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What is a Value Added Forest Sector? Why is it important to Competitiveness in British Columbia?

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What is a Value Added Forest Sector and Why is it important to Competitiveness in British Columbia?

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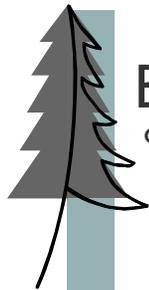
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Introduction

The B.C. Forum on Forest Economics and Policy exists to stimulate research and dialogue aimed at promoting a highly competitive, sustainable, and internationally respected forest sector in Canada. The role of the Forum is to bring critical issues to the forefront, encourage strategically targeted research and produce reports that will inform public policy making. Publication and discussion of synthesis papers is one mechanism through which the Forum stimulates public input.

This synthesis paper is one of several prepared for the critical issue “Toward a Value Focused Forest Sector”. It describes what is meant by “value added” in the context of the B.C. forest industry, and why growth in this sector is important. In doing this, it provides an overview of policy approaches from several other areas of the world that have placed a major effort into increasing the degree of value-added wood processing and identifies several key success factors and questions important to British Columbia.

British Columbia’s Strategic Vision

On February 28, 2005 the Government of British Columbia, in its Speech from the Throne, outlined “Five Great Goals for a Golden Decade”. These goals can be expected to strongly influence the role of government as it relates to the value-added forest products sector:

1. To make B.C. the best educated, most literate jurisdiction on the continent
2. To lead the way in North America in healthy living and physical fitness
3. To build the best system of support in Canada for persons with disabilities, special needs, children at risk and seniors
4. To lead the world in sustainable environmental management, with the best air and water quality, and the best fisheries management, bar none
5. To create more jobs per capita than anywhere else in Canada

These goals lead us to encourage growth in the value-added forest products sector with an eye to ensuring the social, environmental and economic interests of British Columbians are addressed.

“Value-Added – What do we mean?”

In common use within the B.C. forest industry, the term “value-added” is usually equated with conversion of solid wood to a more highly manufactured product than boards or dimension lumber. Typically in British Columbia, the range within this meaning spans from sorting or remanufacturing

for grade, to making high-end furniture and cabinetry. It is often argued, with merit, that even the primary manufacturing process of converting timber to dimension lumber or panels is value-added, and some will extend the definition as far as improvements to site productivity and tree genetics.

There are actually several very different processes, types of enterprise and sub-sectors within the broad value-added wood processing industry, and it is likely sufficient to accept that as long as each adds net value to the economy, it is “value-added”. More important perhaps is the intent – *to increase the overall net economic value generated by forest products through incremental additions per unit of raw material used*. In other words, society wants to increase the cumulative value added to its public timber resource through an industry that applies a value, not volume focus in its business strategies. Moreover, given the complexity of the resource and the wood manufacturing sector, government will want to encourage those sub-sectors offering the greatest potential value-added margins (over existing value). The question from a public policy perspective may be how to encourage success in high margin sub-sectors where B.C. can establish a competitive advantage.

In the broadest sense, value-added forest products can be “timber derived” or “non-timber derived”. The latter are popularly known as “non-timber forest products” and include such things as decorative foliage (e.g. ferns and salal), edible plants (e.g. mushrooms and berries), and enumerable other traditional and emerging products. Typically policy and management initiatives in B.C. have focused on wood, but by being non-specific from a policy point of view, the highest value-added enterprises should grow, regardless of the raw material source. In other areas of the world, particularly on private forest lands, owners sometimes find that non-timber products offer greater value than timber values. This is particularly evident when a full range of environmental services, rather than just traditional consumer “products” are taken into account – for example wildlife viewing or commercial recreation. We have seen examples from Finland where the potential commercial timber yield is under-harvested in favor of the greater commercial value of wildlife harvests.

When taken in the context of a broad range of environmental services and products from the forest, some would argue that to truly measure value-added we should start at the true value of the forest in both timber and non-timber value terms. Currently at a micro level, the value of the forest is determined for stumpage purposes as a derivative of the value of the log(s) or lumber and pulp chips, depending on the valuation method in use, and does not always account well for other environmental services provided by the forest such as carbon sequestration, scenic value, wildlife habitat etc.. Decisions as to the non-timber value of a forest are made at macro levels through planning processes such as Land and Resource Management Plans and Forest Stewardship Plans, and timber harvest rate decisions of the Chief Forester.

As evidenced by the preceding discussion, the term “value-added” is very broad and complex to measure, even when applied to forest products. For the remainder of this synthesis we will therefore limit our scope by adopting the assumption that the initial harvest and primary breakdown is a net value-added and that the alternative value of non-timber forest products or environmental services foregone has already been considered. As a result, we deal only with the manufacture of products derived from wood.

Increasing the “margin-added” – moving from a volume orientation

Margin (\$) added is the measure for net value added at each stage between a tree and a finished wood product (value added in excess of the labor and capital input costs). Arguably, we already have a significant value-added forest products industry in B.C., producing high quality products, contributing to government revenues and providing jobs. However, the public and policy makers often express concern is that we are not adding sufficient margins to sustain industry competitiveness and the resulting public benefits (e.g. jobs, taxes, stumpage fees). Presently, a very high percentage of the timber harvested in B.C. is exported as dimension lumber, pulp, oriented strand-board or plywood, and only a small percentage is further manufactured into secondary products, such as mouldings, or finished products like furniture. This may present opportunities to increase manufacturing and benefits to the province, if companies are able to make a reasonable return on investment in secondary manufacturing and production of finished wood products. This may also reduce the perceived risks involved in relying heavily on production of commodity products in a time of increasing competition from regions of the world with lower labor and raw material costs.

Historically, strong competition in the commodity market has led to smaller margins, encouraging the industry to reduce production costs and increase volume in order to achieve an acceptable, stable return on capital invested. For the most part, the B.C. industry has been very successful with this strategy, especially where robust supplies of good quality timber are available.

In some coastal regions of B.C., the availability of high quality, affordable logs is much more constrained than it once was, requiring the primary industry to contract or consolidate. If feasible opportunities can be found to carry out further manufacturing processes and add more value to the existing volume of raw material, there are potential private and public benefits. A different situation exists in much of the B.C. interior, where the Mountain Pine Beetle epidemic has killed vast areas of pine and harvesting has been accelerated to salvage the dead timber before it decays or burns. This is expected to mean that there will be a short-term (5-15 years) surplus of dry pine, followed by a

significant decline in harvestable timber as the salvage concludes. The volume of dead pine (an estimated 411 million cubic metres has been killed) is so large that it is imperative that there be a continued focus on high-volume primary processing of dead pine for the next few years in order to capture the value of the dead timber. However, before the inevitable decline in the interior wood supply occurs, consideration will have to be given to whether private and public benefits can be maintained by adding more value to the remaining volume.

It is debatable, from a public policy perspective, whether it is preferable to encourage business growth in general, or to create incentives that promote a particular sector of the industry. Theoretically, winners should emerge as a result of market forces and market oriented policies. However, if the government adopts a strategy to encourage value-added wood manufacturing specifically, the approach should be based on a solid understanding and analysis of the risks and synergies in the industry, and should consider:

- Supporting a balance of volume and margin based business strategies that maintain and enhance benefits to the province over the long term;
- Supporting a general and continuous move upwards in margin-added;
- A taxation and regulatory environment wherein skilled entrepreneurs can realize a return on investment that is competitive with what could be earned in other jurisdictions or industrial sectors with the same investment of capital, technology and ingenuity; and
- Retention and enhancement of the forest industries' "social license" through an appropriate balance of social, economic and environmental benefits and risks (e.g. a "triple bottom line" approach).

Terminology used

Important to this discussion is the concept of continuously taking opportunities to generate more net value from the resources available to us – constantly adding margin. For the most part, the context for our value-added discussion is timber derived (wood) forest products, with some consideration for non-timber forest products. Since British Columbia has a well established primary manufacturing sector that is able to maintain high product quality standards and compete globally, the emphasis of this discussion tends more toward the non-commodity products. That is not to say that public policy should not pay attention to the primary sector's need to innovate, improve products and remain competitive. Indeed, the vast majority of B.C.'s timber supply is best suited to commodity production.

Recognizing that value can be added at any stage of manufacturing, and following on the approach taken by Stennes *et al* (2005), we will avoid the use of the generic term "value-added" and speak

more directly to the term *secondary manufacturing*, referring to the processing of wood products past the primary stage (e.g. lumber).

The Benefits of Secondary Manufacturing

While many people may intuitively accept the assumption that adding more value and margin to forest products will have a positive impact on achievement of British Columbia's goals for the next decade, meaningful policy decisions will need to be informed by a more specific understanding of the potential benefits and risks. A stable, viable primary wood products sector is essential to growth of the secondary sector, therefore it is particularly important to understand how we move forward without damaging, and preferably building on, the strength of the primary wood products manufacturing sector. In other words: *How can a growing, profitable secondary manufacturing sector contribute to the ongoing health of the primary manufacturing sector? Why do we want it?*

It is assumed that a strong, growing secondary forest products manufacturing sector is beneficial not only for its direct (internal) economic activity, but also for the synergies with other sectors of the forest products industry. The arguments favoring development of a strong secondary sector include:

- *Export Market Size* – the global demand for further manufactured products and resultant potential for market growth is much larger than that for commodity forest products. This market is diverse and complex.
- *Export Market Diversity* – resilience to commodity market cycles is enhanced by manufacturing a variety of products that have a more diverse market and may be less subject to market cycles, or at least subject to different cycles than primary products.
- *Domestic Market Diversity* – firms that add margin by manufacturing products from raw material purchased from primary producers create a larger domestic market for primary producers. This is not without its challenges. Secondary manufacturers often require special grades and sizes of raw material, a complexity that can constrain efficiency at the primary manufacturing stage, especially if small volumes are involved or buyers are highly cost-sensitive.
- *Timber Supply Constraints in B.C.* – to date, one of B.C.'s primary sector competitive advantages has been an enviable supply of high quality, relatively low-cost publicly owned timber. As harvest of original growth concludes and more pressures emerge to compete for use of the land base, timber supply limits will become more evident. This trend is already well underway on the coast. Upon conclusion of the bark beetle salvage program in the interior, timber supplies will decline and the primary lumber sector in the interior must contract. This reality limits the ability of the industry to grow with global demand for

primary products by processing more volume. Growth in the secondary sector can help to offset reduced gross domestic product resulting from this contraction.

- *Large and Diverse Support Sector* – additional manufacturing should naturally lead to growth and diversity in the service and support sectors. Equipment manufacturers, technology companies, safety and engineering firms and many others will benefit as suppliers to a growing value-added forest products industry. This larger pool of goods and services has the potential to induce competition and benefit the primary industry as well. The potential synergies of a healthy, growing support sector can result in the province becoming a laboratory for commercial innovation and thereby creating a competitive advantage.
- *Geographic Diversity* – Some secondary manufacturers may be able to operate in geographic areas being vacated by consolidation in the primary sector, and thereby utilize the infrastructure, labour pool and local resources without competition from the primary sector. Others may find a business advantage to co-locating with primary manufacturers or other value-added firms because of the synergies available ('industrial clustering'). Public policy decisions may have an impact on this distribution, or it may be left entirely to market forces.
- *Labour Pool Size and Diversity* – growth and diversity in the wood products manufacturing sector can lead to more skilled employees entering and staying in the sector, especially if diversity in product lines and markets buffers the industry against cyclical ups and downs. The benefits of a shared labour pool would be particularly evident where primary and secondary manufacturers are located in close proximity.
- *Critical Mass for Infrastructure* – the relative costs and benefits of public and private infrastructure (transportation, power, etc.) are improved where there are many users.
- *Competition for Raw Material* – many buyers for raw material can lead to more market-based pricing of timber and reduce accusations of unfair trade (do not overpay, do not get accused of subsidy by protectionists).
- *Pride-in-Brand* – the public may identify more with the non-commodity product, and be able to relate more directly to and therefore be more supportive of the industry as a whole.
- *Better Margins, Better Investment Climate* – to the extent that all firms can find ways to add value and capture a strong return on their investment, the overall business climate will be strengthened.

In summary, the combination of a competitive primary industry, linked to a larger and healthier secondary forest products manufacturing sector, has the potential to produce economic wealth in the province equal to or greater than the present industry profile, even with a reduction from the present supply of timber. This ultimately improves the prospects for a competitive forest sector overall.

Inasmuch as the future secondary sector is based on B.C. wood as an input, optimizing and integrating management of that part of the value chain controlled by the primary sector and that

part controlled by the secondary sector, appears to be a critical factor to growth in the secondary sector. Without effective integration or synergy, opportunities to optimize the value chain are lost. To briefly illustrate with a simple example:

- In the absence of synergies, timber-tenure holding primary producers may not be motivated to divert high-suitability logs to entrepreneurs in the value added sector, at any price. These logs are then used for commodity lumber production;
- The issue above reduces the potential timber supply for smaller, or medium sized millers that could extract a higher value from those logs;
- Staying competitive in commodity lumber production requires the highest efficiency mills. Production processes in these mills make it very difficult to produce special dimensions, or pull special grades, at a price that a secondary manufacturer could pay. This, combined with the point above, reduces the ability of secondary manufacturers to source specialty raw material in sawn form.

Viable or sustainable solutions to situations as described above do not include simply expecting the primary producer to accept increased costs. The most likely solutions will arise when the primary and secondary sectors share a vision for growth, follow practical goals for growth in the secondary sector and find ways of sharing in the benefits of creating added value or margin.

Policy Requirements to Encourage Adding Value

Overview of Other Jurisdictions

In October 1999, Forum Consulting Group Ltd. prepared a discussion paper for the Ministry of Forests, entitled *Jurisdictional Review: Policies and Incentives to Promote Investment in Secondary Wood Manufacturing*. The paper summarizes a review of 22 separate jurisdictions representing Europe, Asia and North America. General observations about areas with higher growth rates include:

- The highest rates of growth in sales of secondary wood products have generally been associated with higher degrees of dependence on fiber volumes from private sources;
- Jurisdictions taking a flexible, coordinated approach to marketing have performed well and show a higher rate of growth in sales for secondary wood products;
- Jurisdictions with higher rates of growth make greater use of policy tools and tend to view the promotion of secondary wood manufacturing within the broader context of industrial development;
- Most jurisdictions experiencing higher rates of growth in secondary manufacturing have relatively low labour costs; and

- Jurisdictions with high levels of growth have shown a greater tendency to adopt policies which do not insulate domestic markets from global markets (Forum Consulting Group Ltd., 1999).

While the paper acknowledges that high rates of growth may be mostly associated with non-policy factors, the following traits were observed in relation to effective policy frameworks to promote secondary wood manufacturing:

1. client-focused, single access delivery of government services;
2. entrepreneurial public agencies nurture investment;
3. policy includes careful analysis of factors affecting investment decisions;
4. promotion is within a broader development strategy;
5. manufacturing is export-oriented;
6. employment is recognized as an outcome of increased investment, not a goal in itself;
7. labour flexibility is promoted;
8. competition is fostered through privatization and out-sourcing;
9. tax burdens are minimized;
10. research and development is used to maintain competitiveness;
11. imports of raw wood and primary products offset deficiencies in the species profile; and
12. government policies are used to open markets rather than to insulate business and labour from them.

Quebec

One of the 22 jurisdictions examined in the above-noted report was Quebec. A more detailed and recent examination of the growth of value-added manufacturing in Quebec has been provided by Robert Beauregard (Beauregard, 2005), in which he provides a comparison of statistics (supplied by the Quebec Ministry of Natural Resources) for the Canadian provinces and territories, showing trends in manufacturing and export of wood products over the past decade. Beauregard describes the Value Added Sector in Quebec from the perspective of “what was given” to the sector (inherent strategic advantages) and “what was done” (actions to grow the sector), then outlines two opportunities.

The “what was given” aspects of the Quebec industry are instructive to the extent that the similarities and differences with British Columbia’s context will be important to decisions made here. The key elements identified include:

- significant local market and proximity to large US market;
- diversity of tree species including hardwoods;
- modern transportation infrastructure;
- suitable localities for value-added manufacturing;

- vertical integration in the industry;
- labour pool with a tradition of manufacturing and craftsmanship;
- equipment manufacturing industries;
- availability of experts, scientists and knowledge-based organizations; and
- access to financing.

Perhaps an even more relevant reference for British Columbia is “what was done” by Quebec for the Value Added Sector. Some of the key elements identified by Beauregard are:

- Fiscal policies to overcome distance-to-market disadvantages, and tax breaks for companies establishing facilities in target regions;
- General tax credits for industry research and development expenditures;
- Specific tax credit for secondary wood processing based on increased or new salaries;
- General financial support programs for industries and specific programs for value-added wood producers;
- Technology transfer, value-added research and development, advice to small entrepreneurs.

The two opportunities described in the paper are expansion of the furniture industry and the manufactured house industry. Quebec has established the Research Partnership for the Furniture Industry (PARIM) to be “the driving force for the technological advancement of Quebec’s furniture industry through the creation of a world class research consortium and in structuring the research and development and training efforts among the partnership”. The impact has been to improve the competitive position of Quebec’s furniture industry. A strategic approach is now being developed to move to the leading edge of the manufactured house industry. According to the paper, an underlying, or paradigm shift is underway, from competing on the basis of cheap natural resources and labour to competing on the basis of products that have a mass market, yet can be produced in a manner that allows a degree of customization to suit individual customers.

Ontario

In June 2005 Ontario Natural Resources Minister David Ramsay released the final report of the Minister’s Council on Forest Sector Competitiveness (Ontario Ministry of Natural Resources, 2005). Accompanying the release was the announcement of two initiatives that may assist the growth of value-added wood manufacturing in that jurisdiction: 1) an announcement that Ontario will provide up to \$350 million in loan guarantees to stimulate new investment in value-added manufacturing, improve energy efficiency and make better use of wood fiber. Ontario is hoping this will leverage up to \$700 million in new investment; and 2) creation by government of a process for industry to maximize wood use and reduce costs by moving to multi-party shareholder Sustainable Forest Licenses.

Alberta

In April 2004 Alberta announced a new value-added strategy as part of the government's 20-year plan, *Securing Tomorrow's Prosperity*. The strategy does not propose direct funding to individual businesses. Government's role will be to facilitate and support industry initiatives that further the strategy and increase Alberta industries' ability to compete in world markets. The 20-year plan states a number of strategic directions that aim to provide a general climate for growth and investment, including:

- Enhancing Alberta's current competitive advantages by focusing on a knowledge-ready workforce, competitive business climate and investment in infrastructure;
- Building Alberta's innovation system through a province-wide culture of innovation, enhanced capacity for technology commercialization, increased rate of technology adoption and diffusion, increased business investment in research and development, and focused and coordinated research investment;
- Growing and strengthening small and medium-sized enterprises through increased management/leadership capacity, support mentoring for entrepreneurs, facilitating development of networks, alliances and supply chains, and ensuring access to market research, information and resources; and
- Focusing on priority value-added sectors (Alberta Economic Development Authority, 2004).

The latter strategy is still fairly general as it applies to a wide variety of value-added sectors, of which building and wood products are only one. Alberta does single out value-added wood products in one policy area with the following commitment: "tenure renewal of Forestry Management Agreements will focus on development of new products and value chain/market opportunities. Increased partnerships and business relationships to increase value per unit of fiber harvested will be encouraged." A commitment is also made to undertake a major policy review to assess ways to increase value-added products and services from Alberta's natural resources.

Virginia

The Virginia Coalfield Economic Development Authority (VCEDA) promotes value-added wood product manufacturing through an emphasis on several key advantages, many of which are policy related:

- Location – The area purports to have an ample supply of raw material and advertises that 55 of North America's top 300 wood manufacturers are within 200 miles of the VCEDA Region;
- Support businesses and large raw material suppliers;
- A quality labour force and training;

- Low workers compensation and unemployment insurance rates, competitive wages, taxes and power;
- A good transportation network with access to eastern and mid-American markets;
- Available sites and buildings; and
- Incentives – the VCEDA develops customized location assistance proposals based on project specifications. The level of assistance is based on numerous factors and may include the number of jobs created, capital investment, quality of the company and the specific location within the region. The types of assistance include: facility construction (build-to-suit, lease or sell, reduced land price and deferred payments); fixed asset financing (building, land and equipment rates substantially below prime); specific need assistance (financing for unique needs); tax incentives (at enterprise zones locations only – there are four zones in the region); and workforce related incentives (free employee recruiting, testing and customized training assistance) (Virginia Coalfield Economic Development Authority, 2005).

British Columbia's Situation

British Columbia is the largest producer of forest products in Canada. There is no one factor that guarantees B.C. will be successful at growing and sustaining its secondary forest products manufacturing sector, however the combination of circumstances certainly make it possible.

The Province has undertaken a variety of initiatives over the past fifteen years, mostly through the Ministry of Forests and aimed at making raw material, including standing timber, available for designated “value added” manufacturers. Continuity of supply and cost were most commonly cited by companies as constraints on growth. As a result, programs were put in place to encourage the flow of timber to secondary manufacturers through restricted competition and inclusion of non-financial factors in the award of timber sale licenses under Section 21 of the *Forest Act*. To a degree, these licenses improved the ability of value added entrepreneurs to acquire raw material, both in the form of lumber or specialized logs, from large forest companies that controlled the preponderance of timber through large, long term licenses, overcoming raw material supply obstacles in that way. However, British Columbia's share of Canadian value added wood exports fell dramatically during this period compared to some other Canadian jurisdictions, indicating that the Section 21 policy was not as effective as other policy options to grow the sector. During this period, B.C.'s share of Canadian value added wood exports fell from 33% to 14% in value terms. The rate of growth in Quebec and Ontario was such that those provinces in 2002 produced 34% and 35% respectively of Canadian value added wood exports (BCStats May 2003).

Perhaps the most comprehensive attempt was made by Forest Renewal BC between 1994 and 2001.

This program was undertaken concurrent with the Ministry of Forests' policy to make timber available to the secondary manufacturing sector. Forest Renewal B.C. worked with the industry, government and sector specialists to identify impediments (such as information, training, technology, and market access) and develop a provincial strategy with five key components:

1. Developing infrastructure within the industry
2. Marketing information and access
3. Training in all aspects of the value-added industry
4. Improving access to information and technology
5. Encouraging business development

Although there are questions about the long-term effectiveness of the policies and programs B.C. has employed to date, some growth occurred during this period (BCStats reports that the value of shipments grew from \$300 million to \$900 million between 1990 and 2002), a body of expertise has been established, and some programs (e.g. Forestry Innovation and Investment Limited) continue to provide support to the sector. Marketing initiatives such as BC Wood appear to have been particularly successful.

Prerequisites for Increasing the Success of Secondary Manufacturing Firms in B.C.

In the move to a focus on value from one on volume, there appears also to be a shift in the nature of the factors affecting competitiveness. The impact of traditional comparative factors such as labour costs, interest rates, exchange rates, security of raw material supply, physical infrastructure (e.g. transportation), distance to market and economies of scale are inescapable, and some other regions of the world may have an advantage over B.C. in various combinations of these factors. However, there are emerging market and service oriented factors that can be expected to play a larger role in the success of the secondary wood products sector. Studies have shown that qualitative aspects such as management capability, entrepreneurial orientation, market knowledge, work force skills, innovation and adoption of new technologies are often what determine successful performance.

Ultimately, some combination of tangible "hard" factors, and less tangible "soft" factors will determine success or failure. A few of these are listed below, however B.C.'s position relative to many is arguable, and possibly an area where research can be of assistance. DeLong *et al* (2004) describe 10 factors important to the success or failure of firms in the secondary manufacturing industry:

1. *Cost* is still an important driver for success, although insufficient on its own.
2. *Product innovation* becomes increasingly important as a firm moves up the value chain.
3. *Process innovation* is linked to technology and increasingly important in mature industries.
4. *Technology innovation and development* are important to all firms and create difficulties for small and medium sized firms or those that are downsizing and reducing their technology

- developments.
5. *Managing the value chain* has major implications in the Canadian wood sector where it could help link the primary and secondary sectors.
 6. *Clustering* also has great opportunity in Canada, once concentrations of secondary manufacturers are identified.
 7. *Managerial expertise* is necessary to develop and implement a successful strategy in the increasingly complex global business environment.
 8. *Education and training* ensures the work force can implement the strategies developed by management.
 9. *Marketing orientation* is necessary to compete in a world increasingly concerned with quality, service and value.
 10. *Firm specialization* ensures that firms stick to their core competencies and build success in markets that value these competencies.

B.C. Policy Research Opportunities

Having done a brief examination of what we would be attempting to accomplish by enhancing the secondary manufacturing industry in B.C., and having looked at what is being done in other jurisdictions and the success factors that emerged from existing research and literature reviews, the question becomes: *“in what areas do we need information in order to implement policies in B.C. to better encourage growth in this sector?”*.

Materials

- What factors in the availability of raw materials impact the viability of secondary manufactures, and how?
- What role does location of the raw material play (timber or sawn material) and would new sawmills be needed in some locations to improve supply of raw material?
- Is there a need for sawmills that specialize in primary breakdown customized for secondary manufacturers?
- What is the long-term availability and cost of high quality/high value wood fiber (e.g. old growth Douglas-fir or yellow cedar)?
- What is the availability of supply and market opportunity for aspen, birch, alder and other B.C. hardwoods?
- What silviculture considerations and techniques should be applied to ensure high quality second-growth timber from B.C. tree species?
- Should B.C. be growing other species to increase the diversity of the raw material supply?

- What is the feasibility of importing raw materials for secondary manufacturing and could we do this competitively?

Value Chain

- Are there impediments to more integration or synergies and value chain management in B.C., how do they affect secondary manufacturing, and how can they be reduced?
- What 'clusters' currently exist, why have they developed and can they be expanded?
- What are the success criteria and potential for business cluster locations in B.C.?
- Do regional strengths and opportunities exist and if so how can they be encouraged?
- What are the options and the feasibility of changing forest tenures in B.C. to encourage better value chain management?

Costs

- What, if any, is the impact of government timber pricing policies on secondary manufacturers?
- How important are property taxes and cost of land in secondary manufacturing investment decisions?
- How important are payroll and corporate taxes to the success of secondary manufacturing firms?
- How sensitive are secondary manufacturers to cost and quality of raw materials?

Workforce

- What is the availability of skilled labour now and in the future, what trends are evident and how will these impact secondary manufacturers?
- What are the workforce flexibility requirements for successful firms?
- What is the trend in availability of and competition for skilled managers and entrepreneurs and how will that impact firms' success?

Innovation

- What is B.C.'s product research capacity and what would be needed to increase it in a way that would stimulate more private sector investment?
- What taxation, patent and other policies exist in B.C. to encourage innovation and how well are they suited to secondary manufacturing?
- Is there a role for publicly supported process and technology innovation, and what are the options?

Marketing

- What is the role and impact of coordinated marketing in the success of small firms/value-added firms?

General

- To what extent do the success factors for secondary manufacturing firms work in favor of, or against public policy for sustainability of small and rural communities?
- What is the role and impact of more general economic development policies (non targeted) on secondary manufacturing?
- By region and product type, what are the advantages, disadvantages and opportunities for growth in the secondary manufacturing sector?
- Are there changes to the way in which government services (e.g. licensing, tax information etc.) are delivered that would encourage secondary manufacturing firms?

The Role of First Nations in Developing the Value Added Sector

The Business Council of BC expects First Nations Communities to be increasingly engaged in forming new businesses and economic development ventures and helping to build infrastructure in the province. They report that corporate-Aboriginal business ventures are becoming more common. Established through a variety of agreements, contracts and corporate assistance for wholly-owned Aboriginal businesses and joint ventures, these partnerships have developed in a number of sectors, including forestry.

Aboriginal communities are gaining increasing access to timber tenures through a variety of agreements with the province, and are a growing source of labour for potential value-added manufacturing. According to the Council, communities seeking to become more self-reliant are partnering with corporations to access technical skills, markets, distribution networks and capital and management expertise. In turn, corporations are seeking a stable operating environment, reliable access to resources and a need to tap into the growing labour pool.

The provincial government and B.C. First Nations' organizations are working together to develop a new relationship founded on reconciliation, recognition and respect of Aboriginal rights and title. As this new relationship evolves, it is expected that the role of First Nations in the management and development of forest related industries will also evolve.

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