



Manufacturing: An Overlooked but Important Industry in the Lower Mainland

Manufacturing is a significant but underemphasized part of the Lower Mainland's diverse economy.¹ Because the region does not have a single high-profile manufacturing company (such as Boeing in the Seattle area) or a dominant industry cluster, manufacturing is often overlooked. However, the sector deserves attention because it occupies a sizable place in the region's economy and is a key source of exports to other markets.

Manufacturing in Greater Vancouver and the Fraser Valley is a notably diverse sector characterized by a plethora of mid-sized firms, most of which are privately-owned rather than publicly-traded (which is another reason the sector is less visible). In aggregate, the manufacturing story is mixed. Like other jurisdictions, the number of people working in manufacturing in the Lower Mainland has declined in absolute terms. Yet the sector's diversity, focus on export markets, and orientation toward small to mid-sized companies have made it remarkably resilient. In spite of high land costs in the region, a strong Canadian dollar, and intense competitive pressures from China and other emerging economies, employment in manufacturing has held up reasonably well. Moreover, manufacturing

plays a leading role in fostering R&D and employs substantial numbers of engineers, technicians and skilled trades-people.

Table 1
Manufacturing Employment 2011
Lower Mainland, thousands

All Manufacturing	103.0
Food, Beverage Product Mfg.	22.5
Textile Mills & Textile Prod. Mills	2.2*
Clothing Mfg. & Leather Prod. Mfg.	4.1
Wood Product Mfg.	9.5
Paper Mfg.	2.5
Printing and Related Activities	6.6
Petroleum and Coal Products Mfg.	2.2
Chemical Manufacturing	3.0
Plastics and Rubber Mfg.	3.4
Non-Metallic Mineral Product Mfg.	5.1
Primary Metal Manufacturing	2.8
Fabricated Metal Product Mfg.	7.8
Machinery Manufacturing	7.7
Computer and Electronics Mfg.	5.4
Electrical Equipment, Appliance and Component Mfg.	1.9
Transportation Equipment Mfg.	4.9
Furniture and Related Product Mfg.	5.7
Miscellaneous Manufacturing	8.2

*Source: BC Stats (Labour Force Survey data). *2010*

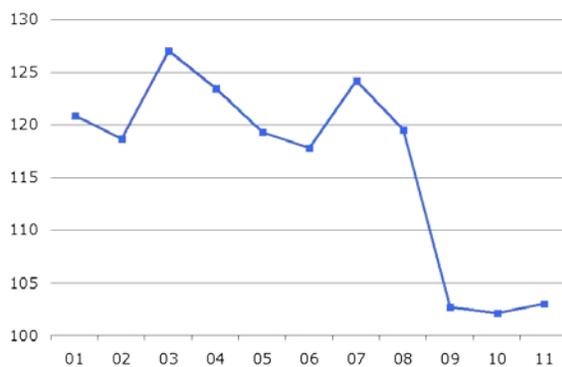
A Solid Employment Base

Today, more than 100,000 people are employed in an array of manufacturing industries across the Lower Mainland. Until 2008 employment in the sector was fairly stable. But employment fell with the onset of the global recession. Unfortunately, three years into the recovery, it appears

¹ Note the geographical area used in the analysis is the Lower Mainland/Southwest labour market region, which includes Metro Vancouver and the Fraser Valley as well as the Sunshine Coast and Whistler/Pemberton. For cross country comparisons with other urban regions, the Metro Vancouver CMA is the region used.

that the recession-related job decline may signal a longer-term contraction, as there is little sign of a rebound in overall manufacturing employment in the Metro Vancouver area. That said, in 2011 manufacturing still accounted for 7.3% of all jobs in the Lower Mainland, equivalent to 1 in 14 jobs (closer to 1 in 10 private sector jobs).

Figure 1
Manufacturing Employment in the
Lower Mainland, 000s



Source: BC Stats (Labour Force Survey data).

Manufacturing is highly diversified and, as noted at the outset, in Metro Vancouver the sector consists mainly of smaller and mid-sized firms rather than a few big companies. Of the 4,700 manufacturing locations across the Lower Mainland², three-quarters have fewer than 20 workers. Another 14% employ between 20 and 49 people, while 8% are in the mid-sized category with 50-199 workers. There are just 76 manufacturers in the Metro

² This refers to locations with paid employees.

Vancouver region which report having more than 200 paid employees.³

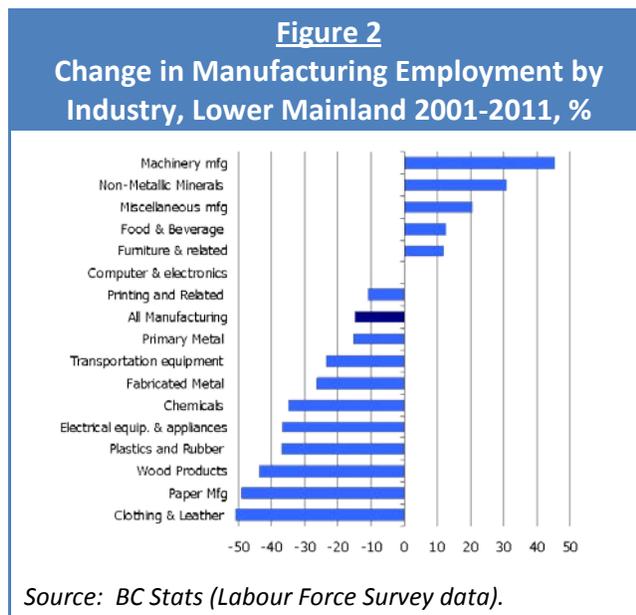
The largest individual segment within the Lower Mainland's manufacturing sector is food and beverage processing, which accounts for about 20% of local manufacturing jobs. Much of this segment's production is consumed locally, but as with most of manufacturing companies in the food/beverage processing industry also export to other parts of Canada and to international markets. The next biggest sub-sector is wood products manufacturing. Many firms in this segment are value-added operations. While some lumber is still produced locally, the large-scale lumber mills that once existed in the region have all closed. The third biggest manufacturing segment is the residual category of miscellaneous manufacturing, which capture firms that do not fit into the other industrial groupings. Both machinery manufacturing and fabricated metal products are also significant parts of manufacturing in the Vancouver region. While it is difficult to say with certainty, our judgment is that much of the foundation for machinery manufacturing is the demand for such products from province's resource-based industries. High tech manufacturing is another contributor to machinery production in the Metro area.

Change in Employment Differs by Segment

While total employment has fallen over the past decade, some parts of manufacturing in Greater Vancouver have expanded. As

³ BC Stats, Establishment/Location Counts (February 2011).

shown in Figure 2, the number of people working in machinery manufacturing has climbed by almost 50% since 2001. This segment was not immune to the global downturn, as employment fell in 2008, but it has posted an impressive rebound, with the number of jobs in machinery production now surpassing the pre-recession level.



The non-metallic mineral products segment has also registered a healthy gain in employment over the past decade. While some of the output produced by this industry is exported, strong growth in construction activity in the Lower Mainland has helped to boost local consumption of cement, windows, glass, and other locally-produced construction materials.

Compared to Other Metro Areas...

Compared to some other metro areas across the country, manufacturing is not a dominant part of the job base in Greater Vancouver. Still, it represents a significant

component of the broader employment landscape. And compared to most other urban areas in Canada, employment in Metro Vancouver's manufacturing sector has actually held up quite well.

Table 2
Manufacturing Employment as a Share of Total Employment 2011, Metro Regions, %

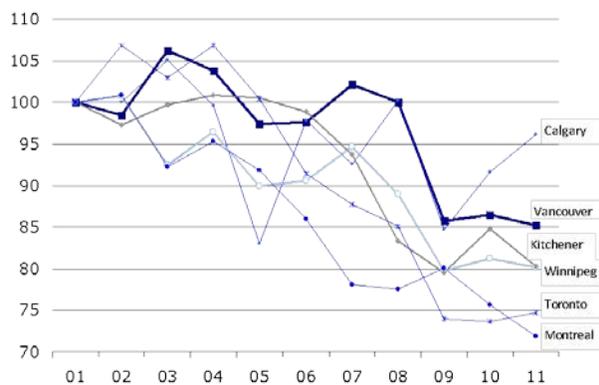
Windsor, Ontario	21.2
Brantford, Ontario	20.1
Kitchener-Cambridge-Waterloo, Ontario	18.4
Barrie, Ontario	13.8
Hamilton, Ontario	13.3
Sherbrooke, Quebec	13.0
London, Ontario	12.4
Montréal, Quebec	11.6
Toronto, Ontario	11.5
St. Catharines-Niagara, Ontario	10.8
Oshawa, Ontario	10.5
Winnipeg, Manitoba	10.0
Abbotsford-Mission, British Columbia	9.0
Edmonton, Alberta	8.0
Québec, Quebec	7.5
Vancouver, British Columbia	7.1
Kelowna, British Columbia	7.0
Calgary, Alberta	6.8
Saskatoon, Saskatchewan	6.3
Regina, Saskatchewan	5.5
Halifax, Nova Scotia	5.2
Ottawa-Gatineau, Ontario/Quebec	4.1
St. John's, Nfld and Labrador	3.3

Source: Statistics Canada, Labour Force Survey

Since 2001, manufacturing employment in Metro Vancouver has declined by 15%, while many other Canadian metro areas have recorded drops of 20-30% over the same period. Moreover, most other Canadian urban regions have seen manufacturing employment trend steadily

lower since 2001, while in Metro Vancouver it held up until 2008. Although there are many factors at play, part of Metro Vancouver's resilience is explained by its greater orientation toward the Asia-Pacific, which has mitigated the impact of the rising Canadian dollar on manufacturing production in recent years. The fact that most parts of manufacturing in the Lower Mainland do not compete directly with China and other emerging countries to the same degree as in Ontario and Quebec has also contributed to the relatively strong performance of manufacturing production and jobs in the Lower Mainland.

Figure 3
Manufacturing Employment Canadian Metro Regions, Indexed 2001=100



Source: Statistics Canada, Labour Force Survey.

Economic Gains from Manufacturing

Perhaps the biggest benefit of having a robust manufacturing sector is the contribution it makes to exports. Exports provide an essential external source of income and wealth generation for any regional economy. Particularly for a small open economy such as BC, a well-

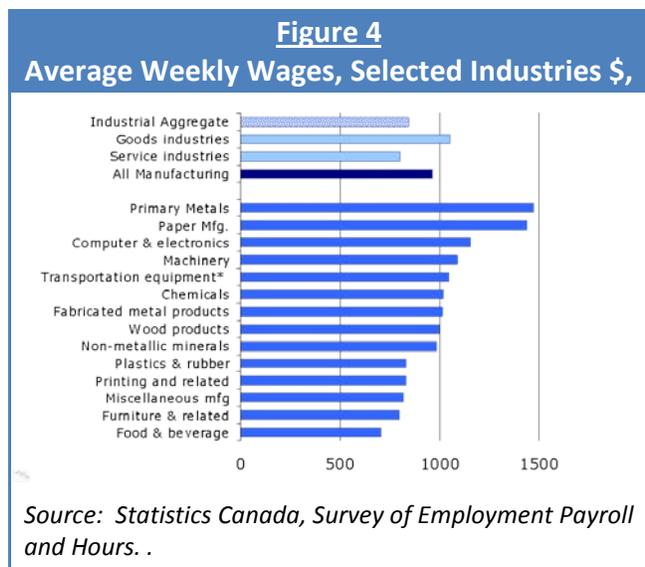
performing export sector is a prerequisite for a vibrant and growing economy. When exports languish, real GDP gains are likely to be subdued at best. At the provincial level, manufactured goods account for three-quarters of total international merchandise exports. In Metro Vancouver, the share is even higher.

The economic benefits linked to manufacturing also reflect the fact that in order to sell in international markets, manufacturers must be competitive on price and quality. To survive, most need to regularly improve their products (or introduce entirely new products) and their processes. This means many manufacturers have to invest in research and development and worker training, and frequently find it necessary to upgrade capital equipment to stay competitive.

Across all advanced economies, manufacturing is increasingly capital-intensive. Although data on capital investment is not available at the regional level, province-wide expenditures are reflective of regional patterns. Last year, BC manufacturers spent \$1.3 billion on machinery and equipment. This represents more than 10% of all M&E spending in BC, and puts manufacturing among the top industries in capital outlays on machinery and equipment.⁴ Considering that manufacturing represents 7% of all BC employment (essentially the same share as at the regional level), proportionally manufacturers in BC invest more per worker than other industries in machinery and equipment.

⁴ Statistics Canada, "Private and Public Investment in Canada, Intentions 2012."

Manufacturing also tends to be a relatively high productivity/high wage sector. Average weekly earnings in manufacturing in 2011 stood at \$963, significantly higher than the economy-wide benchmark of \$842. Within manufacturing, however, wage rates do vary quite a bit, ranging from \$1,471 in primary metal manufacturing to \$707 for food products.



Diverse Export Markets

Of the 4,200 manufacturing operations in Metro Vancouver that are listed in the BC Manufacturers Directory (a slightly smaller number than Statistics Canada's location count), 1,982 report exporting to markets outside of the province. Given the Vancouver region's proximity to the United States, it is not surprising that a majority of manufacturers here ship to the United States. What is notable, however, is how much stronger North-South cross-border trade linkages are compared to east-west connections (within Canada). For 84% of all Lower Mainland manufacturers that export,

the US is a market they sell to. In comparison, just 21% (423) report exporting to other parts of Canada. Asia also figures quite prominently, with some 630 manufacturing companies in Metro Vancouver selling goods to Japan, Hong Kong, China or other countries in Asia.

Concluding Comments

From our perspective, manufacturing continues to be an economically important if generally under-appreciated part of the regional economy, industrial base, and job market. Although it may not be top-of-mind for most people in the Lower Mainland, manufacturing is a key contributor to a competitive and resilient regional economy.

We believe it is important for policy-makers at the local/regional level to focus on protecting the supply of industrial land to ensure that manufacturing continues to have an economic place in Metro Vancouver. This means ensuring that lands that do exist to serve industrial purposes are well-served and accessible to major transportation networks.

Provincial policy makers also need to recognize the importance of the wider non-resource manufacturing sector, much of which is in the Lower Mainland. In BC, non-resource manufacturing is comprised of a diverse mix of industry segments and is dominated by small and medium-sized enterprises.

Given the high cost of land, currency issues and border risks, and BC's location far removed from the bulk of the North American population, the Lower Mainland

likely will never be a major centre for large-scale manufacturing. However, smaller-scale and more specialized manufacturing, as well as the production of manufactured

goods for local consumption, can and should remain a source of high paying jobs in the Lower Mainland.

Some Examples of Lower Mainland Manufacturers

Avcorp Industries Inc. is one of North America's leading providers of integrated metallic and composite components for the **aerospace industry**. Avcorp designs and manufactures tail, wing and other airframe structures. Its four major customers are Cessna Aircraft, Bombardier Aerospace, The Boeing Company and Aviation Partners Boeing. Located in Delta, Avcorp employs 500 skilled aircraft technicians and 150 management and support staff.

Weatherhaven is a leading provider of **portable shelters, camps** and systems for remote sites around the world. The company engineers, manufactures and installs custom shelter systems for a wide variety of commercial, military and medical applications. Weatherhaven's new corporate facilities located in Burnaby house all of the firm's engineering and manufacturing departments under one roof.

Tree Island Industries Ltd. is a global supplier of premium quality **wire and wire products** for a wide range of applications. Located in Richmond and employing around 250 people, Tree Island ships its products – ranging from nails and fasteners to mesh and stucco reinforcing products to stainless steel wire for the automotive industry – worldwide.

K-Line Trailers designs and manufactures US & Canadian style truck transfers, **multi-axle lowbeds**, mine equipment, bulk and/or waste haulers, demolition vans, end and side dumps, and other **specialty trailers** such wind blade trailers. The company is located in Langley and employs about 200 people.

Ballard Power Systems Inc. is a global leader in **fuel cell** technology. Its products are used to power buses, generate on-site electricity, power forklifts and pallet jacks and provide a source of backup power. The company's production facility is located in Burnaby and it employs 340 people.

Vancouver Shipyards Co. Ltd. designs, **builds and maintains all types of vessels**. It is located in North Vancouver and currently employs an estimated 500 people. With parent company Seaspan selected as the prime contractor for the federal government's non-combat ship procurement program, Seaspan's Vancouver Shipyards division will see employment levels jump significantly when construction begins in late 2012.

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