WOOD in the WEST

Innovation Systems Research Network
Fifth Annual Meeting in Ottawa
May 1 and 2, 2003

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The Secondary Wood Industry

(alternatively ‘Wood Manufacturing’ or ‘Value Added’ Industry)

Statistical definition:

- **Sawmills and Wood Preservation (3211)**: manufacturing boards, dimension lumber, timber, poles and ties from logs and bolts; producing lumber that may be rough or dressed by a planing machine but generally not further worked or shaped; preserving wood.

- **Veneer, Plywood and Engineered Wood Products Manufacturing (3212)**: manufacture softwood and hardwood veneer and plywood; structural wood members, except lumber; and reconstituted wood products.
Cont’d:

• **Other Wood Products Manufacturing (3219)**: not classified elsewhere: millwork, wood windows/doors, containers, prefabricated wood buildings, mobile homes, all other, generally using woodworking machinery; includes seasoning and planing of purchased lumber (baseboards, flooring, panelling, handles, toothpicks, clothespins etc.)

• **Furniture and Related Product Manufacturing (337)**: includes wood, metal and other materials.
Descriptive definition

The seven subcategories:

- Remanufactured products
- Engineered building components
- Millwork
- Cabinets
- Furniture
- Pallets and containers
- Other
Functional definition (and distinctions from primary and ‘tertiary’ wood industries)

- Value added
- Employment per m2 raw material
- Use of raw materials
- Unfinished/Finished products
Determinants and boundaries of the secondary wood industry

- Low use of raw materials
- High employment per m³

PRIMARY | SECONDARY | TERTIARY
unfinished | unfinished | finished

Secondary Wood Cluster Study
## Estimated Raw Material Use and Employment for Various Wood Product Groups in BC

<table>
<thead>
<tr>
<th>Business Type</th>
<th>% Raw Material Use</th>
<th>Est. cubic meters (000s)</th>
<th>Jobs per 1000 cubic meters</th>
<th>Est. Total Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remanufacturers</td>
<td>50.50%</td>
<td>6,767</td>
<td>0.5</td>
<td>3,384</td>
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<tr>
<td>Panel board</td>
<td>23.40%</td>
<td>3,136</td>
<td>0.75</td>
<td>2,352</td>
</tr>
<tr>
<td>Engineered wood products</td>
<td>6.80%</td>
<td>911</td>
<td>1.84</td>
<td>1,677</td>
</tr>
<tr>
<td>Shakes and shingles</td>
<td>8.70%</td>
<td>1,166</td>
<td>0.96</td>
<td>1,119</td>
</tr>
<tr>
<td>Millwork</td>
<td>4.00%</td>
<td>536</td>
<td>1.75</td>
<td>938</td>
</tr>
<tr>
<td>Cabinets</td>
<td>0.60%</td>
<td>80</td>
<td>10.33</td>
<td>831</td>
</tr>
<tr>
<td>Furniture</td>
<td>0.40%</td>
<td>54</td>
<td>7.66</td>
<td>411</td>
</tr>
<tr>
<td>Other wood products.</td>
<td>4.30%</td>
<td>576</td>
<td>0.7</td>
<td>403</td>
</tr>
<tr>
<td>Pallets and containers</td>
<td>1.40%</td>
<td>188</td>
<td>0.82</td>
<td>154</td>
</tr>
</tbody>
</table>
Secondary wood companies (BC) and their distribution

Total (estimates):
- Lower Mainland 50%
- Okanagan/West Kootenays 25%
- Prince George/North/Central 15%
- Vancouver Island 10%
Secondary Wood Cluster Study
Clusters and principal factors for clustering

- Proximity to raw material ("fibre," wood – important for re-manufacturers)
- Proximity to clients/the market/convenient transportation routes (important for millwork companies serving primarily the local market)
- Proximity to other companies in the same category
- Proximity to labour pool; training institutions
- Proximity to R & D institutions
Other factors influencing the decision to locate/stay

- Immigration patterns (especially immigrants from Europe – a background in wood/woodcrafts)
- Local knowledge and networks
- “Quality of life”
The profile of secondary wood firms

- Size
- Workforce and skills/terms of employment
- Customer/markets/competition
- Management/company structure
- Technology
- Innovations
- Links to R & D/training institutions
- Industry associations and other networking
Recent developments

– Globalization and its effects on secondary wood
  • Competition
  • Joint ventures
  • Corporate mergers and strategic agreements
– The US market and effects of “softwood lumber” tariffs
– The potential of IT
  • Rationalization
  • Integration of the production/marketing process
  • Customized mass production
– The new managers
Secondary wood in Western Canada
– an industrial cluster

– Preliminary analysis
– Missing pieces
The Secondary Wood Industry
(alternatively ‘Wood Manufacturing’ or ‘Value Added’ Industry)

What is it? Statistical definition:

- **Sawmills and Wood Preservation (3211)**: manufacturing boards, dimension lumber, timber, poles and ties from logs and bolts; producing lumber that may be rough or dressed by a planing machine but generally not further worked or shaped; preserving wood.

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Four principal elements of clusters:

- Local interactions with other companies and organizations/institutions
- Local knowledge flows
- Innovation in cluster firms
- Dynamics of the cluster as a whole
Local Interaction

– Among the seven sub-sectors (ranging from re-manufacturing to furniture), there is almost no interaction across, and little interaction within.

– The only activity with some degree of interaction across the sector as a whole regards marketing activities for new international markets. This interaction does not occur at the local level; it is organized by the province-wide BC Wood Specialty Group.
Local Interaction

? The majority of companies produce mostly for customers outside of their own local region.

? They buy most of their wood and other supplies from suppliers (or sales agents) located outside their own local region.

? However, companies tend to use local business services (banking, accounting, legal services).
Knowledge Flows

? There are only very few larger, local "champion" companies from which other firms have spun-off. In particular, there are almost no spin-offs from the primary sector.

? With few exceptions, there is no R & D collaboration with universities. Some R & D work is done with/by FORINTEK and some colleges/institutes.
Knowledge Flows (2)

The "talent" factor and knowledge transfer through highly educated/trained personnel.

- Most workers are unskilled. They are recruited locally, receive only basic training, earn low wages, and often move to other local firms.
- Few graduates from college programs specializing in wood-related training programs. These are adequately paid and given career development options. They, therefore, rarely change companies.
- No effect yet of engineering program for secondary wood manufacturing at UBC.

Secondary Wood Cluster Study
Knowledge Flows (3)

– The most important knowledge flows into the industry are specialized trade shows. Most of these take place outside the region (mainly in the US and Europe).

– Technical and related (e.g. design) knowledge flowing from these trade shows originate from two sources:

  – competitors
  – producers of wood working equipment
Innovation

As products are mature, most innovation comes in one of three forms:

- product design and quality improvement (mostly incremental product innovation)
- rationalization (often radical process innovation)
- new markets; new materials
Traditional Structures and New Developments

On the whole, the industry has still low tech equipment, a low-skilled workforce and autocratic management, and is rarely innovative, both with respect to products, processes and markets.

There are now four new trends clearly discernible which are changing the traditional structures and dynamics of the industry.
New Developments

- Diversification of markets (Southeast Asia, US)
- Globalization of production
- Product specialization
- Professionalization of management and core staff
- Rationalization and full integration of the entire business process through IT.
Clusters or agglomoration of firms?

First Generation - Clusters building around:

- Skilled labour (immigration)
- Proximity to new materials
- Proximity to local markets (clients)
Clusters or agglomoration of firms?

Second Generation - cluster development:

- Attraction of new firms
- Spin-offs
- Some specialization
Clusters or agglomoration of firms?

Third Generation - de-clustering due to:

- Move towards new national/international markets
- National/international suppliers of raw materials
- National/international suppliers of equipment
- Professionalization of management
- High degree of specialisation
Questions related to the three development phases

1. Why was this firm established here?

2. What factors made the company succeed/grow? Which of these are due to local knowledge flows or interaction with local partners?

3. Have you contemplated a move to another location (where)? What keeps you here?
Clustering and de-clustering in the wood sector

? The industry grew significantly around small local clusters.

? As the sector, and many firms grew, the clusters became both more and less important.

? In the third phase of development, local clusters have little or no importance.
WOOD IN THE WEST

To be continued…

• More case studies in Alberta
• Furniture cluster in Manitoba

Wood in the East?