

TECHNOLOGY TRANSFER NOTE

SECONDARY FOREST PRODUCTS INDUSTRY IN ALBERTA, 1986

A-004

Introduction

Alberta's forestry sector has been criticized for not having enough value-added activity. There is some truth to the fact that the primary forest industry concentrates on commodities such as lumber and pulp but almost by definition - that is what primary is all about. The question that has not been addressed is just how extensive is the secondary forest products industry. Research cannot answer the value judgement "Is it big enough relative to the primary sector?" This note is intended to shed some light on this question.

This report gives an overview of the secondary forest products industry in Alberta. It describes what industries should be included, the size, scope and location of firms belonging to this important Alberta industry. Data are derived from the Alberta Manufacturers Index, 1987.

Classification

The term "secondary industry" is elusive and subject to interpretation. Secondary industries include all establishments principally engaged in the further processing or utilization of primary products. Secondary manufacturing activities are those which use a primary product such as lumber or paper as input and produce items such as furniture or envelopes as outputs. The secondary forest products industry includes parts of 3 major industry groups in the

manufacturing division as defined by Statistics Canada; Wood Industries, Furniture Industries, and Paper and Allied Industries. This includes 21 industry classes, all identified by a "standard industrial classification" (SIC) 4 digit code.

Firms often make multiple products and as such can be classified in a number of industries (in some cases up to 5) depending on their products. The authors eliminated the multiple coding and classed each firm only once so there would be no double counting of firms.

Some of the firms identified in this study could, if rigorously inspected, be regarded more as assemblers or distributors, but these firms have chosen to identify themselves as manufacturers.

Employment by Municipality

In the original source of data employment is shown as a range. The midpoint was used to represent the employment value. The secondary forest products manufacturing employment is estimated to be 12,546 (Table 1). Most jobs are found in Calgary (37%) and Edmonton (33%). Other individual communities have less than 5% of all the jobs. Calgary and Edmonton together have 322 or 60% of the total number of firms. Whereas primary forest industries are located close to their source of raw materials, the location of secondary forest product industries is influenced by markets and labor availability.



Government
of Canada

Gouvernement
du Canada

Canadian
Forestry
Service

Service
canadien des
forêts

Canada

CHECKED JAN 2 2 1992

Table 1. Secondary Forest Products Industry Employment by Municipality

Municipality	No. of firms	Employment	%
Calgary	158	4611	36.75
Edmonton	164	4127	32.90
Lethbridge	21	533	4.25
Airdrie	5	395	3.15
Red Deer	10	280	2.23
Spruce Grove	8	276	2.20
Lloydminster	7	244	1.94
Drumheller	4	215	1.71
Winterburn	3	213	1.70
Lacombe	2	190	1.51
Grande Prairie	7	148	1.18
Medicine Hat	4	90	0.72
Sherwood Park	7	87	0.70
Camrose	6	77	0.61
Other communities	126	1060	8.45
All municipalities	532	12 546	100.00

Size of Firms

The secondary forest products industry is represented by some 532 firms with total employment of 12,546 Albertans (Table 2). It is dominated by small business (95% of the firms have less than 100 employees). In fact 35% of the firms have less than 5 employees (Figure 1). A significant number of these small firms have the facilities and capacity to employ considerably more than 5 employees if demand and the economic environment were to improve.

Comparison with other studies

This study is not the first investigation of the secondary forest products industry. Hallmark, in their report on the secondary forest products industry in 1982, showed that approximately 25% of the larger companies (those with over 20 employees) generated 60% of the employment. We have found that virtually the same percentage (27%) of the

firms in this size class account for of the total secondary manufacturing employment (Figure 2).

Table 2. Size of Firms in Secondary Forest Products Industry

Size of firm by no. of employees	Number of firms	Number of employees
1-4	186	465
5-9	104	728
10-19	100	1 500
20-49	90	3 150
50-99	26	1 950
100-249	25	4 375
250-499	1	375
Total	532	12 543*

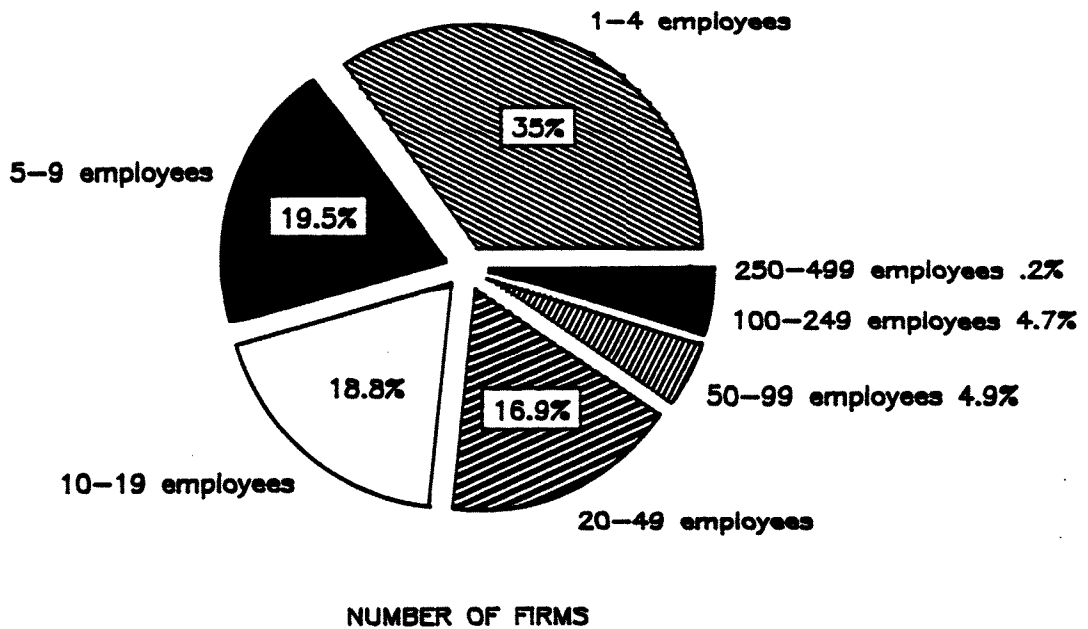
*Differences due to rounding off, the actual number of employees is 12 546.

There were 532 firms manufacturing secondary forest products in Alberta in 1986. Hallmark surveyed 234 firms and then calculated that there were 351 firms in the secondary forest products manufacturing industry in 1982. Hallmark's definition of the secondary forest products industry was restricted to include only firms manufacturing "solid wood" products. No paper converters were included. As shown in table 3, we have recognized some 503 firms as being found in this "solid wood" group, with an additional 29 firms found in paper conversion manufacturing for a total of 532 firms. Statistics Canada using a definition of the secondary forest products group similar to the one used in this study identified only 253 firms as secondary forest product manufacturers (Table 4). This is less than 50% of the total we identified.

Hallmark also estimated employment in the secondary forest products industry (solid wood only) at 5500 jobs in 1982. Our information (Table 3), shows 11,000 people employed in solid wood industry with an additional 1530 employed in paper

NUMBER OF FIRMS BY SIZE CLASS

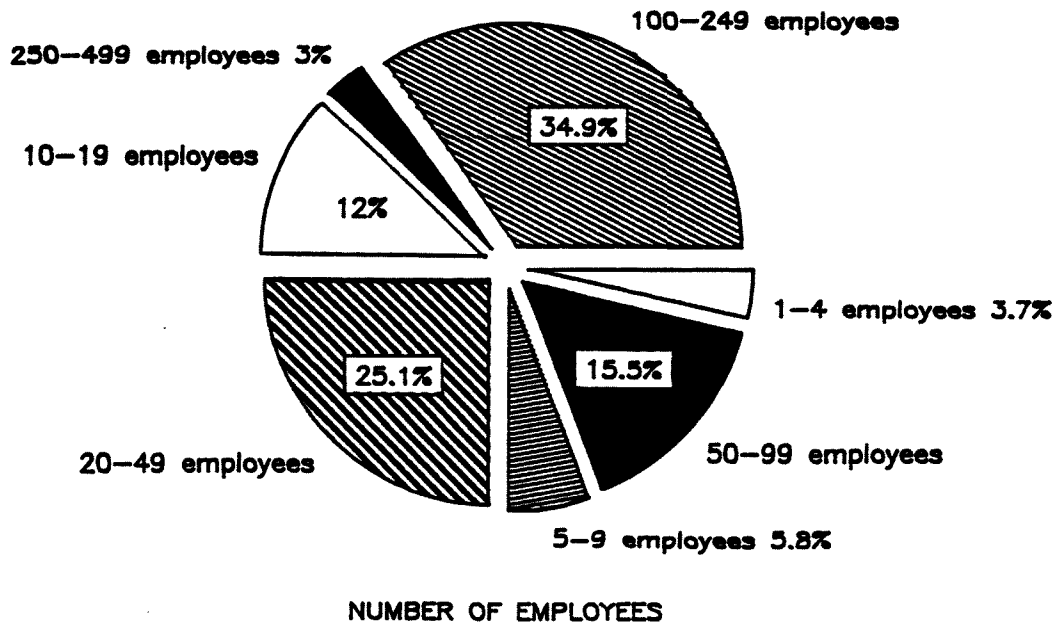
FIGURE 1



1986 data

NUMBER OF EMPLOYEES BY SIZE OF FIRM CATEGORY

FIGURE 2



1986 data

Table 3. Secondary Forest Products Industry in Alberta, 1986

	Number of firms	Estimated employment
Solid wood		
Wood industries (25) includes 7 industry classes	309	7 250
Furniture industries (26) includes 6 industry classes	194	3 766
Paper converters		
Paper and allied industries (27) includes 8 industry classes	29	1 530
Total	532	12 546

conversion, for a total of 12 546 jobs in 1986. Statistics Canada (Table 4), has identified an employment figure of 4 974, only 40% as many jobs as our study determined. We feel the larger numbers are due to a more complete listing of firms as opposed to growth in the industry.

Value of sales

Value of sales or shipments is a good indicator of the importance of an industry. There were no data for volume of sales collected in the Manufacturers Index survey. We have estimated the value of sales in relation to Statistics Canada information and Hallmark figures.

Hallmark gives a value of sales of secondary forest products in 1982 of \$400 million and estimates the employment at 5 500 jobs. Therefore a calculated value of sales per person-year of employment is \$72 727. Statistics Canada figures for 1985 (Table 4) show a value of sales of \$468 million with a corresponding employment value of 4 974 which results in a calculated value of sales per person-year of employment equal to \$94 129. A weighted average of the two previous calculations gives a value of \$82 890. This calculated value of sales per person-year of employment multiplied by the employment value of 12 546 found in our study, would give a value of sales for

the secondary forest products manufacturing industries for 1986 of \$1,039,937,940 or over one billion dollars. This is indicative of a significant sized industry with sales greater than the primary forest products industry.

Summary and Conclusion

A lack of detailed information on Alberta's secondary forest products industry has resulted in a low profile for this important sector of the forest industry. This study provides the best possible estimates on employment, value of sales, location, size and number of firms. In summary, the 532 firms in the secondary sector employed 12 546 persons and generated sales of over \$1 billion in 1986. Additionally, the manufacturing activity associated with secondary forest product manufacturing provides "value-added" to primary forest products. The industry plays an important role in Alberta's economy.

A basic conclusion of this study is that secondary forest product manufacturers lack organization. A unified voice in the form of an association would benefit the industry. An association could promote products, enhance communications within the industry and between the industry and government and generally represent the interests of the industry in many respects.

Table 4. Summary of Alberta Secondary Forest Products Industries

SIC Code	Industry class ranked by employment	Survey info. (1986) ¹		Statistics Canada info. (1985) ²		
		Number of firms	Estimated Employment (total activity basis)	Number of firms	Employment (total activity basis)	Value of shipments \$000 000
2541	Prefabricated wooden building	100	3 396	9	580	53.3
2543	Wooden door & window	49	1 674	22	350	26.9
2612	Upholstered household furniture	45	1 078	11	466	29.6
2611	Wooden household furniture	85	1 055	20	162	10.0
2549	Other millwork industries	54	921	34	494	36.9
2542	Wooden kitchen cabinet & bathroom vanity	77	831	59	407	27.5
2649	Other office furniture industries	15	807	12	319	19.0
2692	Hotel, rest. & inst. furniture & fixture	25	495	16	250	15.9
2732	Corrugated box	8	444	9	439	65.9
2721	Asphalt roofing	3	385	3	250	70.5
2699	Other furniture & fixture	23	328	10	115	6.3
2733	Paper bag	2	250	2	250 ^e	17.0 ^e
2599	Other wood industries	16	246	14	99	5.6
2792	Stationery paper products	6	222	6	91	11.8
2799	Other converted paper products	6	185	4	168 ^e	18.8 ^e
2561	Wooden box and pallet	10	153	11	120	8.9
2581	Coffin and casket	3	29	4	100 ^e	5.1 ^e
2731	Folding carton & set-up box	2	22	3	208 ^e	21.6 ^e
2791	Coated & treated paper	1	15	1	15 ^e	9.0 ^e
2793	Paper consumer products	1	7	0	0	0
2691	Bed spring and mattress	1	3	3	91 ^e	8.6 ^e
	All industries	532	12 546	253	4 974	468.2

¹Information from Alberta Manufacturers Index, 1987.

²Statistics Canada information for most recent year in which information is available 1985.

^eEstimates.

References

Alberta Economic Development and Trade.
1987. Alberta Manufacturers Index.

Hallmark Engineering Ltd. and Woodbridge,
Reed and Associates Ltd. 1983. A
study of Alberta's secondary forest
products manufacturing industry.
Alberta For. Serv., and Can. For.
Serv., North. For. Cent., Edmonton,
Alberta

Statistics Canada. 1980. Standard indus-
trial Classification - 1980. Cat.
No. 12-501E. Ottawa, Canada.

Statistics Canada. 1985. Census of
Manufacturers. Cat. No. 35-350B,
35-251B, and 36-250B.

M.J. Heit
R.A. Bohning

March 1988

This note, if cited, should be referred to as personal communication with the author.

For further information contact:

Northern Forestry Centre
5320 - 122 Street
Edmonton, Alberta
T6H 3S5
(403) 435-7210