	..	..
Resource ¹ manufacturing (subtotal)	51	51	52	53	54	54	54	54	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	18	18	20	19	19	19	19	20	..	..	..
Resource¹ manufacturing employment											
Food processing ²	25	24	24	24	23	24	23	22	..	..	..
Wood processing ³	33	34	37	37	35	33	32	35	..	..	..
Petroleum processing	17	16	17	16	18	17	17	18	..	..	..
Metal processing	16	17	18	17	18	17	19	19	..	..	..
Resource ¹ manufacturing (subtotal)	24	24	26	25	24	24	24	25	..	..	..

See notes at end of table.

Appendix Table 2A Employment in manufacturing in the resource sector value chain, Canada, 2001 to 2008 (continued)

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
All areas											
Total employment ('000)	14,946	15,310	15,672	15,947	16,170	16,484	16,866	17,126	15	2008	..
Manufacturing: number employed ('000)	2,229	2,286	2,275	2,292	2,207	2,118	2,045	1,970	-12	2004	-14
Manufacturing: as a percent of total employment	15	15	15	14	14	13	12	12	..	..	..
Resource¹ manufacturing: number employed ('000)											
Food processing ²	281	300	306	318	312	294	301	306	9	2004	-4
Wood processing ³	383	400	411	417	384	370	343	323	-16	2004	-22
Petroleum processing	138	146	149	156	162	147	139	122	-11	2005	-25
Metal processing	330	330	319	334	344	338	313	314	-5	2005	-9
Resource ¹ manufacturing (subtotal)	1,132	1,176	1,185	1,225	1,202	1,149	1,097	1,066	-6	2005	-13
Resource¹ manufacturing: as a percent of total employment											
Food processing ²	2	2	2	2	2	2	2	2	..	..	..
Wood processing ³	3	3	3	3	2	2	2	2	..	..	..
Petroleum processing	1	1	1	1	1	1	1	1	..	..	..
Metal processing	2	2	2	2	2	2	2	2	..	..	..
Resource ¹ manufacturing (subtotal)	8	8	8	8	7	7	7	6	..	..	..
Resource¹ manufacturing: as a percent of total manufacturing employment											
Food processing ²	13	13	13	14	14	14	15	16	..	..	..
Wood processing ³	17	18	18	18	17	17	17	16	..	..	..
Petroleum processing	6	6	7	7	7	7	7	6	..	..	..
Metal processing	15	14	14	15	16	16	15	16	..	..	..
Resource ¹ manufacturing (subtotal)	51	51	52	53	54	54	54	54	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	18	18	20	19	19	19	19	20	..	..	..
Resource¹ manufacturing employment											
Food processing ²	25	24	24	24	23	24	23	22	..	..	..
Wood processing ³	33	34	37	37	35	33	32	35	..	..	..
Petroleum processing	17	16	17	16	18	17	17	18	..	..	..
Metal processing	16	17	18	17	18	17	19	19	..	..	..
Resource ¹ manufacturing (subtotal)	24	24	26	25	24	24	24	25	..	..	..

1. "Resource manufacturing" refers to the processing of outputs from the resource primary sectors (agriculture, fishing, forestry, mining and oil and gas).

2. "Food processing" includes processing of fish, beverages, tobacco and leather

3. "Wood processing" includes sawmills, pulp and paper and furniture

Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

Appendix Table 2B Employment in manufacturing in the resource sector value chain, Newfoundland and Labrador, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
Rural and small town areas											
Total employment ('000)	89	88	93	99	93	89	89	93	5	2004	-6
Manufacturing: number employed ('000)	10	10	10	12	11	10	9	9	-16	2004	-27
Resource ¹ manufacturing: number employed ('000)	9	9	8	10	10	9	8	8	-9 E	2005	-23
Manufacturing: as a percent of total employment	11	12	10	12	12	11	10	9	..	..	..
Resource ¹ manufacturing: as a percent of total employment	10	11	9	10	11	10	9	9	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	86	91	88	85	94	92	91	93	..	..	..
Larger urban centres											
Total employment ('000)	115	119	119	115	121	127	129	128	11	2007	-1 E
Manufacturing: number employed ('000)	6	6	5	6	6	6	7	6	-4 F	2007	-25
Resource ¹ manufacturing: number employed ('000)	4	4	3	4	5	4	6	3	-11 F	2007	-42
Manufacturing: as a percent of total employment	5	5	4	5	5	5	6	4	..	..	..
Resource ¹ manufacturing: as a percent of total employment	3	3	2	3	4	3	5	3	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	67	64	51	71	75	69	81	62	..	..	..
All areas											
Total employment ('000)	204	207	212	214	214	216	217	220	8	2007	1
Manufacturing: number employed ('000)	16	16	15	17	17	16	16	14	-11	2004	-18
Resource ¹ manufacturing: number employed ('000)	14	14	11	15	15	14	14	12	-13	2005	-20
Manufacturing: as a percent of total employment	8	8	7	8	8	7	7	6	..	..	..
Resource ¹ manufacturing: as a percent of total employment	7	7	5	7	7	6	6	5	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	86	87	78	85	88	86	89	84	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	64	64	66	68	65	61	54	60	..	..	..
Resource ¹ manufacturing employment	64	67	74	68	69	65	55	66	..	..	..

1. "Resource manufacturing" refers to the processing of outputs from the resource primary sectors (agriculture, fishing, forestry, mining and oil and gas).
Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

Appendix Table 2C Employment in manufacturing in the resource sector value chain, Prince Edward Island, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
Rural and small town areas											
Total employment ('000)	26	28	27	28	29	28	29	29	11	2008	..
Manufacturing: number employed ('000)	3	4	3	4	4	4	4	3	10 F	2007	-11 E
Resource ¹ manufacturing: number employed ('000)	2	3	3	2	3	3	3	2	10 F	2007	-21
Manufacturing: as a percent of total employment	11	13	12	13	12	13	12	11	..		..
Resource ¹ manufacturing: as a percent of total employment	8	9	10	9	9	9	10	8	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	72	74	85	69	72	72	81	72	..	..	..
Larger urban centres											
Total employment ('000)	37	37	39	39	39	40	40	41	10	2007	2
Manufacturing: number employed ('000)	3	2	3	3	3	3	3	3	-6 F	2005	-9 F
Resource ¹ manufacturing: number employed ('000)	2	1	2	2	2	2	2	2	6 F	2007	-10 F
Manufacturing: as a percent of total employment	8	6	7	7	8	7	8	7	..	..	..
Resource ¹ manufacturing: as a percent of total employment	5	4	5	5	5	5	5	5	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	58	61	62	68	56	63	68	66	..	..	..
All areas											
Total employment ('000)	64	65	66	67	68	69	69	70	10	2008	..
Manufacturing: number employed ('000)	6	6	6	6	7	7	7	6	2 F	2005	-10
Resource ¹ manufacturing: number employed ('000)	4	4	4	5	4	5	5	4	5 F	2007	-14
Manufacturing: as a percent of total employment	9	9	9	9	10	10	10	9	..	..	..
Resource ¹ manufacturing: as a percent of total employment	6	6	7	7	6	7	7	6	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	68	69	71	73	65	68	75	70	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	48	60	53	56	53	55	54	52	..	..	..
Resource ¹ manufacturing employment	51	65	64	52	59	58	58	53	..	..	..

1. "Resource manufacturing" refers to the processing of outputs from the resource primary sectors (agriculture, fishing, forestry, mining and oil and gas).
Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

Appendix Table 2D Employment in manufacturing in the resource sector value chain, Nova Scotia, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
Rural and small town areas											
Total employment ('000)	145	151	149	155	144	138	142	139	-5	2004	-10
Manufacturing: number employed ('000)	22	22	23	23	20	18	19	16	-27	2005	-17
Resource ¹ manufacturing: number employed ('000)	17	18	18	19	15	14	14	12	-30	2004	-36
Manufacturing: as a percent of total employment	15	15	15	15	14	13	13	12	..	..	..
Resource ¹ manufacturing: as a percent of total employment	12	12	12	12	11	10	10	9	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	77	81	79	81	79	76	73	74	..	..	..
Larger urban centres											
Total employment ('000)	270	272	282	288	299	304	306	315	17	2008	..
Manufacturing: number employed ('000)	20	21	22	20	21	21	23	23	14	2008	..
Resource ¹ manufacturing: number employed ('000)	11	13	13	12	12	13	14	14	35	2008	..
Manufacturing: as a percent of total employment	7	8	8	7	7	7	7	7	..	..	..
Resource ¹ manufacturing: as a percent of total employment	4	5	5	4	4	4	5	5	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	53	59	60	60	59	60	63	62	..	..	..
All areas											
Total employment ('000)	415	423	431	442	443	442	448	453	9	2008	..
Manufacturing: number employed ('000)	42	44	45	44	40	39	41	39	-7	2003	-13
Resource ¹ manufacturing: number employed ('000)	28	30	32	31	28	26	28	26	-5 E	2003	-17
Manufacturing: as a percent of total employment	10	10	10	10	9	9	9	9	..	..	..
Resource ¹ manufacturing: as a percent of total employment	7	7	7	7	6	6	6	6	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	65	70	70	71	68	67	67	67	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	53	51	51	53	49	46	45	42	..	..	..
Resource ¹ manufacturing employment	62	59	58	60	56	51	49	46	..	..	..

1. "Resource manufacturing" refers to the processing of outputs from the resource primary sectors (agriculture, fishing, forestry, mining and oil and gas).
Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

Appendix Table 2E Employment in manufacturing in the resource sector value chain, New Brunswick, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
Rural and small town areas											
Total employment ('000)	143	142	140	147	151	158	152	152	6	2006	-4
Manufacturing: number employed ('000)	22	21	24	25	23	23	23	20	-11	2004	-22
Resource ¹ manufacturing: number employed ('000)	19	17	21	22	20	20	19	17	-7 E	2004	-20
Manufacturing: as a percent of total employment	16	15	17	17	15	15	15	13	..	..	..
Resource ¹ manufacturing: as a percent of total employment	13	12	15	15	13	12	13	11	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	84	82	88	85	85	85	86	87	..	..	..
Larger urban centres											
Total employment ('000)	187	201	203	204	200	198	211	214	14	2004	5
Manufacturing: number employed ('000)	16	17	16	17	13	14	15	15	-2 F	2004	-10
Resource ¹ manufacturing: number employed ('000)	12	14	12	13	10	11	12	13	9 E	2008	..
Manufacturing: as a percent of total employment	8	9	8	8	6	7	7	7	..	..	..
Resource ¹ manufacturing: as a percent of total employment	6	7	6	6	5	5	5	6	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	74	79	74	76	74	77	76	82	..	..	..
All areas											
Total employment ('000)	330	343	343	350	351	355	363	366	11	2008	..
Manufacturing: number employed ('000)	38	38	40	42	36	37	38	35	-7	2004	-16
Resource ¹ manufacturing: number employed ('000)	30	31	33	34	29	30	31	30	-2 F	2004	-12
Manufacturing: as a percent of total employment	11	11	12	12	10	10	10	10	..	..	..
Resource ¹ manufacturing: as a percent of total employment	9	9	9	10	8	9	9	8	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	80	82	82	81	81	82	82	85	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	59	55	59	61	64	63	60	56	..	..	..
Resource ¹ manufacturing employment	61	55	64	63	67	65	63	58	..	..	..

1. "Resource manufacturing" refers to the processing of outputs from the resource primary sectors (agriculture, fishing, forestry, mining and oil and gas).
Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

Appendix Table 2F Employment in manufacturing in the resource sector value chain, Quebec, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
Rural and small town areas											
Total employment ('000)	671	702	709	730	707	729	753	768	15	2008	..
Manufacturing: number employed ('000)	154	170	176	168	152	145	142	145	-6 E	2003	-18
Resource ¹ manufacturing: number employed ('000)	109	118	124	124	111	103	97	105	-3 F	2003	-15
Manufacturing: as a percent of total employment	23	24	25	23	21	20	19	19	..	..	..
Resource ¹ manufacturing: as a percent of total employment	16	17	17	17	16	14	13	14	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	71	69	70	74	73	71	68	72	..	..	..
Larger urban centres											
Total employment ('000)	2,770	2,868	2,920	2,950	3,011	3,036	3,099	3,114	12	2008	..
Manufacturing: number employed ('000)	474	479	452	463	464	436	401	398	-16	2002	-17
Resource ¹ manufacturing: number employed ('000)	220	228	218	218	246	226	206	207	-6	2005	..
Manufacturing: as a percent of total employment	17	17	15	16	15	14	13	13	..	..	..
Resource ¹ manufacturing: as a percent of total employment	8	8	7	7	8	7	7	7	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	46	47	48	47	53	52	51	52	..	..	..
All areas											
Total employment ('000)	3,440	3,570	3,629	3,681	3,717	3,765	3,852	3,882	13	2008	..
Manufacturing: number employed ('000)	628	649	628	630	616	581	543	544	-13	2002	-16
Resource ¹ manufacturing: number employed ('000)	328	345	341	341	357	330	303	312	-5	2005	-13
Manufacturing: as a percent of total employment	18	18	17	17	17	15	14	14	..	..	..
Resource ¹ manufacturing: as a percent of total employment	10	10	9	9	10	9	8	8	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	52	53	54	54	58	57	56	57	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	24	26	28	27	25	25	26	27	..	..	..
Resource ¹ manufacturing employment	33	34	36	36	31	31	32	34	..	..	..

1. "Resource manufacturing" refers to the processing of outputs from the resource primary sectors (agriculture, fishing, forestry, mining and oil and gas).
Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

Appendix Table 2G Employment in manufacturing in the resource sector value chain, Ontario, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
Rural and small town areas											
Total employment ('000)	671	704	725	725	766	787	806	806	20	2008	..
Manufacturing: number employed ('000)	123	124	129	131	134	127	122	117	-4 E	2005	-13
Resource ¹ manufacturing: number employed ('000)	67	71	72	72	74	72	66	66	-1 F	2004	-11 E
Manufacturing: as a percent of total employment	18	18	18	18	18	16	15	15	..	..	..
Resource ¹ manufacturing: as a percent of total employment	10	10	10	10	10	9	8	8	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	54	57	56	55	55	57	54	56	..	..	..
Larger urban centres											
Total employment ('000)	5,255	5,327	5,488	5,591	5,632	5,705	5,788	5,881	12	2008	..
Manufacturing: number employed ('000)	945	970	965	969	930	880	828	784	-17	2002	-19
Resource ¹ manufacturing: number employed ('000)	394	411	407	445	419	397	365	342	-13	2004	-23
Manufacturing: as a percent of total employment	18	18	18	17	17	15	14	13	..	..	..
Resource ¹ manufacturing: as a percent of total employment	8	8	7	8	7	7	6	6	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	42	42	42	46	45	45	44	44	..	..	..
All areas											
Total employment ('000)	5,926	6,031	6,213	6,317	6,398	6,493	6,594	6,687	13	2008	..
Manufacturing: number employed ('000)	1,068	1,094	1,093	1,100	1,064	1,007	951	901	-16	2004	-18
Resource ¹ manufacturing: number employed ('000)	461	482	479	517	493	469	432	408	-11	2004	-21
Manufacturing: as a percent of total employment	18	18	18	17	17	16	14	13	..	..	..
Resource ¹ manufacturing: as a percent of total employment	8	8	8	8	8	7	7	6	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	43	44	44	47	46	47	45	45	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	12	11	12	12	13	13	13	13	..	..	..
Resource ¹ manufacturing employment	15	15	15	14	15	15	15	16	..	..	..

1. "Resource manufacturing" refers to the processing of outputs from the resource primary sectors (agriculture, fishing, forestry, mining and oil and gas).
Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

Appendix Table 2H Employment in manufacturing in the resource sector value chain, Manitoba, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
Rural and small town areas											
Total employment ('000)	150	156	160	162	166	165	163	165	10	2005	-1 E
Manufacturing: number employed ('000)	15	15	18	18	19	18	18	18	20	2005	-3
Resource ¹ manufacturing: number employed ('000)	10	10	12	12	13	11	11	12	17 E	2005	-7 F
Manufacturing: as a percent of total employment	10	10	11	11	11	11	11	11	..	..	..
Resource ¹ manufacturing: as a percent of total employment	7	7	7	7	8	7	7	7	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	67	69	68	66	68	64	63	65	..	..	..
Larger urban centres											
Total employment ('000)	404	411	411	414	414	422	433	442	9	2008	..
Manufacturing: number employed ('000)	54	54	51	51	50	49	52	50	-6	2002	-6
Resource ¹ manufacturing: number employed ('000)	25	25	26	25	27	27	27	28	11	2008	..
Manufacturing: as a percent of total employment	13	13	12	12	12	12	12	11	..	..	..
Resource ¹ manufacturing: as a percent of total employment	6	6	6	6	6	6	6	6	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	47	46	52	48	54	56	51	56	..	..	..
All areas											
Total employment ('000)	554	567	570	577	580	587	597	607	9	2008	..
Manufacturing: number employed ('000)	69	69	69	69	69	67	71	69	-1 F	2007	-3
Resource ¹ manufacturing: number employed ('000)	36	35	38	36	39	38	38	40	13	2008	..
Manufacturing: as a percent of total employment	12	12	12	12	12	11	12	11	..	..	..
Resource ¹ manufacturing: as a percent of total employment	6	6	7	6	7	7	6	7	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	51	51	56	53	58	58	54	59	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	22	22	26	25	28	26	26	27	..	..	..
Resource ¹ manufacturing employment	29	29	31	32	32	29	30	30	..	..	..

1. "Resource manufacturing" refers to the processing of outputs from the resource primary sectors (agriculture, fishing, forestry, mining and oil and gas).
Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

Appendix Table 2I Employment in manufacturing in the resource sector value chain, Saskatchewan, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
Rural and small town areas											
Total employment ('000)	169	171	176	173	172	172	173	177	4	2008	..
Manufacturing: number employed ('000)	7	7	8	8	7	7	9	9	15 E	2008	..
Resource ¹ manufacturing: number employed ('000)	5	5	5	5	4	5	5	4	-8 F	2003	-17 E
Manufacturing: as a percent of total employment	4	4	4	5	4	4	5	5	..	..	..
Resource ¹ manufacturing: as a percent of total employment	3	3	3	3	3	3	3	2	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	65	64	71	63	64	62	53	52	..	..	..
Larger urban centres											
Total employment ('000)	291	297	300	307	312	320	329	336	15	2008	..
Manufacturing: number employed ('000)	21	21	20	21	23	22	22	22	7	2005	-4 E
Resource ¹ manufacturing: number employed ('000)	12	13	12	13	13	13	13	13	9 E	2006	-4 F
Manufacturing: as a percent of total employment	7	7	7	7	8	7	7	7	..	..	..
Resource ¹ manufacturing: as a percent of total employment	4	4	4	4	4	4	4	4	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	56	60	59	62	55	60	58	56	..	..	..
All areas											
Total employment ('000)	460	468	476	480	484	492	502	513	11	2008	..
Manufacturing: number employed ('000)	28	28	27	29	30	29	31	31	9	2008	..
Resource ¹ manufacturing: number employed ('000)	17	17	17	18	18	18	17	17	4 F	2004	-5 E
Manufacturing: as a percent of total employment	6	6	6	6	6	6	6	6	..	..	..
Resource ¹ manufacturing: as a percent of total employment	4	4	4	4	4	4	3	3	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	59	61	62	63	58	60	57	56	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	26	26	28	27	23	25	28	28	..	..	..
Resource ¹ manufacturing employment	29	27	32	27	25	26	26	26	..	..	..

1. "Resource manufacturing" refers to the processing of outputs from the resource primary sectors (agriculture, fishing, forestry, mining and oil and gas).
Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

Appendix Table 2J Employment in manufacturing in the resource sector value chain, Alberta, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
Rural and small town areas											
Total employment ('000)	365	366	372	378	370	382	408	417	14	2008	..
Manufacturing: number employed ('000)	23	25	25	23	23	21	24	26	10 F	2008	..
Resource ¹ manufacturing: number employed ('000)	17	18	17	16	16	15	16	18	6 F	2008	..
Manufacturing: as a percent of total employment	6	7	7	6	6	6	6	6	..	..	..
Resource ¹ manufacturing: as a percent of total employment	5	5	5	4	4	4	4	4	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	73	71	69	68	70	71	68	71	..	..	..
Larger urban centres											
Total employment ('000)	1,266	1,305	1,344	1,380	1,414	1,489	1,552	1,597	26	2008	..
Manufacturing: number employed ('000)	116	121	121	122	108	116	119	119	3 E	2004	-2 E
Resource ¹ manufacturing: number employed ('000)	65	72	72	74	64	71	71	73	13	2004	-2 F
Manufacturing: as a percent of total employment	9	9	9	9	8	8	8	7	..	..	..
Resource ¹ manufacturing: as a percent of total employment	5	5	5	5	5	5	5	5	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	56	59	60	61	60	61	60	62	..	..	..
All areas											
Total employment ('000)	1,631	1,671	1,717	1,758	1,784	1,871	1,959	2,013	23	2008	..
Manufacturing: number employed ('000)	139	146	146	144	131	138	143	144	4	2002	-1 F
Resource ¹ manufacturing: number employed ('000)	82	90	90	91	82	87	88	92	13	2008	..
Manufacturing: as a percent of total employment	9	9	9	8	7	7	7	7	..	..	..
Resource ¹ manufacturing: as a percent of total employment	5	5	5	5	5	5	5	5	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	59	61	62	63	62	63	62	64	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	17	17	17	16	18	15	17	18	..	..	..
Resource ¹ manufacturing employment	21	20	19	17	20	17	18	20	..	..	..

1. "Resource manufacturing" refers to the processing of outputs from the resource primary sectors (agriculture, fishing, forestry, mining and oil and gas).
 Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

Appendix Table 2K Employment in manufacturing in the resource sector value chain, British Columbia, 2001 to 2008

	2001	2002	2003	2004	2005	2006	2007	2008	Percent change from 2001 to 2008	Peak employment year	Percent change from peak year to 2008
Rural and small town areas											
Total employment ('000)	212	207	230	229	266	275	271	270	27	2006	-2 E
Manufacturing: number employed ('000)	23	22	30	33	31	27	27	23	0 F	2004	-29
Resource ¹ manufacturing: number employed ('000)	19	19	24	29	26	23	22	19	1 F	2004	-35
Manufacturing: as a percent of total employment	11	11	13	14	12	10	10	9	..	..	..
Resource ¹ manufacturing: as a percent of total employment	9	9	11	13	10	8	8	7	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	80	85	82	87	84	86	83	80	..	..	..
Larger urban centres											
Total employment ('000)	1,709	1,758	1,785	1,834	1,865	1,921	1,995	2,044	20	2008	..
Manufacturing: number employed ('000)	172	174	177	178	168	170	178	164	-4	2004	-8
Resource ¹ manufacturing: number employed ('000)	113	109	113	108	110	110	117	105	-7	2007	-11
Manufacturing: as a percent of total employment	10	10	10	10	9	9	9	8	..	..	..
Resource ¹ manufacturing: as a percent of total employment	7	6	6	6	6	6	6	5	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	66	62	64	61	66	64	66	64	..	..	..
All areas											
Total employment ('000)	1,922	1,965	2,015	2,063	2,131	2,196	2,266	2,314	20	2008	..
Manufacturing: number employed ('000)	195	197	207	211	198	198	205	187	-4	2004	-11
Resource ¹ manufacturing: number employed ('000)	133	128	139	137	137	133	141	124	-7	2007	-12
Manufacturing: as a percent of total employment	10	10	10	10	9	9	9	8	..	..	..
Resource ¹ manufacturing: as a percent of total employment	7	6	7	7	6	6	6	5	..	..	..
Resource ¹ manufacturing: as a percent of total manufacturing employment	68	65	67	65	69	67	69	66	..	..	..
Rural and small town manufacturing employment as a percent of manufacturing employment in all areas											
Total manufacturing employment	12	11	14	16	15	14	13	12	..	..	..
Resource ¹ manufacturing employment	14	15	17	21	19	17	16	15	..	..	..

1. "Resource manufacturing" refers to the processing of outputs from the resource primary sectors (agriculture, fishing, forestry, mining and oil and gas).
 Source: Statistics Canada, 2001 to 2008, Labour Force Survey.

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