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# Towards a Value Focused Forest Sector in British Columbia

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## Context

There can be no doubt that forests have long played an important role in the growth, development, and prosperity of Canada and that the production of tangible market goods that we have derived from forests have been Canada's economic engine for over a century. Nowhere is this more prevalent than in British Columbia, where an abundance of timber resources, a range of unique and high quality woods, and access to large and lucrative markets have led to BC becoming a market leader in the global forest products sector.

Cohen and Kozak (2001) surmise that the Canadian forest industry has evolved through three different orientations over the course of the last century: a forestry orientation wherein companies were able to sell whatever they could harvest; a production orientation wherein companies manufactured what they were most efficient at; and a marketing orientation wherein companies produced essentially what markets would bear. However, amidst this continual evolution, one characteristic has remained remarkably consistent – our reliance on commodity products like dimension lumber and pulp and paper.

## British Columbia - A Commodity Focus

The forest sector in British Columbia is actually an industrial cluster of many different types of organizations. Some segments of the cluster are very strong, such as the commodity lumber production, commodity panel production and the machinery, technology and software required for the production of these goods. Other segments have enjoyed traditional strengths but have weakened significantly, such as the logging and pulp and paper segments. Still other segments have been traditionally weak and continue to be weak, such as secondary wood products manufacturing.

While the economics of this commodity focus made a great deal of sense for the better part of a century, today we face the salient need to diversify the basket of products that we manufacture and the markets that we serve, especially as global competition intensifies (Roberts et al. 2004). The fundamental issue is not that we produce commodity wood products, but rather that we have perhaps reached a point of over-reliance.

From a public policy point of view, this commodity-oriented strategy is difficult to justify. Martin and Porter (2000), in their seminal analysis of Canadian competitiveness, state matter-of-factly that:

*"[Canada is] standing at a crossroads, facing a choice of whether to tackle serious weaknesses in its microeconomic fundamentals of competitiveness or accepting a lower standard of living. The past nine years show that Canada pursued the latter road."*

High among the list of fundamental microeconomic weaknesses that Martin and Porter (2000) refer to is the fact that there is an over-reliance on the production of commodity products from Canada. They argue that competitiveness in the commodity game is fleeting and success is contingent on the ability to source low cost raw materials using low cost labour inputs. Competitive advantage is gained through efficiencies – producing higher volumes of product at lower costs – and this, in turn, has led to a long-term downward pressure on commodity prices (Commodity Research Bureau, International Monetary Fund). Unfortunately, these spiraling prices do not bode well for a nation that is highly dependent on its global exports of commodities.

Delivered wood costs make up the largest part of the cost of producing commodity wood products. BC's delivered wood costs, already high by global standards, are increasing, while those of global competitors are steadily decreasing. Increased competitive pressures worldwide in the form of lower fibre and labour costs are forcing Canadian wood producers into a situation whereby they must re-think their production strategies and differentiate their product offerings. Martin and Porter (2000) conclude by recommending that Canadian companies should be leaders by creating a business culture of "innovation" and not following one of "replication".

Concurrently, there has been an incontrovertible recognition of the fact that we must manage our forest resources sustainably, with the needs of future generations in mind. Sustainable Forest Management (SFM) has become part of the lexicon of every forest products company operating in Canada, and there is widespread acknowledgement of the need to account for a range of economic, social and ecological values in our forests and wild spaces beyond just tangible market goods.

That said, it can be argued that solely following a commodity-orientation strategy may not, by its very nature, be conducive to the principles of SFM, despite our best efforts to ensure that ecological and societal values are not relegated to the margins by economic interests. We find ourselves in a situation wherein BC companies must clamour to compete against global interests with very clear cost advantages by producing higher and higher volumes of product at lower and lower prices. How long can this be sustained?

## Value-Added Wood Products - Can Focusing on Value help?

It has been suggested that one means of improving the competitiveness of the BC industry is to transition from an orientation based on maximizing volume throughput to a value-based approach. While it is unrealistic to suggest that industrial forestry practices as we know it be halted, it is not unreasonable to question the way in which we utilize our forest resources, indisputably some of the most unique and high quality wood fibre in the world. One common solution that has been proposed to mitigate against potential losses in employment and income resulting from intense global competition is to catalyze and foster the secondary wood processing sector to complement a balanced and value-oriented commodity sector.

If BC has an advantage over other parts of the world, it is not in the low cost but rather the high quality of its timber. Value-added wood products are typically manufactured from higher quality wood products cut in a variety of sizes. BC's forests are currently in transition from older natural forests to younger managed forests and the annual allowable cut on most timber supply areas in BC is projected to decline over the next five decades due to this transition (a trend which is further exacerbated by increasing social and environmental pressures as well as the mountain pine beetle epidemic). In addition, as older stands are converted to younger stands, it stands to reason that decreases in timber size and quality should also be anticipated. Therefore, if we are to develop a value-added sector, the time to do so is now since high value wood products typically use lower volumes of higher quality wood.

The term 'value-added' (or 'secondary' as it is sometimes known) traditionally refers to adding incremental value to wood products through additional processing steps (Kozak 2002). The basket of value-added wood products includes a diverse range of goods typically used in the home: structural systems, mouldings, millwork, flooring, cabinetry, doors, windows, furniture, fencing, decking and so on (Wilson et al. 2001). To a lay person, this may seem to represent a fairly inconsequential sector. However, the collective value of these sorts of products in a new house, for example, can far outweigh the values derived from dimension lumber (the main commodity product used in home construction).

Currently, the value-added sector in BC could best be described as fledgling, with scattered small shops around the province accounting for approximately \$3 billion in annual sales (Wilson et al. 1999). While it is a very transient sector, lacking in momentum, it consists of some very profitable enterprises (Statistics Canada). In contrast, the value of shipments from BC's upstream commodity producing cousins (lumber, pulp and paper) exceeds \$13 billion, and can be characterized by a profit structure that is cyclical. The interesting paradox here is that the value that can be derived from a value-added product (on a per volume basis) far exceeds the value that can be derived from commodity goods. In addition, value-added production has very real employment effects. For example, Wilson et al. (2001) estimate that up to 19.8 jobs per thousand cubic metres (round wood equivalent) can be created by value-added endeavours (in this case, cabinetry), compared to less than 1 job in commodity production. While perhaps overly simplified, the upshot is that value-added approaches could possibly help to meet the objectives of sustainable forest management by removing fewer trees from the forest and creating more wealth and employment per tree harvested in some regions of BC.

As such, most, if not all, forestry stakeholders have embraced the notion of value-added production around the world as a vehicle for change (Wilson et al. 2001). Companies are interested in differentiating their product lines and diversifying their markets. Organized labour is concerned about maintaining high paying jobs, while the public's concerns revolve more around sustaining community health. Governments see value-added production as a means of expanding economic activity. Lastly, environmental groups promote value-added activities as a solution to achieving the tenuous balance of preserving forest lands, while maintaining employment and wealth. That all said, the paradigm shift from volume oriented production to value-focused production in BC has yet to take place on a large scale, and the value-added sector has yet to gain significant traction. Several impediments related to the value-added sector's ability to access fibre and form long-term relationships with commodity producers have also been cited as factors that have led to growth in the sector stalling out (Kozak et al. 2003).

## The Value Focused Forest Sector - A New Paradigm

The term "value-added" is itself a source of confusion – after all, even comparatively lower value goods like lumber and pulp and paper serve to add economic value to producers and communities alike. That being the case, we opt for a more general term to describe opportunities within BC forestry that together represent

a more balanced approach to resource utilization: “value focused forest sector”. This includes, but is not limited to:

- traditional commodities wherever this represents the best use;
- higher value-commodity goods manufactured by more flexible sawmills;
- secondary wood products (eg, value-added products, appearance products);
- non-timber forest products (e.g., berries, floral plants, medicinal plants, mushrooms, and recreation opportunities); and
- other ecosystem services (e.g., carbon sequestration, water and air quality, nitrogen fixation, aesthetic and spiritual values).

In order to maximize all of the benefits (economic, environmental, and social) that we can derive from this value focused forest sector, we need to thoroughly examine the potential of all of the above ecosystem goods and services, as well as the synergies that they may provide. At the very least, we need to assess how supply chain management principles can be used to optimize the value derived from the basket of forest-based products that are available to us. In many ways, the strategies currently being deployed in BC put higher value wood products at the back of the queue. Instead, we should be looking more holistically at opportunities all along the value-chain and matching our resources with the appropriate end-use applications. For example, a Sitka spruce tree that is ideally suited for use as a tone wood should be used as such if this means that the cumulative values to society are maximized. This is not to say that there are no opportunities for primary producers in this sort of scenario. Quite the contrary, their role as a supply link in the value chain is of vital importance. However, this sort of strategy would require a great deal more flexibility and customization on the part of commodity producers than is currently in place.

The overall purpose of this BC Forum initiative on “value focused forestry” is to examine and assess the need to adopt a province-wide strategy on increasing the economic value that we can derive from our forests and, at the same time, maintain or even enhance our ecological and social values. Again, it is important to state that the commodity industry cannot and should not disappear – there will always be a demand for products like dimension lumber and paper. However, it is both sensible and rational at this time to carefully examine our near complete dependence on the commodity wood products sector, especially in the face of intense global competition.

Little research has been conducted to date on the precise meaning of this “value focused forest sector” and what is required for it to gain traction, both as a concept and as a means of doing business. One of the major goals of the BC Forum on Forest Economics and Policy will be to provide this understanding with the aim of fostering its growth and importance within the BC economy.

The following describes the BC Forum Synthesis Papers that will help in establishing clear objectives for future research.

## Synthesis Papers to Be Prepared

### 1) **Optimizing the Value Chain from the Forest to Final Product**

Effective management of the supply chain can increase value by reducing costs and increasing productivity. Many companies are currently taking advantage of supply chain management in their operations to produce a standardized product at the lowest possible cost. Value chain management, on the other hand, is more about creating the highest value for customers. Four key success factors for value chains include: awareness of market opportunities; development of technologies and innovations to produce the right products at the right

cost; ability to work with other companies to create win-win situations; and the capacity to change faster than competitors.

A value chain is defined as a strategic collaboration of organizations for the purpose of meeting market objectives over the long term and for the mutual benefit of all 'links' of the chain. Developing a value chain approach therefore requires a collaborative rather than a competitive approach in our forest sector and should be approached strategically and at a high level of influence. This paper will outline some of the benefits of the value chain approach, explore how this might be implemented in BC, and provide examples of successful value chains developed in other sectors.

Specific questions that this paper will address include:

- How can value chain management principles help to increase the total value derived from our public forests?
- What are the potential benefits for commodity manufacturers to become more competitive through value chain management?
- How can a strategic collaboration best be put together to achieve a working value chain approach in the BC forest sector?
- How could a value chain approach simultaneously serve the triple bottom line of sustainable forest management?

## **2) Economic Zoning for Diverse Forest Values: Concentrating On Regional Strengths**

The coastal and interior regions of BC are vastly different. While not as pronounced, other regions in the interior also have differences in timber, geography, human resources, and other competitive factors. As such, policy homogeneity is likely not an appropriate approach to maximize regional economic strengths within the province. This report will examine the strengths, weaknesses, opportunities and threats related to forest sector competitiveness in the following eight regions of British Columbia:

- Thompson Okanagan
- Southwest
- Northeast
- Kootenays
- Nechako
- Cariboo
- North Coast
- Vancouver Island / Coast

The paper will explore the possibility of developing specific economic strategies and policies for different regions in BC depending upon the characteristics of that region. The report would study the strengths and weaknesses of each region and identify the type of research that must be done to develop a strategic plan for investment to diversify the province's manufacturing profile and strengthen the value chain.

Specific questions that this paper will address include:

- What are the regional differences in macroeconomic fundamentals, natural resources, human resource availability, transportation logistics, capital investment, and other factors?
- Should these differences be considered to create regional forest sector sustainable development policies?
- Should separate strategies for value-added and commodity production be developed to capitalize on regional strengths?
- Are there specific recommendations for moving ahead on regional strategies? What research needs to be conducted before doing so?

### **3) What is a Value-added Sector and Why is it Important to Forest Sector Competitiveness?**

There is much confusion as to what constitutes value-added in the forest sector. This paper will be a background report studying areas of the world that have placed a major effort at increasing the degree of value-added wood processing in the forest sector and what have been the costs and benefits. It will also look at the other values that can be obtained from the forest in relation to forest products. The report will discuss successes and failures and highlight government policies that have had positive or negative impacts.

Specific questions that this paper will address include:

- What exactly does value-added mean and why do we want to achieve it?
- How can a healthy value-added sector provide benefits to the primary manufacturing sector?
- Does BC have a specific competitive advantage with respect to the production of value-added goods?
- Can policy mechanisms be used to catalyze the value-added sector?
- What research needs to be conducted to build effective policies for value-added firm development?
- What important non-timber products should be considered?
- What role should First Nations play in developing the BC value-added sector?

### **4) Business Success Factors for Value Added Manufacturers in BC**

This paper will focus on the business factors that lead to success in value-added wood processing and in increasing wood consumption in the home region. It will examine successful regions and companies and explore the factors that have led to their success and explore the types of high value wood products that can be manufactured competitively in British Columbia based on current market trends. The paper will serve as a discussion paper for businesses investing in value-added and would identify the major research questions that need to be answered to move forward in increasing the degree of value-added.

Specific questions that this paper will address include:

- What are examples of a unique value proposition that BC companies could deliver to customers better than anyone else?
- What are the characteristics of a successful value-added business?
- What opportunities exist with respect to new value-added products and markets?
- What are the micro- and macro-economic factors that ensure success in the value-added sector?

### **5) The Importance of Design in Fostering Growth in the BC Value-added Wood Products Sector**

Design is a very important component of developing a market niche and adding value for customers. Design for manufacturing, assembly, and even disassembly is a critical part of the success of cost effective production of complex products. Concurrent engineering emphasizes the cross functional integration of marketing, manufacturing, quality control in the design of a product. The result is a shortened design cycle, and more a rapid and cost effective response to market opportunities. This paper will demonstrate how design fits into the value stream. It will highlight how design interfaces between marketing and manufacturing to capitalize on market opportunities and lower production costs. The benefits of design will be highlighted through the

use of case studies, and the situation in BC will be compared with other countries and regions.

Specific questions that this paper will address include:

- What is the relationship between design and value-added production and is it important to establish a BC wood design aesthetic?
- How is innovation possible through the application of design, and what are examples of successful design driven products?
- What opportunities for design are possible that are unique to BC, given our fibre resource?
- How can design be used to promote the use of made in BC appearance products both at home and abroad?

## **6) Case Studies in Value Chain Development from Other Areas of the World**

Many areas of the world are currently working on value chain development. Finland was an early entry, and their endeavor was strongly supported by policy changes. They are reported to have had success in increasing the market share of appearance wood products both at home and abroad. Scotland has developed the Scottish Forest Industries Cluster to seek new opportunities for strengthening the forest sector. The states of Maine and Oregon have both developed sector strategies for strengthening the value chain. This paper will look at these case studies from around the world and highlight the lessons learned.

Specific questions that this paper will address include:

- What lessons can be learned from other parts of the world with more evolved value-added sectors?
- How have other regions in the world developed the value-added sector?
- What forest policy initiatives have helped to strengthen the value chain?
- What research should be conducted to strengthen the value chain in BC?

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