

RECENT GROWTH AND PROSPECTS FOR US EXPORTS OF VALUE-ADDED WOOD PRODUCTS FROM BRITISH COLUMBIA, CANADA

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SUMMARY

Expanding the value-added (secondary) processing sector of the forest industry is critical if forestry is to continue as a key economic driver in the province of British Columbia, Canada. Past performance of this sector, and expectations for future growth, are examined focusing on developments in the important US market.

Keywords: Value-added, forest industry, employment, trade, policy

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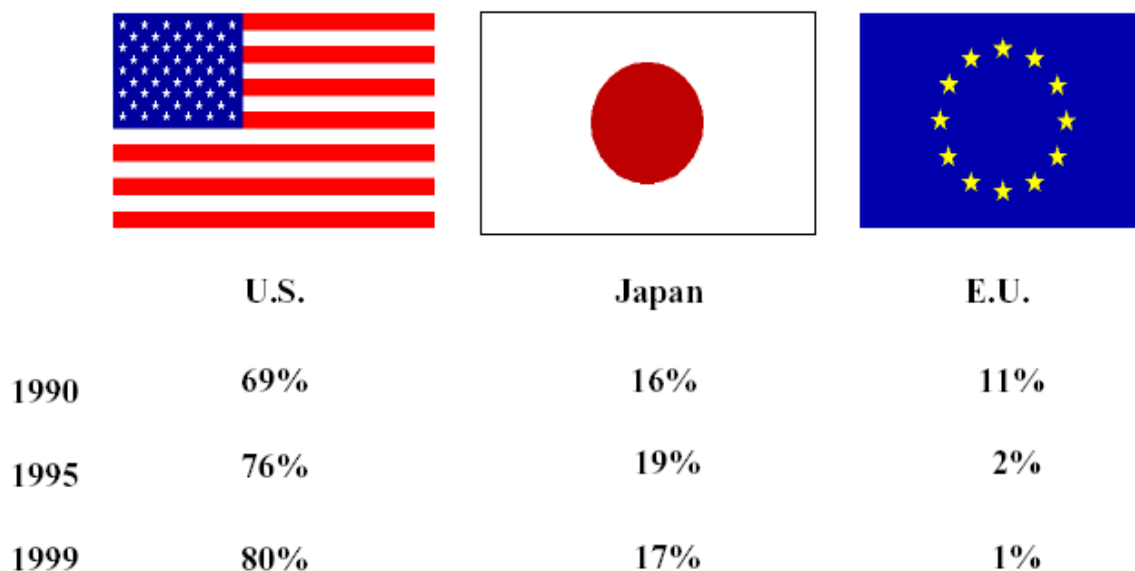
INTRODUCTION

The forest sector in the Canadian province of British Columbia (BC) is a key economic driver, generating total sales of nearly \$16 billion (\$Cdn) in 2001 on a harvest of approximately 77 million m³. This harvest provides for 79% of provincial manufacturing shipments, \$2 billion in direct government revenues and 90,000 direct jobs. Maintaining this level of activity in “primary” forest products in the future is unlikely for a variety of reasons including, pressures to maintain/preserve existing native forests, the international emergence of low-cost plantation products and cumbersome trade restrictions for our largest export market – the US. Maintaining economic and employment benefits from the forest sector requires a maximization of the value of each unit of fibre cut. One strategy to accomplish this goal is through the expansion of value-added (secondary) manufacturing in forest products.

Given the significance and potential of the forest sector it is important that decision-makers seeking to promote an expansion in secondary manufacturing have accurate information. This paper presents select results of a series of surveys of the BC solid wood secondary manufacturing industry through the 1990's. These surveys gathered comprehensive data on operational, employment, production, marketing and financial indicators. One important result that came out of this analysis is that sector growth occurred primarily through increased sales into the US market. We examine historic and future growth of this sector with special attention paid to the impacts of US trade restrictions.

FORESTRY IN BRITISH COLUMBIA

BC is the most important forestry region within Canada. BC harvests of 77 million m³ are approximately 40% of Canadian total harvests. This, combined with BC's small domestic market, make BC a major exporter of softwood lumber (26% of world exports are from BC), plywood, pulp and newsprint. A large, and growing, percentage of these exports are destined for the US market. BC has become less diversified in markets for softwood lumber over the past decade. Over the 1990's, the proportion of BC softwood lumber exports going to the US increased from 69% to 80% of total exports (Figure 1). Given BC's dependence on the US market, current trade actions on softwood lumber are important in the development of secondary processing of wood products in BC.

Figure 1. British Columbia Softwood Lumber Export Sales.

SECONDARY WOOD MANUFACTURING IN BRITISH COLUMBIA²

Further processing of commodity products is a key objective of many jurisdictions interested in maximizing the local or domestic socio-economic benefits of resource industries. It is difficult, especially from a political point of view, to export raw resources to other jurisdictions for further processing. In order to develop timely information on the status and trends of secondary wood processing in BC, the Industry Trade and Economics Research Program of the Canadian Forest Service has developed and carried out a series of surveys through the 1990's.

The initial survey covered the 1990/91 production year with subsequent surveys for 1994, 1997 and 1999. These surveys are a census of secondary manufacturing (SM), sending surveys to all firms identified from comprehensive lists developed in consultation with various industry associations. We achieve very high response rates (over 50% for the latest survey) indicating the recognized importance of this work at the firm level. The survey population, estimated total sales and employment over the four surveys are given in Table 1.

² For a comprehensive review of the survey technique and results readers are referred to Wilson et. al. 2001, available online at www.pfc.forestry.ca.

Table 1. Trends in British Columbia Secondary Manufacturing

	1990	1994	1997	1999	Change 1999/1990
Firms (#)	565	525	683	703	24%
Sales (\$B Real 99)	1.79	2.06	2.71	2.90	62%
Employment	11,660	14,010	14,457	14,410	23%

There were increases in the number of firms, employment and sales between 1990 and 1999. The largest increase was in the sales revenue which, after adjusting for inflation grew by 62% over the decade. Sales growth in this sector was due to both an increase in the number of firms and an increase in mean firm size.

The original definition of SM developed for these surveys included seven business types:³

- Remanufacturing
- Engineered Wood Products
- Millwork
- Cabinets
- Furniture
- Pallets & Containers
- Other

Using survey data on wood use, employment and sales we are able to develop coefficients on labour intensity and sales per unit of roundwood consumed (Table 2). Because most of these business types purchase lumber as an input, these are in addition to employment and sales of the commodity product.

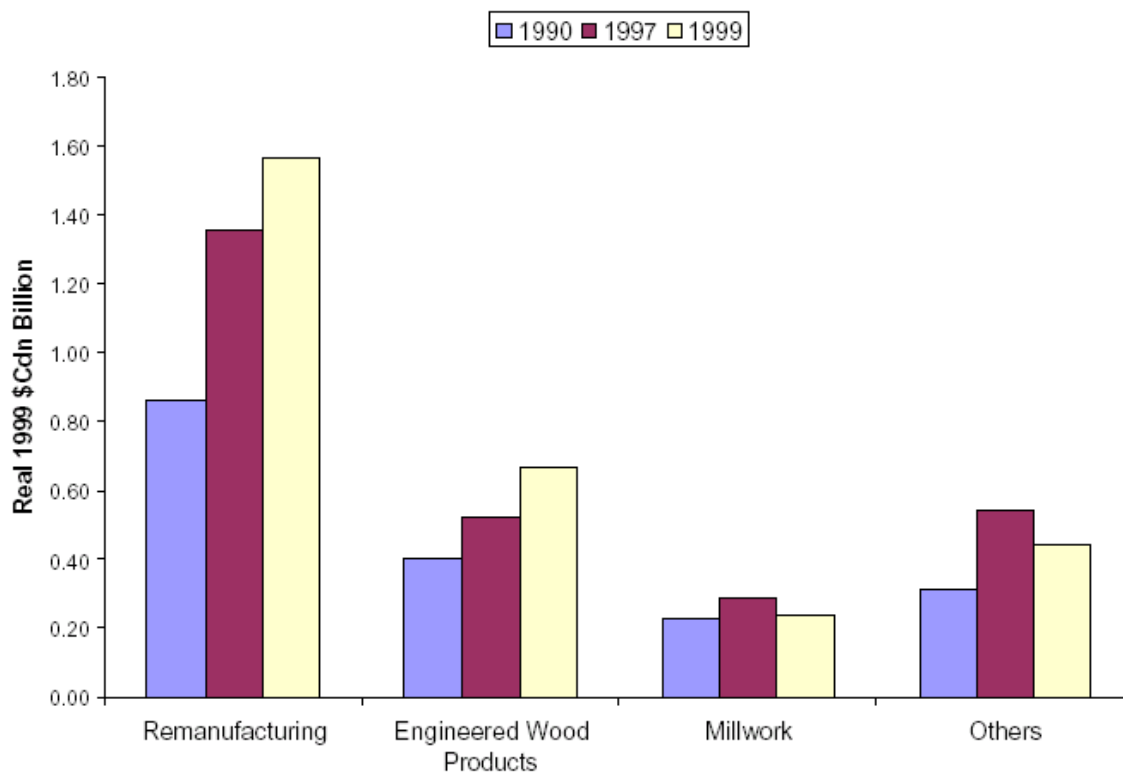
³ The latest 2 surveys expanded the definition to include shake and shingle manufacturers and panelboard producers. These two business types are not included here. Remanufacturers add further value to lumber inputs making products such as fencing, cut stock, furniture stock and fingerjointed lumber. Millwork includes windows and frames, doors, casing and mouldings. Examples of Engineered Wood Products include pre-fabricated buildings, trusses, laminated veneer lumber and I-joists. The other business types are self-explanatory.

Table 2. Jobs and Sales Coefficients per 1000 m³ (RWE)

Business Type	Jobs	Sales (\$'000)
Remanufactured products	0.41	113
Millwork	2.75	358
Engineered wood products	1.03	222
Cabinets	23.29	2,470
Furniture	6.19	689
Pallets and containers	0.64	114
Other wood products	0.41	94
Total Forest Sector^a	1.1	

Source: ITE SM Database, Canadian Forest Service.
Except, ^a Delcourt and Wilson 1998

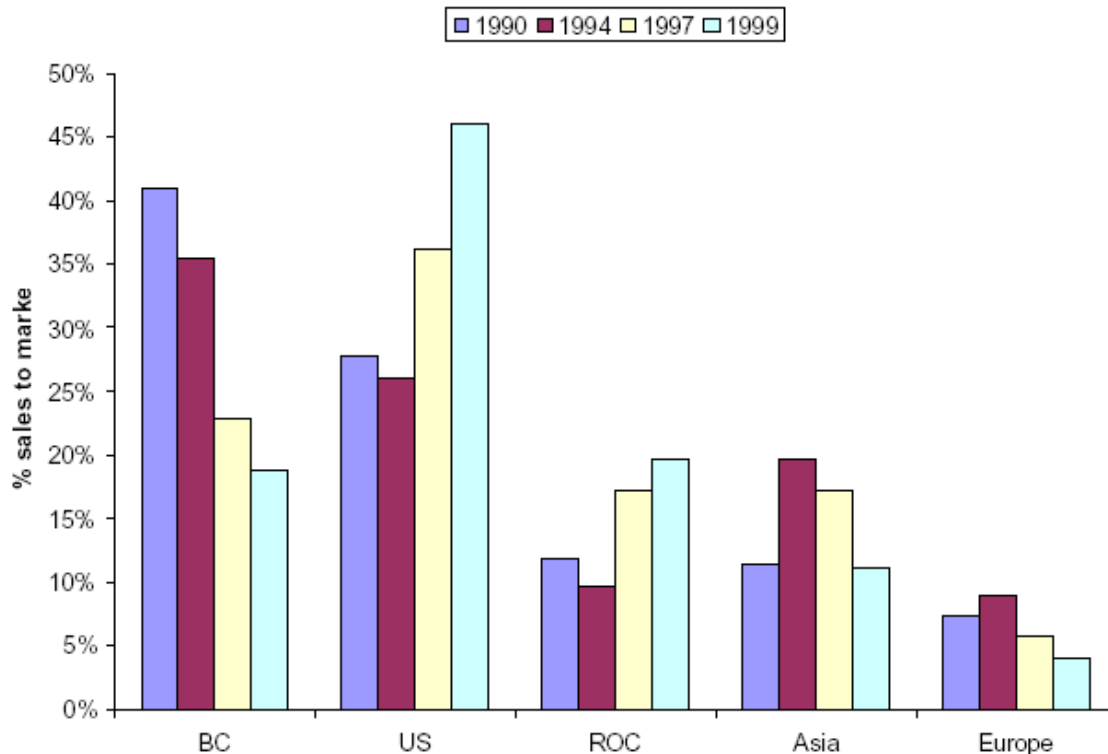
The estimated total sales for the major business type for the 1990, 1997 and 1999 surveys are given in Figure 2. "Others" represents all other firms outside the three explicitly identified business types.

Figure 2. Sales of Secondary Manufactured Wood Products by BC Firms in 1990, 1997 and 1999, Real 1999 \$Cdn.

Remanufacturing of lumber into higher value products is the main secondary manufacturing activity in BC, responsible for over 50% of total sector sales. Remanufacturing also grew most rapidly, with sales (\$ real) increasing by more than 80% through the decade. The engineered wood products business type also had strong sales growth through the 1990's increasing 67 percent. These two business types were responsible for nearly 90% of total SM sales growth over the 1990's.

Figure 3 indicates that growth in BC SM sales has been primarily in the US market and, to a lesser degree the Rest of Canada (ROC). Proportionally, sales to the BC market have fallen as have sales to Asia and Europe over the last half of the decade. For the most recent survey, the US is the largest market with greater than 45% of SM sales from BC.

Figure 3. Percentage of Sales by Market for BC Secondary Manufacturers, 1990-1999.

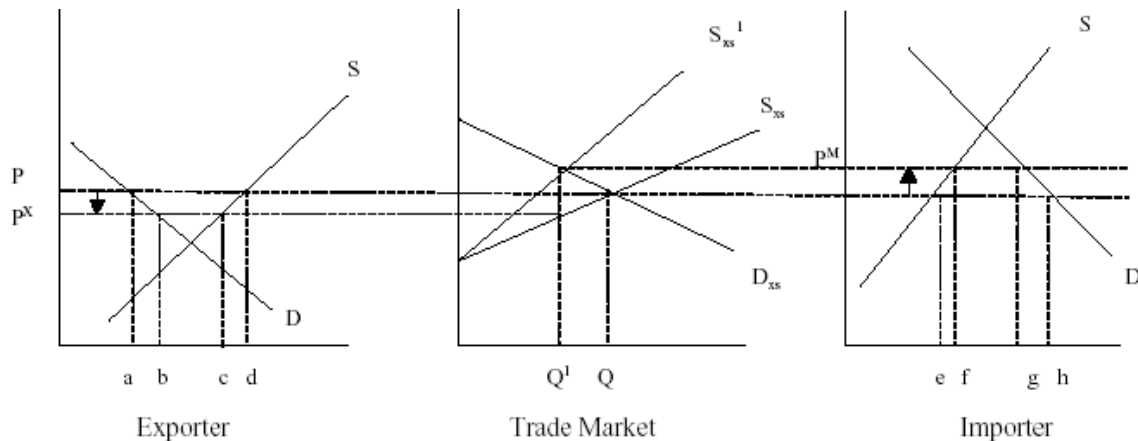


TRADE ASPECTS FOR SECONDARY MANUFACTURING IN BC

Canadian softwood lumber exports to the US have been subject to a number of trade actions since the early 1980's. We focus here on the most recent of these, the quota system under the five year Softwood Lumber Agreement (SLA) started in April 1996, and the more recent ad valorem tariff fully instituted in May 2002. The SLA was a quota limiting (fee-free) access to the US market by the major

Canadian producing regions to a set percentage of historic exports⁴. Exports beyond the quota were subject to a 2-level fee structure of US \$50 for approximately 4% added exports, volume in excess of this were levied a US \$100 over quota levy. The softwood lumber agreement ended in March 2001, and was soon replaced by a combined countervail (CVD) and antidumping (AD) duty by the US which amount to a 27.2% ad valorem tariff⁵.

Figure 4. Simple 2-Region Trade Model with Trade Restrictions



The anticipated aggregate impacts of these two types of trade actions are shown in Figure 4. Included are domestic supply (S) and demand (D) curves in the markets of the importer and the exporter. The excess supply curve (S_{xs}) in the trade market is quantity supplied less demand at each price in the export market and the excess demand curve (D_{xs}) is demand less supply at different prices in the domestic market of the importer. This three-panel diagram shows both the results of free trade equilibrium, and the perturbation due to either an export quota or an ad valorem tariff. Assuming a homogenous commodity and zero transportation costs, the free trade equilibrium is represented by quantity traded Q at price P . This results in exports of $d-a$ in the export region and imports of $h-e$.

An ad valorem tariff shifts the excess supply curve slope by the factor $(1+t)$, where t is the tariff rate. This results in quantity traded falling to from Q to Q^1 , and a wedge between the prices in the import (P^M) and export (P^X) markets. In the domestic market of the exporter the lower price reduces supply to c and increases demand to b , reducing exports. The opposite occurs in the import market reducing imports. A quota, if set at Q^1 is equivalent to the tariff, quantity and prices are affected the same in both markets. An examination of the

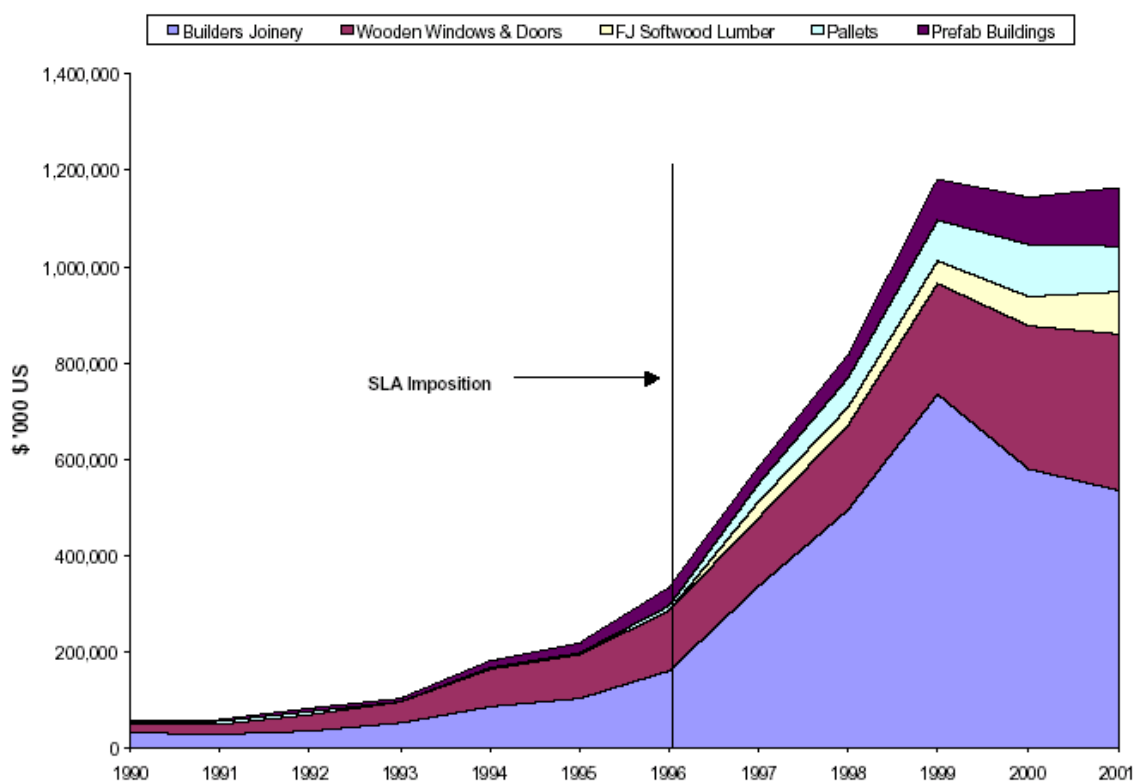
⁴ The fee-free exports allowed under the SLA quota for British Columbia, Alberta, Ontario and Quebec was approximately 93% of 1995 export volumes for those provinces.

⁵ This is the general tariff level, companies included in the AD determination by the US Dept. of Commerce had firm-specific AD duties.

difference between prices for lumber between neighbouring markets in Eastern Canada and the US illustrates this price wedge was formed under the SLA⁶.

Although the aggregate impacts on softwood lumber are shown to be the same under a quota and an equivalent tariff, there are different products impacts to higher valued products from the two types of trade measures. Under a quota, there is an incentive to ship higher valued products to maximize value under a quantitative cap. No such incentive is present under an ad valorem tariff. US import data tracking exports from Canada are consistent with trade estimates from our surveys, showing that SM wood exports to the US increased over the life of the SLA. This is an a priori expected result for two reasons. First, the SM sector allows for the processing of lumber into some products that are no longer subject to the quota. Secondly, a volume-based quota is an incentive to value-added activities as exporters maximize the unit value of exports. Figure 5 shows the level of imports for SM wood products from Canada into the US between 1990 and 2001.

Figure 5. Exports of Secondary Manufactured Solid Wood Products from Canada to the U.S.



Source: USDA, 2002

⁶ Comparing mean price differences in the neighbouring markets of Toronto (Canada) and the Great Lakes (US) for the same grade of lumber for the free trade period prior to April 1996 and over the SLA shows the price wedge grew by \$40/Mbmf under the quota. All prices in real 1995 \$US (Random Lengths 2001).

The ad valorem tariff no longer favours moving up the value chain, as higher value now results in higher levels of tariff. Any interest in moving up the value chain is further mitigated by the US Dept of Commerce's decision to apply the CVD determination on an entered-value basis (or at the final mill).

CONCLUSION

Forestry has been, and will continue to be, an important contributor to the economic performance of British Columbia. In order to maximize future benefits from this sector clearly requires a change in industry focus from commodity production to higher valued products. Industry and government have been responding well to this challenge through the 1990s with the SM sector outperforming the primary products sector over the decade, increasing sales by 62%, between 1990 and 1999. From a public policy point of view this is important as further processing activity leads to increased employment and associated economic benefits.

Most of this growth has occurred in the US market, where access to Canadian lumber products have faced, and continue to face, numerous barriers to entry. Higher valued exports perform relatively well under a volume-based quota, although this is not true under an ad valorem tariff. Growth in SM exports to the US accelerated under the quota regime of the SLA. The US and other markets for these products are becoming more difficult as importers develop means to domestically capture the benefits associated with higher valued products. The combined AD and CVD ad valorem tariff that has recently replaced the SLA can be expected to dampen the prospects for future growth in SM exports.

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