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POLICY PERSPECTIVES

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AN OVERVIEW OF MANUFACTURING IN BC

Manufacturing is a vital but often underemphasized part of the British Columbia economy. There is nothing intrinsically better about manufacturing compared to services or other productive activities. But the sector deserves close attention because it is central to the province's economic health and continues to dominate British Columbia's international exports.

While trade in services is growing rapidly, providing the province with a more diversified export base,[1] manufacturing will remain the backbone of BC's export sector for the foreseeable future. And a strong case can be made that manufacturing makes a disproportionate contribution to the province's prosperity because of spin-offs and other related economic benefits.

Unfortunately, BC has lagged in developing the manufacturing sector. This is a key reason why BC has seen comparatively weak export growth and posted feeble gains in living standards over the past 10-15 years.

Why Manufacturing Matters

A rough division can be drawn between resource-based manufacturing industries and those that produce non-resource-based goods. Both play significant roles in the province's economic well-being. At the most basic level, resource-related manufacturing is important because of its sheer size and the dependence of many smaller and regional economies on the production and sale of resource-based goods. Non-resource manufacturing is of interest because it includes many fast-growing sub-industries and its growth is helping to establish a more diversified and stable export base for the province.

Beyond these generalizations, however, both segments of manufacturing provide more specific economic benefits. Perhaps the most significant is manufacturing's contribution to exports. Exports provide an essential external source of income and wealth generation. 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 growth is likely to be subdued at best – as BC has experienced over most of the past eight years. Manufacturing matters because manufactured goods account for about three quarters of the province's international merchandise exports, which in turn represent one quarter of total economic output or GDP.

Apart from the employment and income generated directly in the different manufacturing sub-industries, the manufacturing sector is a major source of demand for the goods and services produced by businesses in other industries, such as transportation services, communications, repair services, business and professional services, and various suppliers of intermediate goods and other business inputs. Although exports of services also provide a valuable source of external

[1] See "A Primer on BC's International Trade in Services," Business Council of BC (April 2004); available at www.bcbc.com.

BC's Largest Manufacturers (More than 500 Employees)
(listed alphabetically)

Alcan Primary Metals	Northwest BC Timber and Pulp
Avcorp Industries	Ocean Fisheries
Ballard Power Systems Inc.	Peacock Inc.
Beaver Falls Machining Ltd.	Pimlico Apparel Ltd.
CCL Label	Please Mum
Canadian Fishing Co. (Canfisco Home Plant)	Pope & Talbot Ltd. – Grand Forks Sawmill
Canfor Corporation	R.C. Purdy Chocolates Ltd.
Cascade Aerospace	Riverside Forest Products Ltd.
Castart Studios Ltd.	S & R Sawmills Ltd.
Creo Inc.	SRI Homes Inc
Doman Industries Limited	Saputo/Dairyland
Eurocan Pulp & Paper Co. (a division of West Fraser Mills Ltd.)	Scott Paper Limited
	Slocan Forest Products Ltd.
Evergreen International Foodstuffs Ltd.	Sterling Newspaper Ltd.
Fraser Cedar Products	Teck Cominco Metal Ltd.
General Paint Corp.	Tembec
Howe Sound Pulp & Paper Ltd. Partnership	TimberWest Forest Ltd.
International Forest Products Limited	Tolko Industries Ltd.
Kelowna Flightcraft Ltd.	True North Wooden Boat Co. Ltd.
LP Canada Ltd. (LP Woodproducts)	Versacold Corporation
Lafarge Canada Inc.	Weldwood of Canada Ltd.
Lehigh Northwest Cement Limited	West Fraser Timber Co. Ltd.
Manaco Septic Solutions	Western Pulp Inc.
Methanex Corporation	Weyerhaeuser Company Limited
Molson Canada	Xantrex Technology Inc.
NorskeCanada Limited	

Source: BC Stats, BC Manufacturers' Directory, companies listed in an online database search of the two largest employee size classifications supplemented by Business Council information. Note: the database has not been updated to reflect some recent mergers.

income, few service industries have the same wide "economic footprint" as manufacturing.

Another reason why manufacturing matters for BC is that while most service exports (apart from tourism) originate in large urban centres, export-oriented manufacturing industries are found in all regions of the province. In many parts of BC, manufacturing will continue to sustain regional economies, irrespective of any shift toward greater export diversity at the provincial level.

The economic benefits linked to manufacturing reflect other factors as well. For one thing, manufacturing is capital intensive. This year, BC manufacturers collectively plan on spending $1.01 billion on machinery and equipment. This represents 12% of all projected M&E spending in BC and puts manufacturing among the top industries in capital outlays on machinery and equipment.[2]

In order to sell in international markets, manufacturers must be competitive on price as well as quality. The need to develop better (or entirely new products) means many manufacturers have to invest in research and development. As a group, manufacturers do more R&D than most other industry sectors.

[2] Statistics Canada, "Private and Public Investment in Canada, Intentions 2004."

Manufacturing also tends to be a relatively high productivity sector, as proxied by the value of output per employee or per hour worked. A majority of the limited productivity growth that BC has recorded over the past decade has come from the goods-producing portion of the economy, particularly manufacturing. For example, ongoing retooling and consolidation has made BC's interior lumber mills among the most productive in the world.

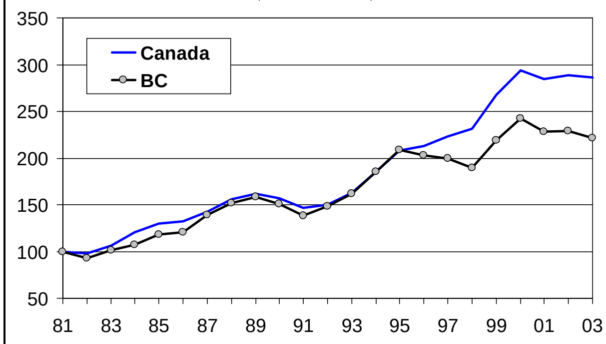
Over the longer-term higher productivity translates into improved living standards. This is most apparent in wages: people employed in high productivity activities generally earn above-average wages, since they produce more output per hour. In BC, the typical manufacturing employee earns more than $800 per week, well above the all-industry benchmark of $683.[3]

Finally, as a sector, manufacturing has a relatively high concentration of large firms (measured by number of employees). Large firms are particularly important to economic prosperity because they tend to pay higher wages and offer better benefits and more training than their smaller counterparts. Large firms also pay more in taxes and have a considerably greater propensity to engage in export activity.

The manufacturing sector accounts for 17% of all BC enterprise establishments – including those in the diverse public sector – with more than 200 employees. A majority of these are sawmills and pulp mills, but large-scale enterprises also found in other manufacturing sub-industries, including printing, chemicals, metal manufacturing, plastics, and machinery and equipment, as well as computer and electronic components manufacturing, steel products and ship building.

[3] BC Stats, "Earnings and Employment Trends," December 2003.

Manufacturing Shipments, Indexed
(1981=100)



Source: Statistics Canada.

More Detail on Manufacturing in BC

There is a general perception that the province's manufacturing sector, or at least its resource-based component, is in decline. While consolidation, rationalization, and competitive pressures have certainly resulted in job losses in some areas of manufacturing (particularly in the coastal forest industry), manufacturing as a whole has not fared too badly in BC.

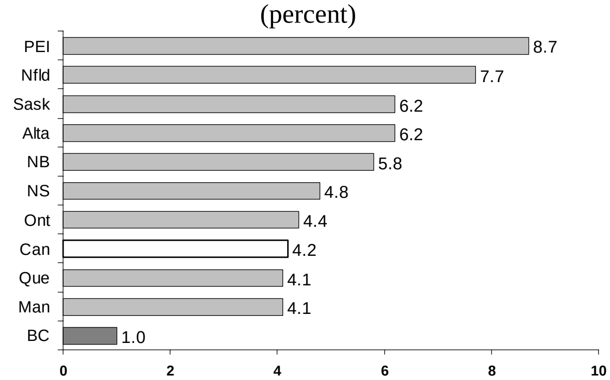
At present, manufacturing directly employs around 200,000 British Columbians, up from 175,000 in the early 1990s. Real manufacturing GDP, or the value of final output adjusted for inflation, increased at an average annual rate of 1.2% between 1990 and 2002. However, manufacturing output has increased more slowly than total provincial GDP. As a result, manufact-uring's share of GDP in British Columbia has fallen from almost 13% in 1990, to 10.5% today. By comparison, over the same 1990-2002 period, manufacturing's share of Canadian GDP actually edged higher, from 16% to 17%. Stated differently, BC represents a shrinking slice of Canadian manufacturing activity. Manufacturing's share of total employment has also slipped in BC, but not to the same extent.

Broadly speaking, BC has a moderately manufacturing oriented economy when set within the larger Canadian context. Not surprisingly, BC ranks well behind Ontario and Quebec, Canada's industrial heartland, where manufacturing makes up more than one-fifth of GDP. BC also trails Manitoba, which has a substantial manufacturing sector and boasts a strong position in industries such as textiles, aerospace, furniture, food processing, machinery, and transportation equipment. On the other hand, BC is ahead of five other provinces in the proportionate size of the manufacturing sector.

Turning from the relative size of manufacturing to the growth of manufacturing shipments (shipments being the most commonly cited indicator of manufacturing activity), BC's recent record is less impressive. From 1996 to 2003, the value of manufacturing shipments increased on average by just 1.0% annually. This is barely one-quarter of the national pace and puts BC last among the ten provinces. From a longer-term perspective, manufacturing's performance in BC over the past seven years has also been mediocre. Between 1981 and 1995, the value of BC manufacturing shipments rose by 5.7% annually, essentially equivalent to the national figure and placing BC in the middle of the provincial growth rankings.[4] It is only since the mid-1990s that BC's manufacturing shipments have begun to falter relative to the national benchmark.

Much of the recent weakness in manufacturing in BC can be traced to the resource sector, where the value of manufacturing shipments fell by an average of 1.1% annually over the past seven years. Non-resource manufacturing, however, has also posted smaller gains than in the rest of Canada. Combined non-resource manufacturing shipments have increased by about 3.0% per year since 1996, well short of the growth in non-resource shipments in other provinces over the same period.

Growth in Manufacturing Shipments
Average annual rate 1996-2003
(percent)



Source: Statistics Canada.

Composition of the Industry

British Columbia is home to over 8,500 manufacturing establishments with paid employees. On top of this are another 5,300 establishments without employees, consisting of small owner-operator entities or companies that only have contract workers.

Slightly more than 76% of all manufacturing establishments in the province with paid workers have fewer than 20 employees, with fully 88% having payrolls of less than 50. These figures are not dissimilar to those in other provinces, although the size of manufacturing establishments in BC is more skewed towards smaller firms. At the other end of the scale, BC has approximately 190 "large" manufacturing establishments with more than 200 paid employees. This group represents just 2% of all manufacturing establishments – a statistic that underscores

[4] Statistics Canada recently significantly revised manufacturing shipments data from 1999 to 2003 due to a new sampling framework and changes in the treatment of head offices. Averages of annual growth rates in shipments are used here to minimize the distortion of growth rates caused by the revisions.

the point that BC has a relatively small number of major manufacturers.

Manufacturing in BC is still heavily concentrated in the resource and related activities. Approximately 60% of the province's manufacturing shipments consist of resource or primary products, although this is down from more than 65% in the mid 1990s thanks to stronger growth in non-resource based manufacturing industries.[5]

Some Specific Manufacturing Growth Industries

Although manufacturing as a whole has grown more slowly in BC than in other provinces, the picture varies among individual sub-industries, ranging from annual increases in manufacturing shipments of 10% plus to declines in the 2% to 4% range.[6] One noticeable pattern is that, apart from the veneer, plywood and other engineered wood products industry (which is part of the broader wood products category), the fastest growing manufacturing industries are concentrated in the non-resource category.

Growth has been strongest in the category of "miscellaneous manufacturing industries," where the value of BC shipments rose by 10.7% per year (on average) between 1996 and 2003. Expansion in this "residual" non-resource category has been driven primarily by solid increases in medical equipment and supplies (where annual growth in shipments has averaged 9%) and the sporting and athletic goods segment (27% annually). The next fastest growing industry has been plastics and rubber manufacturing, where shipments have increased by an average annual rate of 9%.

BC Manufacturing Shipments

	Avg. growth 1996-2003 (%)	2003 share (%)
Miscellaneous	10.7	1.9
Plastics and rubber products	9.0	3.4
Non-metallic mineral products	6.6	4.3
Beverage and tobacco manufacturing	6.5	3.0
Machinery manufacturing	5.4	5.1
Furniture and related products	4.8	1.6
Chemicals	4.6	3.7
Fabricated metal products	3.0	4.8
Electrical equip., appliances and comps.	2.9	1.1
Textile product mills	2.9	0.3
Food manufacturing	2.5	13.3
Computer and electronic products	1.4	2.4
Transportation equip.	-0.2	3.2
Paper products	-1.2	15.0
Wood products	-2.0	28.0
Printing and related support activities	-2.2	1.7
Clothing	-2.5	0.8
Petroleum and coal products	-3.2	2.3

Source: BC Stats, BC Manufacturing Shipments 1996-2003.
Note: the Primary Metals Industry is not shown due to data suppression.

The non-metallic mineral products industry has seen shipments climb at an average annual rate of 6.6% over the past seven years. While most of the sub-industries in this segment have performed well, non-metallic shipments have been lifted by a particularly strong expansion in the concrete products and glass products industries. Production in the beverage industry has also

[5] In this paper, resource-related manufacturing includes manufacturing and processing of animal food, fruit, vegetables, meat products and seafood; forestry products, pulp and paper, non-ferrous primary metal production, industrial gas and petroleum and coal products. This is a slightly narrower definition than "primary manufacturing," which includes all manufacturing activities in which materials used to produce an industry's output have not been processed by another manufacturer.

[6] BC Stats, "BC manufacturing shipments 1996-2003."

risen by more than 6% per year, with growth fairly evenly balanced between soft drinks, breweries and wineries.

Machinery manufacturing shipments have grown by 5.4% annually in recent years. Here, the re-tooling of sawmills has been an important factor. Shipments from the sawmill and woodworking machinery industry have increased by 6% per year. Furniture manufacturing has also recorded above average growth of 4.8% annually. Two sub-industries dominate this segment, with most shipments coming from kitchen cabinet manufacturers and the household and institutional furniture category. Chemicals, fabricated metal products, food products, and textiles are among other manufacturing sub-industries that have recorded modest growth in shipments since the mid-1990s.

At the other end of the scale, shipments of wood products, paper products, coal and petroleum products, clothing, and printing products have all declined in value since 1996. Some non-resource manufacturing industries have also seen shipments fall. Notably, shipments in both the computer and peripheral equipment and the semi-conductors and related components sub-industries tumbled by more than 50% between 2000 and 2003, which has kept annual growth in the broader electronic equipment sector at just 1.4%.

Summary

Overall, BC's manufacturing sector has struggled since the mid-1990s, with total shipments growing at a feeble pace. Much of the weakness has been concentrated in resource-related manufacturing industries, which among other things have had to grapple with relatively low commodity prices over a good part of the period under review (although commodity prices have risen significantly in the past year or so).

Solid growth in a number of non-resource based manufacturing industries has helped to offset weaknesses elsewhere, and assisted in creating a more diverse export base for the province. But at an aggregate level, growth in the non-resource segment of manufacturing has not been particularly impressive by Canadian standards.

Although it represents a declining share of total economic output, manufacturing – including resource-based manufacturing – continues to play a major role in BC's economy and forms the core of the province's export base. This is a message that policymakers need to understand.[7] To bolster the export base and improve living standards, the province would be well advised to find ways to build the manufacturing sector.

Admittedly, this is not a simple task. Some resource-based manufacturing industries face unique problems, including American lumber tariffs, structural difficulties in the coastal forest industry, and a marked decline in the number of operating mines/smelters in the province. Still, the government should be working to broaden its message that BC's high quality of life, excellent universities and colleges, skilled workforce, competitive US dollar business costs, and solid infrastructure make the province a desirable location for some types of manufacturing.

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[7] See "Exports and the British Columbia Economy," Policy Perspectives, vol. 10, no.3 (June 2003).