THE EXPORT OF BRITISH COLUMBIA LUMBER PRODUCTS TO JAPAN IN THE COMING DECADE:
CRACKING A HARD NUT
by
KENNETH F. ARBOUR
B.A., MCGILL UNIVERSITY, MONTREAL, 1974

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS in
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We accept this thesis as conforming to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA
OCTOBER 1980
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Department of Community and Regional Planning

The University of British Columbia
2075 Wesbrook Place
Vancouver, Canada
V6T 1W5

Date October 17, 1980
ABSTRACT

The recent downturn in the American lumber market, a market that consumed no less than 60.6% of total B.C. lumber production in 1979, has led to large layoffs and production curtailment in the B.C. lumber industry. As a consequence, increasing lumber exports overseas has again become a matter of serious concern to B.C. lumbermen. Japan is one country which, because of its strong economy and large population, holds the potential of becoming an increasingly large alternative market to the U.S. There is also the possibility that, if a more sophisticated marketing approach can be taken towards Japan, Canada can improve its anemic record of exporting manufactured products to that country through an expansion of manufactured lumber exports, i.e. prefabricated houses, kitchen cabinets etc. The purpose of this study is to examine the factors which govern the market for B.C. lumber in Japan and make recommendations to better exploit the potential of the Japanese lumber market.

The first part of the study estimates Japan's lumber demand to the year 1990 by projecting the course of housing starts - the major determinant of lumber consumption. Sources of housing finance, rate of household formation, disposable income, as well as the general Japanese economic and political situation were taken into consideration in making the projection. This is followed by an evaluation of Japan's domestic and international sources of softwood lumber supply. This provides the basis for an assessment of B.C.'s position as a lumber supplier to Japan from an international perspective and thus enables a better understanding of the course that B.C. lumber exports to Japan
will take in the 1980's.

An analysis of the B.C. supply outlook suggests that while Japan's demand for imported lumber will grow, B.C. will not greatly expand lumber exports to Japan primarily because of timber supply shortages. Increasing exports to Japan would require the shifting of export volumes from the U.S. to Japan. This is unlikely not only because neglecting American markets is hazardous, but also because the supply limitations make the Japanese uneasy about allowing B.C. to assume a greater role as lumber supplier. The internationally tight lumber supply situation, however, coupled with Japan's growing lumber demand presents an opportunity for increasing manufactured lumber product exports to Japan. This would enable B.C. to boost the value of its exported lumber, without shifting or expanding export volumes, by encouraging the trade of more fully processed lumber products.

The identification of these possibilities leads to an examination of possible means of alleviating the problems of engaging in the trade of manufactured products in Japan. The obstacles to be overcome in marketing products in Japan run the gamut from language and cultural difficulties, tariff barriers, lack of Canadian marketing expertise to the indifference of the Japanese trading firms towards importing foreign manufactured goods. It is recommended in this study that a permanent marketing structure be supported in Japan, under Canadian auspices, to develop the necessary expertise, and in general, handle the marketing of Canadian manufactured products in Japan.

The manufactured lumber products industry possesses
the potential to expand markets in Japan if it is properly fostered. This industry can benefit from international shortages of lumber and the high quality of the raw material in B.C. to produce valued products for export. Successes have already been registered by the prefabricated housing industry. Further success seems possible if production and marketing assistance are provided.

Production assistance could be in the form of increased investment in R&D to aid product and technological improvements. The establishment of an institution for creative wood design should also be investigated. The marketing of manufactured lumber products in Japan could be improved by the establishment of a Canadian Trading Corporation, but this is not likely the best course of action to follow. More feasible alternatives include providing assistance to existing Canadian trading agencies operating in Japan, especially those already dealing with lumber, to encourage the marketing of more manufactured lumber products in that country. Also, the large Canadian lumber exporters could be induced to expand their handling of manufactured lumber goods through government subsidization of their efforts and/or through government regulation of the forest industry (in a manner similar to that which helped expand B.C.'s pulping capacity) by tying timber harvesting rights to the export of more manufactured lumber products.
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GLOSSARY OF TERMS

Cants: Log with 2 edges or sides sawn off.

CLS: Canadian Lumber Standards, i.e. 2x4's and similar Canadian cuts of lumber.

EDP: Enterprise Development Program.

Heavy squares: a log with 4 edges sawn off, generally 14"x14" or 12"x 12" square.

Lumber: Logs which have been sawn, including cants, heavy squares, baby squares, 2x4's etc.

PEMD: Program for Export Market Development.

PPP: Promotional Projects Program.

Sawlogs: Logs that usually are to be sawn into lumber.

Seasia: Shortened form of Seaboard Lumber and Plywood Sales Asia Ltd.

Sogo Shosha: A Japanese trading company.

SPF: Spruce, pine and fir.

Timber: Unprocessed logs.

USDA: United States Department of Agriculture.
ACKNOWLEDGEMENTS

I would very much like to thank my advisors, Professors Irving Fox and Bill Thomlinson for their guidance and encouragement in the preparation of this thesis. My thanks extend also to all the people I interviewed for this study, who, without exception, gave generously of their time and interest. I would also like to thank Sheila Brown and Arvid Thorstensen of the Council Of Forest Industries for their aid in the gathering of data for this study. Finally, I would like to thank the Ministry of Labour for the financial assistance offered to support this study.

Thank you all.
The purpose of this study is to examine and evaluate the factors which govern the market for British Columbia lumber in Japan, so that it will be possible to plan the best course of action for the future development of this market. Furthering the lumber trade between B.C and Japan will bring about two major benefits to British Columbia and Canada as a whole. First B.C. needs to improve its lumber market in Japan to provide more stability in the lumber industry which at present is very vulnerable to demand fluctuations in the United States. Secondly the marketing of lumber and finished lumber products may pave the way for Canada to develop and expand present knowledge and experience with the Japanese market.

Japan has long been something of an enigma to Canadians who surround the country with a number of myths and misconceptions. Canadians involved in political or business relations with Japan have seldom been able to overcome their own failings in this regard. Unfortunately the growth of Japan as an economic power and its displacement of the United Kingdom as Canada's second largest trading partner has not led to any comparable improvement in our ability to deal with the Japanese. The development, then, of a more coordinated, indeed a more sophisticated approach to Japan may not only enable the expansion of Canadian lumber exports to that country and therefore greater employment and production stability in the lumber industry, but may also lead to improvements in the
balance of trade in manufactured goods, which, at present, so heavily favors the Japanese. The accomplishment of this latter goal may, in optimal circumstances, involve utilizing the expertise gained through the lumber trade to expand trade opportunities in other commodities.

The need for this kind of marketing strategy is not difficult to recognize. Canadian businessmen are apprehensive about entering the Japanese market due to language problems, differences in culture and business practises, geographical remoteness etc. etc. In many cases these problems have simply proven to be too great a barrier. It is quite possible, however, that an increase in the number of Canadians who are knowledgeable, and comfortable in their dealings with the Japanese market may change all this. To the extent that familiarity breeds attempts, their acquaintance with Japan, built through their dealings with the lumber market, could well enable many more Canadian manufacturers to penetrate the Japanese market.

Prior to any discussion, however, on the means whereby such a marketing strategy may be developed, it is first necessary to identify the nature of the trade relationship between B.C./Canada and Japan; and since the lumber trade is presented here as the tool, more or less, for the development of Canadian expertise on Japan, the focus will be on the existing and future prospects for lumber exports from B.C. to Japan. The study then, will involve first, estimating the demand for imported lumber in Japan over the next decade, and secondly,
determining the portion of that demand which may be supplied by
the B.C. lumber industry. The former projection will be arrived
at mainly as a function of housing starts through the 1980's.
The latter involves an evaluation of B.C.'s future competitive
position vis-a-vis the other lumber and log exporting nations
which supply the Japanese market.

The second part of this study deals with the obstacles
B.C./Canada face in building markets in Japan and the possible
means of approach that can be undertaken to help overcome these
obstacles. Again the emphasis will be on the marketing of
lumber, or finished lumber products, in Japan.
1.1.0 The Major Issues In The Japanese Lumber Trade

During the last two decades the British Columbia lumber industry has enjoyed a relatively steady, if unspectacular, increase in the volume of softwood lumber shipments to Japan. Table 1 shows that the only years in which this growth trend was upset were in the mid-1970's. This was primarily due to the economic recession in Japan brought on by the OPEC price hike, and to the serious labor problems which struck the B.C. lumber industry in those years and cut its annual production volumes.

In relation to the total British Columbia lumber export picture Japan is still a substantially smaller market than the United States. While the proportional reliance on the U.S. market has been declining slowly in recent years the 60.6% of the province's total lumber shipments that were consumed by the United States in 1979 (Table 2), still indicates a very heavy dependence on American lumber demand. This inordinate dependence has not been without its costs. The recent downturn in the demand for lumber in the United States resulting from the current high interest rates and low number of housing starts has hurt the lumber industry all over the Pacific Northwest, especially the smaller mills. Also the lumber mills in the interior of British Columbia, which export almost exclusively to the U.S., have been seriously affected by this slump. (The Vancouver Sun, May 7, 1980, pp.H8) And it is becoming very apparent, now that the B.C. lumber industry has raised its head
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<tr>
<td>U.S.A.</td>
<td>6,759.5</td>
<td>5,128.9</td>
<td>4,338.6</td>
<td>6,244.2</td>
<td>7,992.2</td>
<td>8,436.2</td>
<td>7,726.3</td>
</tr>
<tr>
<td>Japan</td>
<td>617.2</td>
<td>501.3</td>
<td>407.6</td>
<td>633.8</td>
<td>705.7</td>
<td>784.8</td>
<td>1,013.5</td>
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<tr>
<td>U.K.</td>
<td>491.2</td>
<td>560.1</td>
<td>233.3</td>
<td>536.6</td>
<td>507.7</td>
<td>407.6</td>
<td>517.5</td>
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<tr>
<td>Other E.E.C.</td>
<td>158.7</td>
<td>184.6</td>
<td>102.1</td>
<td>271.6</td>
<td>254.9</td>
<td>307.3</td>
<td>393.2</td>
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Source: Council of Forest Industries, B.C. Forest Industry Statistical Tables. April, 1980
### Table 2
1979 B.C. Lumber Shipments By Markets

![Pie chart showing distribution of B.C. lumber shipments by market.]

- **U.S.A.** 60.6%
- **Canada** 21.9%
- **Japan** 8%
- **U.K.** 4.1%
- **Other E.E.C.** 3.1%
- **Australia** 1.1%
- **All Other** 1.2%

*Source: Council of Forest Industries, April 1980.*

### Table 3
B.C. Lumber Production by Species: 1979

(million board feet)

<table>
<thead>
<tr>
<th>Species</th>
<th>Coast</th>
<th>%</th>
<th>Interior</th>
<th>%</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Douglas Fir</td>
<td>734.4</td>
<td>15</td>
<td>726.4</td>
<td>9</td>
<td>1,460.8</td>
<td>12</td>
</tr>
<tr>
<td>Hemlock</td>
<td>2,689.0</td>
<td>58</td>
<td>362.8</td>
<td>5</td>
<td>3,051.8</td>
<td>24</td>
</tr>
<tr>
<td>Red Cedar</td>
<td>884.3</td>
<td>19</td>
<td>235.2</td>
<td>3</td>
<td>1,119.6</td>
<td>9</td>
</tr>
<tr>
<td>SPF</td>
<td>255.5</td>
<td>5</td>
<td>6,489.6</td>
<td>82</td>
<td>6,712.1</td>
<td>54</td>
</tr>
<tr>
<td>All Other Softwoods</td>
<td>127.2</td>
<td>3</td>
<td>45.9</td>
<td>1</td>
<td>173.1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Softwoods</strong></td>
<td>4,657.4</td>
<td>100</td>
<td>7,859.9</td>
<td>100</td>
<td>12,517.4</td>
<td>100</td>
</tr>
</tbody>
</table>

*Source: Statistics Canada*
in the hope of finding other markets, that Japan, with its limited forest resources, large population and burgeoning economy is being viewed as having the potential to become a large alternative market for B.C. lumber. "B.C. Lumberman Hopeful Of Breakthrough In Japan" - a recent headline in The Vancouver Sun - is a good example of the strong aspirations the Japanese market usually tends to evoke. (Mike Sasges, The Vancouver Sun, June 2, 1980, pp. B7) Once again the Japanese market is being presented as the panacea for the lumber industry's present ills.

The question, however, is whether this is really possible? There are several important factors which stand in the way of increased British Columbian lumber sales to Japan. To begin with the Japanese have a tariff on imported lumber in the species spruce, pine and fir (hereafter cited as SPF).

These species form 54% of the province's total lumber production - mostly from the interior. (Table 3) Imported logs in the species SPF are not subject to the tariff. However, the export of logs has been restricted by the B.C. provincial legislature since the early 1900's.

The purpose of Japan's SPF import tariff is to protect the large native sawmilling industry, consisting of some 25,000 mills, which relies to a large extent on the importing of logs or cants. In regard to softwoods, wood in the form of logs or cants comes mainly from the United States, the U.S.S.R., and to a lesser extent, New Zealand and South America. (Japan, Ministry of Agriculture and Forestry Statistical Yearbook 1974-1975,
pp.323-325) The sawmillers hold significant sway over the Japanese government and have lobbied effectively to maintain the import tax on SPF lumber. The continuing strength of the sawmiller's influence is evident in the recent GATT negotiations which saw the tariff reduced, but maintained nevertheless at 6%, against strong pressure from Canada, the United States and Japan's own Ministry of Construction and Ministry of International Trade and Industry (MITI).

In addition to the tariff the difference between the cuts of lumber used in the housing construction industry in Japan and those used in North America is another barrier that the Canadian lumber industry must overcome in its dealings with the Japanese. Much of the lumber exported to Japan from B.C. is in the form of "baby squares" (approximately 4"x4") or heavy squares (12"x12", 14"x14") which are resawn in Japan to suit the needs of the native construction industry. The traditional Japanese method of housing construction, the "post and beam" method, is by far the dominant format for housing construction in Japan and differs markedly from the North American "platform frame" method. As a result there is little market in Japan for 2x4's or similar cuts which the British Columbia sawmilling industry is, by and large, geared to produce. In turn, lumber that is "custom cut" in B.C. for specific Japanese buyers is difficult to sell anywhere else in the world. (Laird Wilson Personal Interview, May 1980) As a consequence B.C. lumber exporters generally engage in cutting lumber to meet Japanese requirements only for specific deals involving a fixed volume of lumber. This practice not only increases the cost of milling
the lumber since there is no realization of economies of scale, but also leads to a basic inhibition among lumber exporters preventing them from dealing freely in the Japanese market due to the fear that if the deal somehow falls through with the Japanese there is nowhere else where the lumber can be marketed.

Another factor limiting the export of lumber to Japan is that the Japanese greatly prefer lumber produced in their own country to that produced overseas. (Yoshinobu Ohtsuki, Sumitomo Forestry Co. Personal Interview, May 1980) Japanese mills have a solid reputation in their country for producing high quality lumber. Canadian mills are still unable to match the meticulousness and care which their Japanese counterparts exercise in the manufacturing of their product. (Ohtsuki, Personal Interview, May 1980) It has been mentioned to this author during the course of interviewing people involved in the lumber trade between Canada and Japan, how the Japanese appreciation of quality wood "is almost a religion". While this is naturally something of an overstatement it still reflects in the Japanese appreciation of wood a greater attention to quality and detail than is perhaps the case on this side of the Pacific.

From this then, it would appear that unless there are some major changes in the structure of the lumber trade between British Columbia and Japan, B.C. will continue to hold merely a marginal share of the Japanese market. It is, however, unlikely, that the Japanese tariff on imported lumber will be reduced any further, at least for "two or three years". (Don Lanskail quoted in Mike Sasges, The Vancouver Sun, June 2, 1980,
Nor is it likely that the Japanese will lose their appreciation for domestically produced wood; nor that Japanese sawmillers will lose their ability to produce the quality lumber that meets the high standards of the Japanese consumer.

Yet the faith in a growing Japanese market for the types of lumber B.C. produces is far from being without foundation. The basic arguments behind this position will be outlined here, though they will be discussed in more detail in the body of this paper.

The first of these is that Japan, though heavily forested, is a small and very heavily populated country with a domestic demand for wood that will continue to outstrip the native industry's ability to supply. Japan, then, will continue to rely on foreign, including Canadian, exports for wood and lumber.

A second contention is that the world timber/lumber supply situation is becoming tighter every year. Only Canada and the U.S.S.R. among Japan's major suppliers have any potential for supplying more wood to Japan. Japan then, will likely be forced to expand its lumber imports from this country, and more specifically, from British Columbia.

A third is that B.C. possesses significant reserves in the types of wood that are preferred in Japan i.e. white woods, hemlock and cypress. British Columbia then, is capable of producing more quality wood, and more quality lumber, for the Japanese market.
A fourth argument is that the trend, at least since 1975, has been for a consistent expansion of lumber exports to Japan and, given the nature of the trade relationships established between Canada and Japan, this is likely to continue.

The fifth, and last, concerns the recent attempts of the B.C. lumber industry to introduce and build a market for Canadian cuts of lumber in Japan i.e. 2x4's and similar cuts sawn to Canadian Lumber Standards (hereafter cited as CLS lumber). This program has involved the training as well as the "winning over" of Japanese carpenters and builders to the prospectively cheaper and more efficient platform frame method of housing construction. Whether or not this market will continue to develop or develop to an appreciable level is yet unknown. Nevertheless possibilities for expanded lumber exports to Japan through this program definitely exist.

These 5 points form the crux of the position on which the optimistic forecasts for the Japanese consumption of British Columbia lumber are based. As such an analysis of these points will be the subject of the first two chapters of this study.

Guaranteeing and expanding a market for B.C. lumber in Japan, however, goes beyond the parameters of the 5 points mentioned above. The problem is that with the exception of the program to introduce CLS lumber into Japan there is no consolidated effort on the part of the B.C. lumber industry to open the doors for more active market expansion in Japan. The
major single factor governing British Columbia lumber exports to Japan at the present time is the basic lumber demand situation in that country which can be subjected to only very limited B.C. or Canadian influence. At this point it may be said that Canada is no more able to influence the Japanese market than Japan is able to influence ours. I take issue with this statement on three grounds. 1) The distribution of Canadian lumber to Japanese buyers and wholesalers is primarily handled by the major Japanese trading companies or sogo soshas. The volume of lumber bought every quarter from Canadian lumber producers is generally fixed by the major sogo shosha except perhaps for a slight increase (or decrease). Canadian lumber producers are content with this arrangement because it spares them the vagaries of dealing with the Japanese market and gives them a steady market that they can count upon. The result though, is that if there is a surplus of Canadian lumber there are few Canadian marketing mechanisms in Japan that can work to expand sales. These mechanisms are controlled by the sogo shosha who may, or may not, operate them in the best interests of the Canadian lumber industry.

2) Another factor limiting Canada's ability to influence the Japanese market is that the demand for lumber, like that of many primary products, may be inelastic for price decreases, but in the long run, may be very elastic for price increases. As stated by Keith Griffin:

"A rise in the price of a raw material provides an incentive to undertake industrial research (in developed countries) into ways of economizing on the commodity or substituting something else for it or
producing it in the importing country. A price decline appears to provide no such incentive for investigating new ways of using the commodity. For example, a fall in the price of copper may lead to a very small increase in the quantity demanded, but a rise in the price of copper may result in permanent substitution by aluminum." (Keith Griffin, 1969, pp.115)

In regard to lumber a price increase in Japan would most likely lead to the substitution effect resulting in the building of more non-wooden dwellings. Such dwellings already comprise almost 40% of the Japanese housing market. (Japan Lumber Journal, Feb. 20, 1980, pp. 12) Thus the export of primary products, such as lumber, limits the ability of the exporting nation to affect demand in the receiving nation.

3) The third and certainly not least important factor limiting Canadian influence in Japan is the general inexperience among Canadians in effectively working within the confines of the Japanese market. This factor is part and parcel of the first two factors mentioned above, but it is also indicative of a more serious dilemma that affects all Canadian industry - lack of salesmanship and marketing know-how in foreign, and especially Japanese markets. These problems and their relation to the lumber industry will be discussed in more detail in Chapters 5 and 6.

It is the belief of this author that most of the problems so far identified in this study affecting Canada/Japan trade - 1) the inability to influence the Japanese lumber market, 2) the inability to guarantee and improve the Japanese market for B.C. lumber, and 3) the expansion of manufactured
goods exported to Japan - can all be accomplished by developing an industrial organ, or a government/industrial organ, that can expand Canadian expertise in the marketing of lumber products in Japan. It is the aim of this paper to show why this should be done.
1.2.0 Scope And Description Of Thesis

This thesis is divided into two parts. In general the chapters are presented according to the following outline.

Part I Chapter 2

This chapter estimates the future demand for lumber in Japan. To do this it is necessary to:

1) Make a simple estimation from existing Japanese Government projections and the analysis provided from other sources of research what the probable extent of wood-based housing construction will be in Japan in the 1980's.

2) Define what this level of housing construction will mean in terms of actual lumber demand i.e. what proportion of total lumber demand for which housing accounts and whether there is any discernible correlation between lumber demand in housing and the demand in other lumber consuming industries (millwork, furniture, etc.).

3) Develop an overall projection for lumber consumption in Japan for the next 10 years.

4) Examine what factors may upset this projection including rising energy costs or factors affecting household formation, and likewise housing consumption, and make a rough estimation of their effect.

5) Estimate from the above information a high and low level for Japanese consumption of lumber over the next 10 years.

Part 1 Chapter 3

This chapter narrows the estimated lumber demand in Japan to that amount which may possibly be supplied by the B.C. lumber industry. To arrive at this figure it will be
necessary to:

1) Divide Japanese lumber consumption for the ten year period into that proportion which will be supplied domestically and that proportion which will be supplied from external sources.

2) Define B.C.'s position as a source of softwood lumber vis-a-vis the province's major competitors in the Japanese market. This will primarily concern the forms of wood the major Japanese lumber suppliers export to Japan, the size of their individual shares of the Japanese market, as well as an estimation of each countries potential for further expansion of lumber exports.

Part I Chapter 4

This Chapter describes the past and present involvement of the B.C. lumber industry in the Japanese market. Major factors to be investigated are:

1) the B.C. lumber industry's past and present endeavors to expand exports of lumber to Japan.

2) The role of the Japanese trading companies in the export of B.C. lumber to Japan.

3) An assessment of the future supply-demand situation.

Part II Chapter 5

In this chapter is discussed the major obstacles impeding the expansion of B.C. lumber and lumber product exports to Japan. These include:

1) The general problems faced by Canadian businessmen in dealing with Japan.

2) The problems faced by the B.C. lumber industry in increasing their markets in Japan.
3) The problems of expanding exports of fully manufactured lumber products to Japan.

Part II Chapter 6

This chapter deals with the means of overcoming the problems discussed in Chapter 5. The discussion will include those mechanisms already instituted by government or industry to improve Canadian export performance abroad. Other possible means that may lead to improvements in the export situation with Japan will also be discussed. These include:

1) A description of a proposed model arrangement for expanding exports of more fully processed lumber products to Japan.

2) What government and industry are doing to increase exports to Japan, i.e. to expand marketing and improve production capabilities. This also involves a discussion of the role of the Program for Export Market Development and similar programs designed to improve the performance of Canadian exports.

3) An assessment of the possible policy options for improving the exports of manufactured lumber products to Japan.

Part II Chapter 7

This Chapter provides a summation of the foregoing analysis and an outline of conclusions and recommendations.
CHAPTER 2

PROJECTING LUMBER DEMAND IN JAPAN TO 1990

There are a number of ways of determining a nation's lumber consumption. The construction industry, as the largest consumer of lumber is by far the major determinant. This study then will commence with an estimation of housing starts to the year 1990. Other variables, such as trends in housing size and the proportion of wood based housing units will also be taken into consideration. The actual relation between housing starts and lumber consumption will be determined in the second section of this chapter.

2.1.0 Annual Housing Projection For The 1980's

There is a considerable amount of uncertainty regarding the future projection of housing starts in Japan. One industry study performed by a reputable research institute last year made an error of over 25% in the first year of its projection period. Generally housing market studies are made according to the rate of household formation which is usually

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1. Eli Sopow the forest industry analyst for The Vancouver Province has stated simply and without much equivocation that, "demographic studies show that the United States housing market is going to peak in about 1985-7." (March 6, 1980 pp.D.5) Such a statement typifies the usual importance placed on demographics when projections are made regarding the housing market or housing starts.
tied directly to demographic statistics. Demographics, though, do not provide as accurate a basis for housing market projections in Japan as may be the case in North America. The recent rapid rise to affluence of many Japanese households, in conjunction with the economic growth of the nation as a whole, has led to the obsolescence of significant portions of the existing housing stock on the simple grounds that these houses are too small. Any movement, then, of these households into the housing market is not a product of demographic change. Also, the rate of household formation is as much due to the modern breakdown of the extended family unit as it is to the maturation, marriage and departure of family members. These circumstances seem to require a different approach to the projection of housing starts in Japan.

For example, the Economic Planning Agency (Keikakucho) speaks of a housing stock in 1978 of 35,700,000 dwellings which exceeds the number of ordinary households by about 3,000,000. (Japan, Economic Planning Agency, New Economic And Social 7 Year Plan: 1978-85 pp.45) The vacancy rate in 1978, then, would have been about 8%. This leads us to the natural expectation that the housing market in Japan is in a serious state of oversupply. This, however, can be contrasted with the example of the Japan Housing Corporation's 206 housing lots in the "Tama New Town" area near Tokyo for which no less than 31,872 house-seekers filed applications. (Oriental Economist, Dec. 1979, pp.6) One lot attracted as many as 3,430 applicants. It does not seem plausible that a situation of oversupply would result in such a remarkable plethora of housing applicants.
Then again, according to an article by Yozo Shiota et al. in the Forest Products Journal the general rate of new housing construction to population in developed countries is approximately 10 units per 1000 population annually. (Yozo Shiota, June 1980, pp.26) Shiota argues that since housing construction in Japan has been running at a rate of about 13 to 14 units per 1000 population that "no great increases in housing starts can be expected." (Shiota, June 1980, pp.26) Compare this with the fact that in the single month of September 1979, 7,575 condominium housing units were put on the market in the Tokyo area and as much as 83% of them had been sold by the end of the month. (Oriental Economist, Dec.1979, pp.6) Again market forces seem to differ dramatically from the usual population trends.

Still further examples of contradicting arguments regarding the housing situation in Japan can be given. The Japan Lumber Journal points to the fact that since the present housing stock is equivalent to 110% of the number of households in Japan that housing starts will continue to decrease - perhaps to 1 million units/year within 3 or 4 years from the approximately 1.5 million in 1979. (Japan Lumber Journal, May 20, 1980, pp.11) Other figures, however, show that 1.3 million of Japan's households are still living in "rabbit hutches" of only 11 square meters, fully 33% of householders were "hard pressed for housing", an additional 5.5% stated they "had to do something about housing," and as much as 44% of all Japanese people were dissatisfied with their present housing conditions. (The Economist, Feb.2, 1980, pp.92 and The Oriental
Economist, Dec. 1979, pp. 9) Furthermore these figures are about the same as those in 1969 and 1973 before the housing boom of the last 7 to 10 years. (Oriental Economist, Dec. 1979, pp. 9)

It would appear therefore, that in this kind of situation where there are questionable indicators of both demand and supply that an accurate projection based solely on demographics is not possible. As a result, it is proposed here that, while rates of household formation or related statistics should not be ignored, the emphasis be place on the trends and factors affecting the sources of housing finance.

2.1.1 Publically Funded Housing

Viewed in this manner, the first aspects to be taken into consideration are the past trends in the financing of new housing. Table 4 gives the yearly number of housing starts in Japan throughout the 70's and the proportion of either privately or publicly funded units. This year the Housing Problem Investigation Association expects a drop of 8 - 11% to 1.33 - 1.37 million units, mostly as a result of a 10 to 15% drop in privately funded homes. (Japan Lumber Journal, March 20, 1980, pp. 15) The large increase in housing starts in the latter 1960's and through the 1970's was largely due to heavy government funding in the housing sector. From 1965 to 1977 public funds accounted for almost 25% of total housing starts. This figure leaped to almost 40% in 1978 and 1979 as housing benefited from a large increase in public investment in general by the Japanese government. (Keidanren Review, Oct. 1979, pp. 7)
<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Privately Funded</th>
<th>Publicly Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>843</td>
<td>626</td>
<td>216</td>
</tr>
<tr>
<td>1968</td>
<td>1,202</td>
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<td>1970</td>
<td>1,495</td>
<td>1,122</td>
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<tr>
<td>1973</td>
<td>1,905</td>
<td>1,500</td>
<td>405</td>
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<tr>
<td>1974</td>
<td>1,316</td>
<td>919</td>
<td>398</td>
</tr>
<tr>
<td>1975</td>
<td>1,356</td>
<td>950</td>
<td>407</td>
</tr>
<tr>
<td>1976</td>
<td>1,524</td>
<td>1,128</td>
<td>396</td>
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<td>430</td>
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<td>1978</td>
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<td>949</td>
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<tr>
<td>1979</td>
<td>1,492</td>
<td>885</td>
<td>608</td>
</tr>
<tr>
<td>1980 (est.)</td>
<td>1,350</td>
<td>770</td>
<td>580</td>
</tr>
</tbody>
</table>

There does not seem to be any reason to assume a dramatic change in Japanese government policy towards housing investment. A policy paper of the Japan Economic Planning Agency, that was subsequently passed by the Japanese Diet, stated that, "It is envisaged that the number of housing starts during the plan period will continue at about present levels (1.5 million in 1979) but progressive improvement in the quality of such matters as size, fixtures and structure is expected." (Japan, Economic planning Agency, New Economic And Social 7 Year Plan: 1978-1985, pp.45) It would therefore appear that instead of pushing for sheer numbers of housing starts that the Japanese government is emphasizing the overall quality of the new housing constructed. The extent of this change in housing size or quality on lumber consumed per house will be discussed later in this chapter.

The question here, though, is that since housing starts are not continuing at 1978 levels, i.e. only 1.3 million this year, whether the government will step in with even greater funding support. This seems unlikely for several reasons. In order to bring present housing starts up to 1978 levels the Japanese government would have to increase present funding by at least a further 30%. Given the present calls, within and without the country, to increase military spending, or the fact that there was already a 100% increase in public housing investment between 1972 and 1977, or the generally recognized inadequacy of other elements in the residential environment, e.g. only 25% of the households in heavily urbanized
Japan are connected to a sewerage system - the government will most likely try to hold the line on the further expenditure of public funds for housing. This is perhaps especially true since, as stated earlier, the government is able to point to a housing stock which is 10% greater than the number of households.

The unwillingness of the Japanese government to further shore up the housing market becomes more evident when the number of publicly funded housing starts for 1980 are examined. The number of such units declined from 608,000 in 1979 to 580,000 in 1980. (Japan Lumber Journal, March 20, 1980 pp.15) This is the largest decline ever for a single year and is a good indication of a levelling off in public funded housing. It should be remembered, however, that this 5% decrease in the number of units still represents an increase in funding in real terms. The increased size in the housing produced, as well as an inflationary increase in housing prices of well over 5% (housing prices increased at an average of 15.9% per annum during the 1970's) means that a decline of only 5% reflects relatively firm government support of the housing market. Yet it can be considered likely that the slight trailing off in the number of publicly funded housing units will continue through the 1980's.

In keeping with this assessment Table 5 has been drawn up to estimate the probable yearly rate of government funded housing in the 1980's. It should be remembered that the single set of figures given in this table is merely meant to reflect a
<table>
<thead>
<tr>
<th>Year</th>
<th>Projection (1000 units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>580</td>
</tr>
<tr>
<td>1982</td>
<td>560</td>
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<tr>
<td>1983</td>
<td>540</td>
</tr>
<tr>
<td>1984</td>
<td>525</td>
</tr>
<tr>
<td>1985</td>
<td>500</td>
</tr>
<tr>
<td>1986</td>
<td>490</td>
</tr>
<tr>
<td>1987</td>
<td>480</td>
</tr>
<tr>
<td>1988</td>
<td>470</td>
</tr>
<tr>
<td>1989</td>
<td>460</td>
</tr>
<tr>
<td>1990</td>
<td>450</td>
</tr>
</tbody>
</table>
general trend through the decade. Fluctuations, in the actual figures which come about, of 100,000 to 200,000 starts above or below the projected figures for any given year, should not be unexpected.

2.1.2 The Private Housing Market

The situation should be somewhat different regarding housing in the private sector. The decline of between 100,000 to 150,000 units this year is only surpassed in quantity by the year of the "oil shock" - 1974. This is not altogether surprising. The Japanese economy has suffered a second oil shock in the last year which will be dealt with in more detail later in this chapter. Also the internationally tight money supply and the very high interest rates that have been witnessed in the last 12 months, while not having had as severe an effect on housing in Japan as in the United States, where starts have dropped 42% in the last year (The Vancouver Sun, May 17, 1980, pp.C1) have had their effect in Japan nonetheless.

There are, however, reasons for suggesting that the private housing market has bottomed out in Japan and will experience a slight upswing:

1) As mentioned above (page 20) there are a large number of householders that wish to improve their living environment, i.e. acquire newly constructed larger housing.

2) Japan has the highest rate of capital investment in housing as a portion of GNP in the world. Indeed the desire of the average Japanese to own his own house must be considered one of the strongest in the world. (Economist, Feb 2, 1980, pp.92)
3) The decline in interest rates, which is expected to lead to an increase in housing starts in the U.S. for the rest of this year, will probably have a similar if somewhat more belated effect in Japan.

4) The private housing industry should benefit from the increased attention paid by the government to urban infrastructure and other residential amenities in the coming years.

The single major factor which is most likely to impede the growth of the private housing market, and likewise privately funded housing starts, is the price of residential land. The average increase for the 1970's was slightly lower than the increase in consumer prices - 9.3% vs. 8.7%. (The Economist, Feb. 2, 1980, pp.92) The problem, however, is that in 1979 the rise in land prices edged up past the rate of inflation, no doubt exacerbating the effects of the high interest rates and the poor economic performance of the country to bring about the dramatic fall in housing starts this year. If the price of land continues to accelerate upward, and this is a big if, it would seriously limit the improvement in the housing market in the 1980's.

Nevertheless it would seem possible to suggest from a look at the total picture, that privately funded housing will recover slightly during the next year or two and level off for the rest of the decade. The extent of the upswing is reflected in the projection in Table 6. Again, these figures are to represent a rough trend. The actual figures for any particular year are liable to fluctuate by as much as 200,000 to 300,000 units above or below the projected figure.
<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Privately Funded</th>
<th>Publicly Funded</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>1,360</td>
<td>770</td>
<td>560</td>
</tr>
<tr>
<td>1982</td>
<td>1,370</td>
<td>800</td>
<td>540</td>
</tr>
<tr>
<td>1983</td>
<td>1,375</td>
<td>830</td>
<td>525</td>
</tr>
<tr>
<td>1984</td>
<td>1,360</td>
<td>850</td>
<td>510</td>
</tr>
<tr>
<td>1985</td>
<td>1,350</td>
<td>850</td>
<td>500</td>
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<td>1986</td>
<td>1,340</td>
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<tr>
<td>1987</td>
<td>1,330</td>
<td>850</td>
<td>480</td>
</tr>
<tr>
<td>1988</td>
<td>1,320</td>
<td>850</td>
<td>470</td>
</tr>
<tr>
<td>1989</td>
<td>1,310</td>
<td>850</td>
<td>460</td>
</tr>
<tr>
<td>1990</td>
<td>1,300</td>
<td>850</td>
<td>450</td>
</tr>
</tbody>
</table>

Table 6: Projection of Housing Starts to 1990 (1000 units)
2.1.3 Wood Based Versus Non-wood Based Housing

The next major question insofar as lumber consumption is concerned is what percentage of housing starts will be wood based. In general wood based houses are a maximum of three storeys in height with the most common form being the two storey single family dwelling. Non-wood based housing are best typified by high rise apartments or condominiums i.e. the Japanese "mansion".

Robert Forster in a paper published in 1978 for the Canadian Forestry Service stated that,

"Wooden houses have always played the most important role in the Japanese house construction picture. In 1964 wooden houses comprised 78% of total construction. As substitute products became available at competitive prices the number of wooden houses constructed as a proportion of the total slowly dropped to a low of 59% in 1973. This percentage rose to 66% in 1974 and is expected to continue to rise as the relative price of competing materials increases because of the rising costs of petroleum products and energy. Thus the trend has reversed and wooden houses are expected to remain a dominant proportion of total housing starts. (Robert Forster, 1978, pp.12)

However, as shown in Table 7 the number of wood based housing starts dropped again as a proportion of total housing in 1977 to 62.7%, in 1978 to 61.8%, and again last year to 61.0%. (Ministry of Construction, in the Japan lumber journal, Feb.20, 1980, pp.12) The trend then seems to be towards a slight increase in the proportion of non-wood based dwellings which could well continue through the next decade. It is not difficult to find reasons for why this trend may continue. Perhaps most important
### Table 7

Trends in Wood Based and Non-Wood Based Housing Starts

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Wood Based</th>
<th>Non-Wood Based</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>843</td>
<td>647</td>
<td>196</td>
</tr>
<tr>
<td>1968</td>
<td>1,202</td>
<td>886</td>
<td>316</td>
</tr>
<tr>
<td>1970</td>
<td>1,485</td>
<td>1,036</td>
<td>449</td>
</tr>
<tr>
<td>1973</td>
<td>1,905</td>
<td>1,120</td>
<td>785</td>
</tr>
<tr>
<td>1974</td>
<td>1,316</td>
<td>870</td>
<td>446</td>
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<tr>
<td>1975</td>
<td>1,356</td>
<td>907</td>
<td>449</td>
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<tr>
<td>1976</td>
<td>1,524</td>
<td>1,023</td>
<td>501</td>
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<tr>
<td>1977</td>
<td>1,508</td>
<td>946</td>
<td>562</td>
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<tr>
<td>1978</td>
<td>1,549</td>
<td>958</td>
<td>591</td>
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<tr>
<td>1979</td>
<td>1,492</td>
<td>910</td>
<td>583</td>
</tr>
<tr>
<td>1980 (est.)</td>
<td>1,350</td>
<td>817</td>
<td>533</td>
</tr>
</tbody>
</table>

Source: Japan Ministry of
Construction,
in Japan Lumber Journal

### Table 6

Projection of Wood Based and Non-Wood Based Housing Starts to 1990

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Wood Based</th>
<th>Non-Wood Based</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>1,360</td>
<td>816</td>
<td>544</td>
</tr>
<tr>
<td>1982</td>
<td>1,370</td>
<td>815</td>
<td>555</td>
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<tr>
<td>1983</td>
<td>1,375</td>
<td>811</td>
<td>564</td>
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<td>1984</td>
<td>1,360</td>
<td>798</td>
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<tr>
<td>1985</td>
<td>1,350</td>
<td>787</td>
<td>563</td>
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<td>1986</td>
<td>1,340</td>
<td>777</td>
<td>563</td>
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<td>767</td>
<td>563</td>
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<tr>
<td>1988</td>
<td>1,320</td>
<td>756</td>
<td>564</td>
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<tr>
<td>1989</td>
<td>1,310</td>
<td>747</td>
<td>563</td>
</tr>
<tr>
<td>1990</td>
<td>1,300</td>
<td>738</td>
<td>562</td>
</tr>
</tbody>
</table>
is that non-wood based dwellings, such as high rise condominiums, help to alleviate the burden of high land costs for the prospective home owner. Also in a country where the individual's transportation is usually defined by his/her access to the train lines, the condominiums usually provide a more convenient location i.e. closer to the train station and not so far from the center of the city.

It is likely then, that condominiums and similar housing forms will continue to hold their own in the Japanese housing market and perhaps slightly increase their percentage of total housing. This is depicted in Table 8 as an increase of a fraction of a percent annually throughout the 1980's. It is important to point out that the figures in this table are rough estimates of an expected trend. Fluctuations in the actual figures in any year should be expected.

2.2.0 Lumber Demand Projection For The 1980's

The first question to ask is whether there is any obvious correlation between annual total lumber demand and wood based housing starts. The answer seems to be a "yes" but with limitations. For example, Table 9 shows that in 5 of 7 years lumber demand per wood based housing unit averaged about 60 cubic meters. Unfortunately, the figures for the other two years of 69.8 m$^3$ per unit in 1974 and 64.8 m$^3$ in 1979 make the possibility of a general correlation somewhat remote. Also this kind of analysis, given that a 100 m$^2$ house in Japan contains
### Table 9: Lumber Demand Vis-a-vis Wood Based Housing Starts

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Lumber Demand (1000 m³)</th>
<th>Wood Based Housing Starts (1000 starts)</th>
<th>Lumber Demand Per Wood Based Housing Starts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
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<td>59.8 m³/start</td>
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<tr>
<td>1973</td>
<td>67,470</td>
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<td>60.2 m³/start</td>
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<td>1974</td>
<td>60,734</td>
<td>870</td>
<td>69.8 m³/start</td>
</tr>
<tr>
<td>1975</td>
<td>55,341</td>
<td>907</td>
<td>61.0 m³/start</td>
</tr>
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<tr>
<td>1979</td>
<td>59,010</td>
<td>910</td>
<td>64.8 m³/start</td>
</tr>
</tbody>
</table>


### Table 10: Trends in Sawn Lumber Shipments in Japan (1000 m³)

<table>
<thead>
<tr>
<th>Year</th>
<th>Building Construction (% of Total)</th>
<th>Civil Engineering</th>
<th>Packaging</th>
<th>Furniture</th>
<th>Vessels and Vehicles</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>31,555 74.8</td>
<td>1,917 74.9</td>
<td>3,573 76.8</td>
<td>2,987 75.9</td>
<td>440 76.2</td>
<td>1,693 76</td>
<td>42,165</td>
</tr>
<tr>
<td>1971</td>
<td>31,374 74.9</td>
<td>1,820 76.8</td>
<td>3,578 75.9</td>
<td>3,131 75.9</td>
<td>411 76</td>
<td>1,544 76</td>
<td>41,858</td>
</tr>
<tr>
<td>1972</td>
<td>33,858 76.8</td>
<td>1,776 75.9</td>
<td>3,494 75.9</td>
<td>3,059 75.9</td>
<td>377 76</td>
<td>1,495 76</td>
<td>44,061</td>
</tr>
<tr>
<td>1973</td>
<td>34,138 75.9</td>
<td>1,828 75.9</td>
<td>3,600 75.9</td>
<td>3,332 75.9</td>
<td>424 76</td>
<td>1,742 76</td>
<td>45,339</td>
</tr>
<tr>
<td>1974</td>
<td>30,728 76.2</td>
<td>1,477 76</td>
<td>3,399 75.9</td>
<td>2,768 75.9</td>
<td>387 76</td>
<td>1,574 76</td>
<td>40,333</td>
</tr>
<tr>
<td>1975</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

NA - Not Available

Source: Japan Ministry of Agriculture and Forestry, Statistical Yearbook.
about 20 m³ of wood, does not provide any reasonable explanation for how the other 40 m³ per unit are utilized, thus making the correlation even less trustworthy.

On the other hand there is a more distinct correlation between the amount of finished lumber shipments for total housing construction and other wood consuming industries. In Table 10 it can be seen that between 1970 and 1975 housing construction accounted for a yearly average of 75.7% of total lumber shipments, that is wood shipped from the sawmills, and only fluctuated by about 2 percentage points. For the purposes of the rough estimation of lumber consumption required here this figure can be simplified to the extent where it can be said that 75% of lumber shipments are used in housing construction.

In a 1973 publication of the Japan Forestry Agency (the last year in which such a projection was performed) the proportion in lumber of total timber demand - which includes timber used for pulp or plywood - was estimated at 60.4% for 1971 - 1973. This percentage was forecast to rise to 71.6% by 1981. However, due to the fact that the lumber demand in Japan has remained relatively constant for the last five years while the demand for pulp has increased markedly, lumber has declined as a proportion of Japan's total timber demand almost every year. (Table 11) There are two major reasons which may account for the relative lull in lumber consumption in Japan during this time.

1) While Japanese houses have been getting larger the lumber used per square meter has been declining as a result of technological and design innovations, and substitution by
Table 11  Japanese Timber and Lumber Consumption

<table>
<thead>
<tr>
<th>Year</th>
<th>Timber (1000 m³)</th>
<th>Lumber (1000 m³)</th>
<th>Lumber as % of Timber</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>70,530</td>
<td>47,084</td>
<td>66.7</td>
</tr>
<tr>
<td>1970</td>
<td>102,979</td>
<td>62,009</td>
<td>60.3</td>
</tr>
<tr>
<td>1971</td>
<td>101,405</td>
<td>59,801</td>
<td>59.0</td>
</tr>
<tr>
<td>1972</td>
<td>106,504</td>
<td>63,613</td>
<td>59.7</td>
</tr>
<tr>
<td>1973</td>
<td>117,581</td>
<td>67,470</td>
<td>57.4</td>
</tr>
<tr>
<td>1974</td>
<td>113,040</td>
<td>60,734</td>
<td>53.7</td>
</tr>
<tr>
<td>1975</td>
<td>97,200</td>
<td>55,341</td>
<td>57.4</td>
</tr>
<tr>
<td>1976</td>
<td>101,400</td>
<td>57,394</td>
<td>56.6</td>
</tr>
<tr>
<td>1977</td>
<td>101,854</td>
<td>56,564</td>
<td>55.5</td>
</tr>
<tr>
<td>1978</td>
<td>103,417</td>
<td>57,560</td>
<td>55.6</td>
</tr>
<tr>
<td>1979</td>
<td>108,970</td>
<td>59,010</td>
<td>54.1</td>
</tr>
<tr>
<td>1980</td>
<td>106,250</td>
<td>56,750</td>
<td>53.4</td>
</tr>
</tbody>
</table>

Source: Japan Forest Agency
March 1980

Table 12  Wholesale Price Index of Wood and Wood Products in Japan

![Wholesale Price Index Graph]

other products.

2) Wood based housing did not grow by any appreciable amount but hovered around the low 900,000 per year mark for four of the last five years.

From the housing estimates for the 1980's developed above (page 28) it would appear that the trend towards a continuing decline in wood based housing, and therefore lumber consumption, will continue. This thought must be tempered with a few opposing facts. One, as shown above (page 31) there has been only a tenuous correlation between figures for wood based housing and total lumber demand. Also the rising costs of energy and lumber substitutes due to high oil prices in Japan have made further substitution for lumber less likely and the proportion of non-wood building materials may even decline. Lumber prices, it should be pointed out, have remained fairly steady in Japan through the decade. (Table 12)

Finally, housing size should continue to increase (Table 13) and eventually lead to real increases in lumber consumption. Since 1976 the increases in housing volumes, that is total housing size, not simply floor space, have averaged 5.5% annually. The emphasis in government policy upon a larger and better quality housing stock and the still common desire among consumers for larger housing, should mean that the trend towards larger houses will continue through the 1980's. If this continues at about the 5% level it will easily offset the very marginal decline in wood based housing as well as any further, though unlikely, wood product substitution, and result in a net increase in Japan's total annual lumber demand.
### Table 13  
**Average New House Size: Wood Based Dwellings**

<table>
<thead>
<tr>
<th>Year</th>
<th>House Size ($m^2$)</th>
<th>% Increase</th>
<th>Floor Space ($m^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>77.5</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>80.8</td>
<td></td>
<td>68.1</td>
</tr>
<tr>
<td>1973</td>
<td>91.7</td>
<td></td>
<td>76.9</td>
</tr>
<tr>
<td>1974</td>
<td>100.0</td>
<td></td>
<td>81.5</td>
</tr>
<tr>
<td>1975</td>
<td>101.3</td>
<td></td>
<td>82.9</td>
</tr>
<tr>
<td>1976</td>
<td>98.2</td>
<td></td>
<td>82.2</td>
</tr>
<tr>
<td>1977</td>
<td>104.4</td>
<td>6.3</td>
<td>84.1</td>
</tr>
<tr>
<td>1978</td>
<td>109.5</td>
<td>4.9</td>
<td>88.0</td>
</tr>
<tr>
<td>1979</td>
<td>115.2</td>
<td>5.2</td>
<td>NA</td>
</tr>
</tbody>
</table>

NA - Not Available

Source:  
(Floor Space) Japan Ministry of Construction

### Table 14  
**Lumber Demand Projection to 1990**

(1000 $m^3$)

<table>
<thead>
<tr>
<th>Year</th>
<th>1% Yearly Increase</th>
<th>2% Yearly Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>56,750</td>
<td>56,750</td>
</tr>
<tr>
<td>1981</td>
<td>57,317</td>
<td>56,885</td>
</tr>
<tr>
<td>1982</td>
<td>57,890</td>
<td>59,042</td>
</tr>
<tr>
<td>1983</td>
<td>58,469</td>
<td>60,222</td>
</tr>
<tr>
<td>1984</td>
<td>59,053</td>
<td>61,426</td>
</tr>
<tr>
<td>1985</td>
<td>59,643</td>
<td>62,654</td>
</tr>
<tr>
<td>1986</td>
<td>60,239</td>
<td>63,907</td>
</tr>
<tr>
<td>1987</td>
<td>60,841</td>
<td>65,185</td>
</tr>
<tr>
<td>1988</td>
<td>61,449</td>
<td>66,488</td>
</tr>
<tr>
<td>1989</td>
<td>62,063</td>
<td>67,817</td>
</tr>
<tr>
<td>1990</td>
<td>62,683</td>
<td>69,073</td>
</tr>
</tbody>
</table>
The result, then, for the 1980's should be that there will be some increase in lumber consumption for housing purposes. The range of this increase could be from the most slight to perhaps 3 to 4% annually. What is most likely is an increase of between 1 and 2% annually, given that housing sizes continue to increase at the 3 to 5% per year level.

To revert to the earlier statement that lumber for housing construction has accounted for a steady 75% of Japan's total lumber demand a 1 to 2% per year increase in lumber demand for housing should result in a similar increase in other wood product consumption. Volumes for millwork and furniture especially should become larger as the housing units themselves become larger. Thus it seems reasonable to expect a 1 to 2% increase in total yearly lumber demand in Japan in the next decade. Table 14 has therefore been drawn up to reflect this belief.
2.3.0 Other Factors Affecting Housing And Lumber Demand

The consumption of a large commodity such as housing can be affected by other factors that have not yet been dealt with. For example, any fluctuations in national income or consumer prices will result in a deleterious effect upon housing consumption. It is necessary to discuss these broader variables in order that a more complete picture regarding housing and lumber consumption in Japan can be provided. To this end the following variables will be examined: 1) the Japanese economy, 2) changes in disposable income, 3) household formation, and 4) the political climate.

2.3.1 The Japanese Economy

The last decade has witnessed some considerable changes in the domestic workings and international environment of the Japanese economy. The 1970's marked the end of the post war era of 10% real annual growth in GNP, and the beginning of serious problems involving pollution and energy. The pattern of economic growth reflected in Table 15 shows that increases in GNP settled to between 5 and 6% in the latter years of the 1970's. This figure may decline further to between 4 and 5% in at least the early years of the 1980's. The Japanese Government's official projection for the coming year stands at only 4.8% and even this is considered optimistic. (Oriental Economist, Feb. 1980, pp.4) In August of 1979 the Ministry of International Trade and Industry announced long term growth
<table>
<thead>
<tr>
<th>Year</th>
<th>Real Growth Rate of GNP (%)</th>
<th>Real (billion yen)</th>
<th>Nominal (billion yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal 1969</td>
<td>12.3</td>
<td>67,694.8</td>
<td>64,513.6</td>
</tr>
<tr>
<td>1970</td>
<td>10.2</td>
<td>74,576.4</td>
<td>75,523.9</td>
</tr>
<tr>
<td>1971</td>
<td>5.6</td>
<td>78,766.5</td>
<td>83,166.0</td>
</tr>
<tr>
<td>1972</td>
<td>10.4</td>
<td>86,925.7</td>
<td>96,883.7</td>
</tr>
<tr>
<td>1973</td>
<td>6.5</td>
<td>92,596.8</td>
<td>117,257.9</td>
</tr>
<tr>
<td>1974</td>
<td>-0.0</td>
<td>92,582.2</td>
<td>139,219.3</td>
</tr>
<tr>
<td>1975</td>
<td>3.2</td>
<td>95,557.0</td>
<td>153,126.3</td>
</tr>
<tr>
<td>1976</td>
<td>5.9</td>
<td>101,192.0</td>
<td>171,735.6</td>
</tr>
<tr>
<td>1977</td>
<td>5.6</td>
<td>106,901.6</td>
<td>191,426.3</td>
</tr>
<tr>
<td>1978</td>
<td>5.5</td>
<td>112,808.3</td>
<td>210,654.6</td>
</tr>
<tr>
<td>1979</td>
<td>6.0 (est. Tokai Bank)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Japan, Economic Planning Agency
rates of 5.7% in 1977 through 1985, 5% from 1986 through 1990, and 4% from 1991 through 1995. (Takeo Takahashi, Jan., 1980, pp.9) These figures now appear to be somewhat exaggerated. On the other hand even at a growth rate of only 3 to 4% the Japanese economy will probably outperform that of Canada or the United States with little difficulty.

From a general perusal of the arguments surrounding the future of the Japanese economy offered in the Oriental Economist the situation seems to be one of weakness in the short run and strength in the long run. In order to explain this situation in the proper context it is best to delve a little into the past to follow the recent path the Japanese economy has taken.

At the beginning of the 1970's the economic outlook in Japan was understandably bright. Remarkable growth rates were continuing at over 10% per year. In 1974, however, came the "oil shock" and the initial $7 increase in the price of crude oil. Japan then, as now, relied on foreign oil imports to supply no less than 75% of its energy needs. (Takeo Takahashi, Jan., 1980, pp.9) The immediate result was a bout of rapid inflation and a total halt in economic growth. According to Takafusa Nakamura an easy money policy had preceded the price hike (the money supply had been increasing at 20% per year) and facilitated the commodity hoarding and the inflationary period of "crazed prices" (kyooran bukka) that followed the oil crisis. (Takafusa Nakamura, Winter 1980, pp.156) The government responded to this with a period of credit tightening that lasted
24 months and, while slowing inflation, brought on a recession in 1974 and 1975.

It was not until 1976 that the Japanese economy managed to pull itself out of this recession. The means of doing this was through rapid export expansion. This amounted to increases of 20.5% in 1976, a further 20.4% in 1977, and 16.1% in 1978. At the same time the yen rose dramatically against the (U.S.) dollar moving from 300 yen to the dollar in 1975 to 190 yen to the dollar in the fall of 1978. (Nakamura, Journal of Japanese Studies, Winter 1980, pp.160) The Canadian dollar during the same period depreciated from 300 to about 160 yen. Unfortunately, the growth in exports was not matched by a similar increase in domestic consumption. This "export-led growth" has prompted more than one observer to accuse the Japanese of dumping, i.e. selling goods abroad at lower prices than at home, and unfair government subsidization of exports. According to the U.S. Import-Export Bank for example, the Japanese Government provided financial credits or guarantees for 42% of the country's total exports in 1977 compared to 7% for the United States and 6% for Canada. (quoted in Keith Hay 1979, pp.54)

Besides the fluctuation in the value of the yen, large rises in the prices of imported raw materials - especially oil, and the imbalance in the growth of the externally and domestically oriented sectors of the economy, the Japanese economy in the 1970's was also struck by a major decline in two crucial industries - shipbuilding and chemicals, and further
faced increased costs and public concern for environmental protection. All these contributed to economic instability throughout the decade. Since no economy thrives in instability the Japanese economy appears to be still suffering, but there are signs that the situation may be improving. In August 1979, the Japanese Government published a white paper on the economy which pronounced that the economy had "returned to an equilibrium". (Oriental Economist, Oct. 1979, pp.6) While the impartiality of the source is somewhat doubtful five factors were specified as giving rise to this equilibrium:

1) Growth in the economy of strong domestic demand
2) Improvement in corporate profits
3) Stabilization of commodity prices
4) The movement of the international balance of payments towards equilibrium
5) Improvement in the employment situation.

This picture, however, appears to be too good to be true and in several ways it is. For example, while the balance of payments situation in general has improved, Japan is still having a difficult time reducing its trade imbalance with the United States. This imbalance grew in Japan's favor from $1.7 billion in 1975 to almost $12 billion in 1978. (U.S. Senate Subcommittee On Trade Of The Committee On Ways And Means, 1979, pp.2) A U.S. Senate Subcommittee on Trade has urged the Japanese to make a much more concerted effort to reduce tariff and non-tariff barriers on American goods entering Japan. (U.S. Subcommittee on Trade Of The Committee On Ways And Means, 1979, pp.5) If such barriers are further reduced Japan's balance of payments could
again become seriously impaired. The likelihood, however, considering the languor with which most GATT resolutions have been undertaken is that the further removal of barriers will take time.

The most serious failing, and the potential Achilles' heel of the Japanese economy is the almost total dependence on foreign oil imports to meet its energy requirements. Japan's economy is very vulnerable to unpredictable increases in the price of oil. It effects not only the production of energy, but also the synthetic fibre and petrochemical industries. (Oriental Economist, March 1980, pp.28) Other related effects include a predicted drop in 1980 of consumer demand and rising inflation brought on by the 1979 oil price increase. (Tokai Monthly Economic Letter, June 1980, pp.1) It has been estimated that a (U.S.) $1 per barrel increase in the price of crude pushes up wholesale prices by .3% in Japan and consumer prices by .1%. (Tokyo Financial Review, May 1980, pp.3)

The major question is how great an effect will the oil price increase of 1979 have? There is reason to believe that it will not be that serious. Takeo Takahashi, the Administrative Councillor of the Economic Planning Agency, has stated that the increase from late 1978 to July 1979 of $7.89, and even more on the spot market, will have only a fraction of the effect of the January 1974 price increase of $8.65. Takahashi gives four reasons for this:

1) The GNP had doubled in the five year interim which essentially halves the impact,

2) The consumption of energy per unit of GNP
had been cut by 20% lessening the blow by a further 20%.

3) The inflationary effect of the increased price is not as serious (no doubt due to the tighter money policies which preceded the recent oil price increase),

4) The yen had appreciated against the U.S. dollar further reducing the cost to Japan.

A further strength against future oil shocks was pointed out by Hiroshi Takeuchi, the chief economist of the Long Term Credit Bank of Japan. It is one of those interesting facets about the Japanese people that more cynical analysts tend to forget. As Takeuchi stated:

"Japan is a racially homogeneous nation with a very high level of education... In the event that the Japanese economy is in a (oil) crisis the will to overcome the crisis will surge up among the people and bind them together." (Hiroshi Takeuchi, Aug. 1979, pp.15)

Perhaps most importantly, however, when assessing the general condition of the Japanese economy is that it be recognized that the Japanese economy is, and has been performing well, and occasionally above expectations. The important mining-manufacturing index rose 9.4% in fiscal 1979, well above the expected high of 8%. (H. Katsumata, June 1980, pp.4) Also, wage increases during the annual "spring offensive" (shunto) in 1979 were at a very moderate 6% and should remain between 6 and 8% for fiscal 1980. (Focus Japan, Jan. 1980, pp.3) Lastly inflation was an extraordinarily low 3.8% in 1978 and 3.6% in 1979. (Oriental Economist, April 1980, pp.47) Considering the dramatic impact of the 1974 oil shock then, the Japanese economy
must be viewed as having weathered the crisis well. This bodes well for the present oil shock as well. This optimism for the future is shared by two important financial publications. The "Keidanren Review" states that:

"Business activity will remain sluggish in the first half of fiscal 1980 but as the rate of inflation eases off at the beginning of the autumn the economy as a whole will regain increased steadiness. It will perhaps resume an upswing after the turn of the year. Even with the recovery in the latter half the GNP growth rate for fiscal 1980 as a whole will be limited to 4%. (Keidanren Review, Feb. 1980, pp.12)

The "Tokyo Financial Review" published by the Bank Of Tokyo, while typically less favorable, is also optimistic:

"it is expected that Japan's real economic growth will slow from an estimated 6.4% for fiscal 1979 to around 4% for both fiscal 1980 and fiscal 1981, but accelerate to about 5% for fiscal 1982, as the economy will likely commence on a path of moderate recovery about the middle of fiscal 1981." (Tokyo Financial Review, May 1980, pp.3)

To judge from these views then, the Japanese economy is in reasonably good health and has a good outlook for the 1980's. While this projection is incumbent on the moderation of future oil price hikes the large price hike last year and the present glut of oil on the market make inordinate price increases very unlikely. This, however, will ultimately be determined at the next OPEC conference in November.

2.3.2 Disposable Income

When speaking of housing starts, the income and
consumption variables regarding the average worker who purchases the housing are equally as important as the general condition of the economy. The reasons for this are simple enough. If a worker is enjoying a real increase in income that is higher than increases in consumer prices, and is maintaining a healthy savings rate, then it may be expected that the ability to make large capital outlays, as are needed to buy housing, will be greatly facilitated.

From Table 16 it seems evident that incomes have kept pace with the rises in consumer prices. Indeed, there was a 2.7% and 3.4% income surplus over consumer price rises in 1978 and 1979 respectively. In addition to this the average propensity to consume has remained steady at about 77% (Table 16) which means a healthy savings rate of about 23% of disposable income. The 1979 increase in the price of oil is largely responsible for driving consumer price increases above average wage hikes. (Tokai Monthly Economic Letter, June 1980, pp.2) As stated above, however, the improvement in the economy in the next few years should also lead to a bettering of the wage-price ratio similar to that of the last two years.

It is difficult to measure even with this surplus in expendable income whether the average worker is still able to find good affordable housing. Obviously with over 40% of householders dissatisfied with their housing (above page 20) the average worker does not seem to be able to do so. If, however, he/she is able to maintain an increase in real income, as seems likely, continuing into the 1980's, the ability to afford better
Table 16  
Income and Prices

<table>
<thead>
<tr>
<th>Year</th>
<th>Monthly Real Income (Yen)</th>
<th>% Monthly Real Income Growth</th>
<th>Average Propensity to Consume</th>
<th>% Increase in Consumer Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>236,152</td>
<td>14.8%</td>
<td>77.0%</td>
<td>11.9%</td>
</tr>
<tr>
<td>1976</td>
<td>258,237</td>
<td>9.4%</td>
<td>77.4%</td>
<td>9.3%</td>
</tr>
<tr>
<td>1977</td>
<td>286,034</td>
<td>10.8%</td>
<td>77.2%</td>
<td>8.1%</td>
</tr>
<tr>
<td>1978</td>
<td>304,562</td>
<td>6.5%</td>
<td>77.0%</td>
<td>3.8%</td>
</tr>
<tr>
<td>1979</td>
<td>326,013</td>
<td>7.0%</td>
<td>77.6%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

# over previous year  

Table 17  
Rate of Household Formation

(1000's)

<table>
<thead>
<tr>
<th>Year</th>
<th>Households</th>
<th>Total Increase</th>
<th>Yearly Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>19,678</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td>23,085</td>
<td>3,407</td>
<td>681.4</td>
</tr>
<tr>
<td>1970</td>
<td>26,856</td>
<td>3,771</td>
<td>754.2</td>
</tr>
<tr>
<td>1975</td>
<td>31,270</td>
<td>4,414</td>
<td>852.8</td>
</tr>
<tr>
<td>1958</td>
<td>18,647</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1963</td>
<td>21,821</td>
<td>3,174</td>
<td>634.8</td>
</tr>
<tr>
<td>1968</td>
<td>25,320</td>
<td>3,499</td>
<td>700.0</td>
</tr>
<tr>
<td>1973</td>
<td>29,651</td>
<td>4,331</td>
<td>866.2</td>
</tr>
<tr>
<td>1978</td>
<td>33,093</td>
<td>3,442</td>
<td>688.4</td>
</tr>
</tbody>
</table>

Source: Office of the Prime Minister, Japan.

<table>
<thead>
<tr>
<th>Year</th>
<th>Households</th>
<th>Yearly Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>29,146</td>
<td></td>
</tr>
<tr>
<td>1971</td>
<td>30,027</td>
<td>881</td>
</tr>
<tr>
<td>1972</td>
<td>30,853</td>
<td>826</td>
</tr>
<tr>
<td>1973</td>
<td>31,908</td>
<td>1,055</td>
</tr>
<tr>
<td>1974</td>
<td>32,628</td>
<td>720</td>
</tr>
<tr>
<td>1975</td>
<td>33,310</td>
<td>682</td>
</tr>
<tr>
<td>1976</td>
<td>33,911</td>
<td>601</td>
</tr>
</tbody>
</table>

housing should increase.

2.3.3 Household Formation

As stated earlier household formation in Japan is not as easily tied to demographics as in the West, primarily because there is the additional question of the state of the extended family unit and how rapidly it is breaking down. The unravelling of the large household has in no small part been responsible for a rate of household formation equalling three times the rate of population increase over most of the last three decades. (Economist, Feb. 2 1980, pp. 93) There is no clear way to verify whether this trend will continue, or at what rate.

It would seem though that there is a slackening in the rate of household formation. The figures available, however, are contradictory and this makes a projection hazardous. The Prime Minister's Office in Japan offers two sets of figures. (Table 17) Both are from surveys taken every five years. A third source of data is the Economic Yearbook of the Oriental Economist. (also Table 17) From these it would seem that the yearly increase in households was declining after 1973 from over 1 million to between 600,000 and 700,000 by 1978. If this is true it would be in keeping with the decline in the marriage rate during the same period. (Table 18) Unfortunately (at least for the purposes of clarification), there does not seem to be a close correlation between the number of marriages and the number of new households.

Perhaps from the population pyramid, given in Table
### Table 18  Marriages

<table>
<thead>
<tr>
<th>Year</th>
<th>Yearly Total</th>
<th>Marriages per 1000 pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1969</td>
<td>984,142</td>
<td>9.6</td>
</tr>
<tr>
<td>1970</td>
<td>1,029,405</td>
<td>10.0</td>
</tr>
<tr>
<td>1971</td>
<td>1,091,229</td>
<td>10.5</td>
</tr>
<tr>
<td>1972</td>
<td>1,099,984</td>
<td>10.4</td>
</tr>
<tr>
<td>1973</td>
<td>1,071,923</td>
<td>9.9</td>
</tr>
<tr>
<td>1974</td>
<td>1,000,455</td>
<td>9.1</td>
</tr>
<tr>
<td>1975</td>
<td>941,628</td>
<td>8.5</td>
</tr>
<tr>
<td>1976</td>
<td>871,543</td>
<td>7.8</td>
</tr>
<tr>
<td>1977</td>
<td>821,029</td>
<td>7.2</td>
</tr>
</tbody>
</table>

Source: Office of the Prime Minister (Japan)

### Table 19  Changing Demographic Aspects in Japan

![Demographic Aspects Diagrams](image)

Source: Economic and Foreign Affairs Research Association, pp. 4.
19, it is possible to make the future course of household formation clearer. The major difference between the 1970 census and the 1977 survey is that there is about a 10% drop in the size of the very important 20-29 age group. This helps to account for some of the drop in households and marriages. However the drop in both household formation and marriages is about 30% between 1970 and 1977. It is conceivable that the "oil shock", while hurting the economy, also lowered the rate of increase in the number of households. If this is the case then the recent improvement in the economy should also lead to an increase in new households. The surveys necessary to verify this, though, have only just been undertaken. Perhaps the best guess then is that the increase in households in the 1980's will be in the 750,000 per year range.

The question is, at a possible rate of 750,000 new households per year in the 1980's, what number of housing starts will prove adequate to provide sufficient accommodation. The important factor here is that between 1972 and 1978 the replacement of old houses by new dwellings increased from 20% to 30% of all houses built. That means that of the 1.5 million dwellings constructed in 1978 450,000 units were replacements within the existing housing stock. If this trend continues, which seems likely, it would be necessary to build 1.2 or 1.3 million new dwellings yearly to provide both replacements and accommodate the basic increase in new households. When it is realized that the average Japanese home still has only 43 m² of space it is difficult to ignore the pressure that exists to increase the number of larger housing units. A rate of housing
starts in the 1.3 million range, then, as estimated earlier, would seem to be commensurate with the housing need that 750,000 new households per year would bring onto the Japanese market in the 1980's.

2.3.4 The Political Climate

Except for the initial postwar election the conservative Liberal Democratic Party (LDP or Jiminto) has held majority power in the Japanese Diet. Even after the "Lockheed Scandal" which shook the right wing base of the party and led to the resignation and temporary imprisonment of the then Prime Minister, Kakuei Tanaka, the LDP steadfastly manages to control the government. Nor did the recent death of the leader of the party and Prime Minister only days before a national election prevent the maintenance of the LDP's parliamentary majority.

Japan then, must be considered one of the more politically stable nations in the world. It is unlikely that there will be any dramatic shifts in the country's political makeup during the next decade. If the scandals and economic difficulties of the last decade have not shaken the LDP's hold, it makes it difficult to imagine what will. A stable political climate suitable to a "good investment climate" is not a very risky projection to make for the Japan of the 1980's.

2.4.0 Conclusion

What effect will these variables discussed above have, then, on housing starts and lumber demand in Japan in the
1980's. To sum up, it has been stated that the Japanese economy is going through some momentary difficulties but that it is healthy and should continue so. Japanese workers have been enjoying real increases in expendable income, over the rise in consumer prices, and with their large savings rates should continue to be able to better their housing conditions in the 1980's. The rate of household formation, even if it does decline in accordance with the population decrease, should still result in the maintenance of a healthy demand for new housing. And the political situation is perhaps as stable as ever.

Given this, there does not seem to be any significant enough reason to alter seriously the lumber demand expectations offered in the first half of this chapter. This, of course, depends to a great extent on the outcome of further oil price increases. Nevertheless, given the strength of the Japanese economy it should return to a position of 5% growth within a year or two and thus serve to maintain a level of 1.3 million housing starts throughout the decade.
CHAPTER 3

B.C.'S POSITION AMONG JAPAN'S DOMESTIC AND INTERNATIONAL SOURCES
OF LUMBER SUPPLY

In order to assess British Columbia's position as a lumber supplier to Japan it is first necessary to investigate Japan's own lumber producing capability. This is followed by a quick look at the lumber supply situation surrounding Japan's major external sources of softwood supply.

3.1.0 Japan's Domestic Lumber Production Capacity

Considering that in Japan there are 115 million people living on a land area less than 4% that of Canada's it is surprising to discover the size of Japan's forest resource. Fully 68% of Japan is forested with a growing stock of over 2 billion m$^3$. (Robert Forster, 1978, pp.52) Also due to rampant overharvesting during the war years there is a substantial amount of timber that is not expected to become harvestable until the second or third decade of the next century. (Japan Forest Agency, 1980, pp.49) The growing stock then, as well as the annual allowable cut (AAC), are expected to increase, leading to expansion of domestic timber production in the future.

As can be seen in Table 20 however, domestic timber production declined between 1965 and 1975 after which it levelled out to approximately 34 million cubic meters (hereafter

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic (1000 m³)</th>
<th>Imports (1000 m³)</th>
<th>Total (1000 m³)</th>
<th>Imports as a % of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>50,375</td>
<td>20,155</td>
<td>70,530</td>
<td>28.6</td>
</tr>
<tr>
<td>1966</td>
<td>51,535</td>
<td>25,041</td>
<td>76,876</td>
<td>32.6</td>
</tr>
<tr>
<td>1967</td>
<td>52,741</td>
<td>33,206</td>
<td>85,947</td>
<td>38.6</td>
</tr>
<tr>
<td>1968</td>
<td>48,963</td>
<td>42,843</td>
<td>91,806</td>
<td>46.7</td>
</tr>
<tr>
<td>1969</td>
<td>46,817</td>
<td>48,753</td>
<td>95,570</td>
<td>51.0</td>
</tr>
<tr>
<td>1970</td>
<td>46,241</td>
<td>56,438</td>
<td>102,979</td>
<td>54.8</td>
</tr>
<tr>
<td>1971</td>
<td>45,966</td>
<td>55,437</td>
<td>101,405</td>
<td>54.7</td>
</tr>
<tr>
<td>1972</td>
<td>43,941</td>
<td>62,563</td>
<td>106,504</td>
<td>58.7</td>
</tr>
<tr>
<td>1973</td>
<td>42,209</td>
<td>75,372</td>
<td>117,581</td>
<td>64.1</td>
</tr>
<tr>
<td>1974</td>
<td>39,474</td>
<td>73,566</td>
<td>113,040</td>
<td>65.2</td>
</tr>
<tr>
<td>1975</td>
<td>34,820</td>
<td>62,380</td>
<td>97,200</td>
<td>64.2</td>
</tr>
<tr>
<td>1976</td>
<td>34,790</td>
<td>66,610</td>
<td>101,400</td>
<td>65.7</td>
</tr>
<tr>
<td>1977</td>
<td>34,231</td>
<td>67,623</td>
<td>101,854</td>
<td>66.4</td>
</tr>
<tr>
<td>1978</td>
<td>32,558</td>
<td>70,859</td>
<td>103,417</td>
<td>68.5</td>
</tr>
<tr>
<td>1979</td>
<td>34,140</td>
<td>74,830</td>
<td>108,970</td>
<td>68.7</td>
</tr>
<tr>
<td>1980</td>
<td>33,900 (est.)</td>
<td>72,350</td>
<td>106,250</td>
<td>68.1</td>
</tr>
</tbody>
</table>

cited as mm$^3$) per year. In the meantime the proportion of imported timber rose rapidly from 28% in 1965 to 64% in 1973 to over 68% in 1980. The domestic supply of timber therefore has been declining as a proportion of total supply, though not so rapidly in recent years.

The 1980's will probably witness an increase, though small, in the proportion of domestically produced timber in Japan. There is little doubt that domestic production will grow eventually. The question is when will it start? Robert Forster's estimate from his study of Japanese forestry is that timber production will grow from the present 34 mm$^3$ to 70 or 80 mm$^3$ at the "time of maximum production". (Robert Forster, 1978, pp.57) This is substantially below official government projections. However, government projections made in 1973 have already proven overly optimistic in regard to the basic forest land area. Forster gives 4 reasons why the failure to meet the goals of domestic production set in 1973 will continue:

i) no market has, or likely will be established for the vast larch plantations in Hokkaido,

2) the conservation movement is growing and will continue to place restrictions on forest harvesting,

3) the expected results from forest management programs are overly optimistic, especially for remote or distant areas where management has recently been initiated,

4) there is insufficient labor to carry out the highly labor-demanding harvesting management and silviculture programs. (Robert Forster, 1978, pp.57)

Due to these failures it does not appear that there is an
accurate forecast of Japanese timber production available from
the Japan Forest Agency. While Forster's figure of 70 or 80
\( \text{mm}^3/\text{year} \) is a more reasonable estimate of maximum production, he
does not state when this maximum will be reached or at what rate
of increase. Much of the growth in timber production towards
the 70 or 80 \( \text{mm}^3/\text{year} \) mark will likely be attained in large
yearly increments around the year 2010 when much of the
presently overabundant immature forest becomes harvestable.
Before that, however, the growth in production should be
relatively slow.

To put a figure on the rate growth in Japan's domestic
timber production is difficult. Differences in tree species,
rotation periods, cultivation practices, climate, market
conditions, and accessibility greatly complicate the projection
analysis. For example, at present approximately 70% of
plantations and 40% of natural forests are comprised of immature
trees under 20 years of age. (Robert Forster, 1978, pp.52 and
Japan Forest Agency, 1980, pp.46) Together they amount to 50%
of total forest area. (Japan Forest Agency, 1980, pp.46) Some of
these forests, like the larch plantations in Hokkaido, mature in
35 years. This larch will become harvestable during this
decade. The problem though, is that no market exists for larch
in Japan and it will not be harvested until there is a viable
market. Forster doubts whether this market will ever develop.
Other plantations are of sugi, or Japanese cedar, which is the
most common species of tree in Japan, and requires about a 50 to
60 year rotation period to produce good sawlogs. The rotation
period though, can vary from 15 to 120 years depending on the
quality of timber required. (Robert Forster, 1978, pp.54,58)

Another factor inhibiting effective projection of harvestable timber is that of the approximately 20% of the land that supports mature forests, i.e. trees 60 years old or more, (Robert Forster, 1978, pp.52) much is inaccessible due to the mountainous terrain of Japan. 42% of forest land is on slopes of 15 to 30 degrees, and 28% is on slopes in excess of 30 degrees. (Jaakko Poyry and Co., 1975, pp.38) Naturally enough, a good proportion of the mature timber is on the most inaccessible of terrain.

Thus, perhaps the best means of achieving an estimate for timber production in 1990 is simply to take Forster's figure for maximum domestic production - 70 to 80 mm$^3$ - determine when it should be attained, and divide the increase into yearly average increments between the present and the time of maximum production. According to the Forestry Agency maximum growing stock, and likewise AAC, will be arrived at sometime in the 2020's. (Forestry Agency, 1980, pp.49) While the actual Forest Agency figure for volume of growing stock seems seriously exaggerated, there is reasonable validity in the estimate of when maximum growing stock and AAC will be attained. This is because the Forest Agency's error lies in the overestimation of forest land "area" and the volume of growth per acre as opposed to an overestimation of the maturation rate of the existing timber. Since Forster's figure takes the former into account it is reasonable to accept 2020 as the year when Japan should be harvesting between 70 and 80 mm$^3$ of timber annually.
Since present production is 34 mm$^3$/year the average yearly increment to attain 70 to 80 mm$^3$/year by 2020 is .9 to 1.15 mm$^3$/year. By 1990 this would result in a harvest of between 43 and 45.5 mm$^3$/yr. This estimate can be modified further because, as stated earlier, the yearly increment in growing stock will likely be greater towards the end of the rotation cycle than at the beginning, when the presently vast young forests are approaching maturity. Thus, in the short term .9 to 1.15 mm$^3$/year must be recognized as a very optimistic projection. Perhaps most likely is a 1990 harvest of about 40 mm$^3$. An even lower figure is also in the range of possibility if bad weather or poor markets for the faster maturing species affect the harvest. It would appear though, that the safest range is between 40 and 43 mm$^3$/year and this will be used as the estimate for timber production in 1990.

It still remains necessary to translate this figure for timber production in 1990 into a figure for lumber production. In Japan, domestic timber is made into two major products - lumber and pulp (including chips) - with only a very small proportion used for plywood and other products. In the five years between 1970 and 1974 the proportion of sawlogs to total timber production varied from 57.5% to 62.7%, and averaged 60.1%.(Japan, Ministry of Agriculture and Forestry, Statistical Yearbook, 1974, pp.320) It would seem fair to say therefore that about 60% of domestic timber is made into lumber. Placed against the projection for timber production in 1990 this would amount to domestic production of between 24.0 mm$^3$ and 25.8 mm$^3$. 
of sawlogs.

Of total domestic timber production between 1969 and 1974 the proportion of hardwoods to total timber fluctuated from 39.5% to 42.7%, again a very consistent pattern. The average for the six years is 41%. (Japan Ministry of Agriculture and Forestry, Statistical Yearbook, 1974, pp.308) Since 98% of the recent, artificially planted forests are softwood this proportion can be expected to fall. But the proportion of hardwoods should fall only after another 10 to 20 years when these plantations begin to be harvested. As a result of the 24 to 25.8 mm³ of timber estimated as sawlogs in 1990 about 41% should be hardwoods or between 9.8 and 10.5 mm³. Likewise 59% should be softwoods or approximately 14.1 to 15.2 mm³.

The reason for breaking down timber production into softwoods and hardwoods is because in Japan it requires 1.31 m³ of softwood log to produce 1 m³ of sawn lumber, while for hardwoods it takes 1.54 m³ of log to produce 1 m³ of lumber. (statistics from The Ministry of Agriculture, in Robert Forster 1978, pp.8) In order to determine total lumber production this difference in conversion factors must be taken into consideration. Thus the 9.8 to 10.5 mm³ of hardwood timber should come to between 6.4 and 6.9 mm³ of hardwood lumber. Similarly the 14.1 to 15.2 mm³ of softwood timber should amount to between 10.8 and 11.6 mm³ of softwood lumber. Total domestic lumber production in 1990 should approximate 17.2 to 18.5 mm³.

Of the 62.6 to 69.1 mm³ of lumber projected as Japan's total demand in 1990 then, imports will account for a low of
44.1 mm$^3$, and a high of 51.9 mm$^3$.

Since imported lumber, or lumber produced from imported sawlogs varied between 35 mm$^3$ and 40 mm$^3$ annually throughout the 1970's, it can be concluded that Japanese lumber and sawlog imports will increase over the next decade though not as dramatically as in the 1960's and early 1970's. By 1990 the increase in yearly imports will have resulted in between 4 and 12 mm$^3$ per year more lumber derived from imported wood than during the peak years of the 1970's.
3.2.0 Where The Competition Stands

With over 50 nations exporting lumber to Japan Canada will not have an easy time competing for whatever gains there are to be made in the Japanese market over the next decade. The slower growth rate of the lumber market in Japan that is projected here for the 1980's however, does not mean that there will be no room for Canadian lumber export expansion to that country. On the other hand, it may mean that a more concerted effort will have to be made in order to pick up a significantly increased slice of the Japanese lumber market pie.

The next major question then, is where does Canada stand vis-a-vis the other major "softwood" suppliers to the Japanese market. Table 21 shows that the market is dominated by the United States and the U.S.S.R. This does not mean that Canada is not an important source of supply however. In order to better understand Canada's, and more specifically B.C.'s position in the Japanese market it is necessary to examine the condition of the forest industries and resource bases of the other major softwood suppliers, namely the U.S., the U.S.S.R., British Columbia, New Zealand, and, because of its potential, South America. The manner for doing this is to rely on prominent forestry journals or respective government agencies to develop an analysis for each country or region.

3.2.1 The United States

In a study undertaken in 1979 by David Darr and Gary Lindell, both of the United States Department of Agriculture
Table 21  Major Suppliers of Softwood to Japan: 1979

(quantity: 1000 m³, value: 1000 yen)

<table>
<thead>
<tr>
<th></th>
<th>LOG</th>
<th>LUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>quantity</td>
<td>value</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>12,346</td>
<td>426,588,758</td>
</tr>
<tr>
<td>Canada</td>
<td>334</td>
<td>11,593,171</td>
</tr>
<tr>
<td>New Zealand</td>
<td>994</td>
<td>16,627,932</td>
</tr>
</tbody>
</table>

Source: Japan Lumber Journal, April 30, 1980, pp.10,
(USDA) Forest Service, a projection was developed for U.S. lumber consumption, domestic production, imports and exports until the year 2030. (Table 22) According to this study, lumber consumption in the United States is expected to increase rapidly from 1977 to 1990 by a total of 19% after which it will level off. The U.S. despite large exports to Japan will remain a net importer of softwood lumber. The percentage of imports to total consumption will peak in 1990 at 28.2%. During the 1980's lumber exports are expected to increase as domestic production expands. It would appear from Darr and Lindell's study that U.S. lumber production will expand by no less than 25% over the next 30 years. Also, even though the United States is a net importer they are expected to expand exports of softwood between 1977 and 1990 by 500 million board feet or 35%. Imports from Canada meanwhile should grow by about 3 billion board feet or 29%. This increase in exports will come at the expense of any Canadian effort at market diversification. As Darr and Lindell state:

"If the past is any guide the U.S. market will probably continue to buy the bulk of Canadian production at the expense of reduced Canadian sales to offshore markets." (Darr and Lindell, Forest Products Journal, May 1980, pp. 17)

Darr and Lindell evidently foresee little change in the present Canadian dependence on the U.S. lumber market.

Darr and Lindell's results differ markedly from another study prepared in 1979 by Richard Haynes and Darius Adams. Haynes is also from the USDA Forest Service, while Adams
Table 22  U.S. Production, Imports, Exports, and Consumption of Softwood Lumber to 2030

(billion board feet)

<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic Production</th>
<th>Imports from Canada</th>
<th>Total Imports</th>
<th>Exports</th>
<th>Apparent Consumption</th>
<th>Imports as a % of Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>27.5</td>
<td>5.7</td>
<td>5.8</td>
<td>1.2</td>
<td>32.1</td>
<td>18.1%</td>
</tr>
<tr>
<td>1975</td>
<td>26.2</td>
<td>5.7</td>
<td>5.7</td>
<td>1.4</td>
<td>30.5</td>
<td>18.7</td>
</tr>
<tr>
<td>1977</td>
<td>31.1</td>
<td>10.2</td>
<td>10.4</td>
<td>1.4</td>
<td>40.1</td>
<td>25.9</td>
</tr>
<tr>
<td>1990</td>
<td>36.2</td>
<td>NA</td>
<td>13.5</td>
<td>1.9</td>
<td>47.8</td>
<td>28.2</td>
</tr>
<tr>
<td>2000</td>
<td>37.4</td>
<td>NA</td>
<td>13.0</td>
<td>1.8</td>
<td>48.6</td>
<td>26.8</td>
</tr>
<tr>
<td>2010</td>
<td>41.1</td>
<td>NA</td>
<td>13.0</td>
<td>1.7</td>
<td>52.4</td>
<td>24.8</td>
</tr>
<tr>
<td>2020</td>
<td>41.1</td>
<td>NA</td>
<td>12.5</td>
<td>1.6</td>
<td>52.0</td>
<td>24.0</td>
</tr>
<tr>
<td>2030</td>
<td>40.9</td>
<td>NA</td>
<td>12.0</td>
<td>1.6</td>
<td>51.3</td>
<td>23.4</td>
</tr>
</tbody>
</table>

NA - Not Available

is a professor of forestry at Oregon State University. Haynes and Adams, whose results appear in Table 23 foresee no increase in U.S. domestic lumber production between 1980 and the year 2000. In fact, they project a decrease of 1.7 billion board feet or 5.3%. Their increases in domestic consumption are smaller than Darr's and Lindell's for the year 2000, i.e. 48.6 billion board feet for Darr and Lindell versus 44.5 billion board feet for Haynes and Adams. The latter expect an even greater increase in imports from Canada to compensate for the poor performance of the domestic lumber industry, i.e. 14.3 billion board feet versus 13 billion board feet for Darr and Lindell. If this becomes true the domination of the American market will be that much greater.

Despite this reliance on lumber imports from Canada the U.S. will probably remain Canada's greatest obstacle to the expansion of sales in the Japanese lumber market. There are several reasons for this. As already stated it is difficult for Canadian lumber producers to make the extra effort to expand lumber sales in Japan when the American market is so close, so large, and so familiar. Secondly, the U.S. is not only Japan's largest supplier of softwood, but furthermore 90% of these exports are in log form. (Japan Lumber Journal, 1979 figures, April 30, 1980, pp.10) The Japanese prefer logs as this supplies their own large native sawmilling industry which better serves their own lumber market. Also the types of wood the United States exports to Japan are generally of the same species of wood as Canada's. (Japan Lumber Journal, April 30, 1980, pp.10,11) Thus it appears that the domination of the American
<table>
<thead>
<tr>
<th>Year</th>
<th>Domestic Consumption</th>
<th>Imports from Canada</th>
<th>Exports</th>
<th>Apparent Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>41.0</td>
<td>9.1</td>
<td>1.3</td>
<td>31.9</td>
</tr>
<tr>
<td>2000</td>
<td>44.5</td>
<td>14.3</td>
<td>1.4</td>
<td>30.2</td>
</tr>
<tr>
<td>2030</td>
<td>47.5</td>
<td>14.1</td>
<td>1.2</td>
<td>33.4</td>
</tr>
</tbody>
</table>

market and the fact that Canada exports lumber, not logs, will prevent Canada from making any gains in the Japanese market at the expense of the Americans present market share.

The possibility of a major change in U.S. log exporting policy is unlikely, though there is a growing movement to halt log exports in favor of more processed wood exports, i.e. lumber. This movement has already recorded some victories. The export of logs has been restricted from U.S. National Forest west of the 100th meridian by federal law. (Robert Forster, 1978, pp.85) Also Oregon, California and Alaska have prohibited the export of unprocessed timber from state lands. The result has been that in 1975, for example, one-third of the timber harvest from Washington, Oregon and California was prohibited from export in log form by Federal or State controls. (Lindell, Log Export Restrictions, 1971, pp12) Still, log exports account for one-fifth of all timber harvested in the United States Northwest. Shutting this flow off would antagonize not only the Japanese who rely heavily on U.S. log exports, but would also arouse opposition from large companies like Weyerhauser. The Japanese pay high prices for logs mainly because the care with which they saw the wood allows them to retrieve more usable lumber. (Economist, May 24, 1980, pp.44) According to "The Economist" Japanese bidding increases the price of logs to Weyerhauser by an extra $75 per 1000 board feet. (Economist, May 24, 1980, pp.44)

Also, because of U.S. transportation policy, i.e. the "Jones Act, which necessitates the use of American ships for
shipments between American ports, it is cheaper for B.C. mills to ship lumber through foreign freighters to the north eastern United States than it is for the states of Washington and Oregon who must use American freighters. In this situation the Japanese market could be almost considered an escape valve to keep western American lumber producers from putting pressure on the government to change its transportation policy.

Lastly, since it is more difficult for the large American sawmills to cut lumber to intricate Japanese specifications, restrictions on log exports would not automatically result in an increase in lumber exports. It would mostly mean lost markets. The Japanese would seek logs elsewhere. If it meant importing more lumber the Japanese would probably turn to the smaller Canadian mills than to the mills in the United States. If this happened Canada would naturally benefit greatly, but there would be no small uproar from workers and industry in the U.S. Northwest.

Nevertheless, on the immediate horizon, it appears that the State of Washington will follow California, Oregon, and Alaska in passing a government bill prohibiting the export of unprocessed wood from State lands. In 1974, 22% of logs shipped from the State originated from State-managed lands. The bill is given a "fair chance of succeeding." (Economist, May 24, 1980, pp.44) If it does it may open up a market of 400 million board feet/year - which is 22% of the 1977 exports of 2,003 million board feet. (Florence Ruderman, USDA, 1978, pp.27) Since 90% of the State of Washington's log exports are destined for Japan the
Japanese may have to look to other sources for approximately 360 million board feet of softwood timber in the near future. The possibility certainly exists for B.C. capturing a share of this market. The capturing by B.C., however, of even all of the 360 million board feet in lumber form would only amount to about a 10% increase in present exports to Japan. If we are to speak of really diversifying Canadian/B.C. lumber markets the Japanese market should be at least doubled, if not quadrupled during the next decade. A 10% increase would be a step in the right direction, but certainly not a terribly significant one.

Besides changes in export policy there is also the question of export supply, and especially of whether the United States can maintain its proportion of the Japanese softwood trade given the projected increase in Japanese demand for sawlogs and lumber by 1990. The prospects are not crystal clear. Darr and Lindell who projected an increase both in domestic timber production and exports, allot only 500 extra million board feet for possible export. This would make up only a small fraction of the projected increase in Japan's lumber requirements and would furthermore be totally neutralized by the passing of the State of Washington bill. Haynes and Adams' projected increase in U.S. exports is even smaller at 100 million board feet. (see Table 23) Accordingly the U.S. would appear to be able to maintain its present volume of wood exports to Japan, but not much more, over the next decade.

This is in keeping with the trend of the last decade during which there has been a fairly consistent flow of about 11
mm³/year of logs and lumber to Japan. On the other hand, the U.S. trade imbalance with Japan is inordinately weighted towards the latter's favor. In the light of this politically sensitive issue it is not impossible that log exports may even be stimulated to help alleviate the embarrassing imbalance of trade. The eruption of Mount St. Helens may also enter this calculation as the volcano blew down no less than 4% of Weyerhauser's extensive timber holdings creating the distinct possibility of the dumping of these logs onto the Japanese market in the near future. Keeping the above in perspective, however, and including the possibility of large growth in U.S. domestic lumber consumption it would not appear that there will be very much wood left over for export expansion to Japan. The maintenance of the present export volume is possible through the next decade.

3.2.2 The U.S.S.R.

The U.S.S.R. possesses over half of the world's softwood growing stock. Much of this lumber is in the remote eastern area of Siberia and thus far from European markets. This makes it well suited for export to Japan. (Lindell, Forest Products Journal, July 1979, pp.47) These factors enabled the U.S.S.R. to supply Japan with over 27% of the latter's forest product imports in 1975. Since that time, however, timber production has stalled despite a 5 year plan aimed at increasing production. (Jay Holowacz, July 1979, pp.23) The result has been a proportionate decline in Russia's export share of not only the Japanese market but other markets in Europe as well. In the
last five years only in 1977 has the value of wood exports to Japan risen. (Japan External Trade Organization, White Paper On International Trade 1977-1979) This falling off has reached dramatic proportions this year as shipments of logs to Japan were down 28% in the first quarter. (Japan Lumber Journal, Jan. 20, 1980, pp. 1)

While U.S.S.R. wood exports may rebound somewhat it does not appear likely that any expansion of timber production or timber exports is in the offing. Jay Holowacz gives three reasons for this:

1) the timber industry is of relatively low status in the U.S.S.R. and as a result encounters difficulties in recruiting and building a permanent work force,

2) with about 100 government ministries, institutions and departments governing wood operations effective administration is extraordinarily difficult,

3) the huge land mass requires efficient land based means of transporting wood and the U.S.S.R. has simply not developed adequate log moving equipment to maintain timber output and boost labor productivity.

Jan Solecki, who has written several authoritative studies on the forest industry in the U.S.S.R. agrees with the technological inadequacy and low status of the Soviet lumber industry. (Personal Interview, August 1980) The lack of priority given to lumber production is further reflected in the fact that despite the size of the resource, planned output may even be surpassed by projected consumption by 1995. (Lindell, World Softwood Lumber Trade, July 1979, pp. 47) Solecki, however, points out that that this situation may change if the industrial
priorities of the Soviet government shift. The U.S.S.R. is a planned economy. Resources, i.e. men and machines, are allocated according to a system of industrial priorities. At present the priorities in eastern Siberia center upon 1) the new Baikal-Amur railroad extending from Lake Baikal to the Pacific, 2) the fertilizer industry to shore up lagging agricultural production, and 3) oil and gas development. (Jan Solecki, Personal Interview, August 1980)

These priorities may change, for example, when the railroad is completed in the near future. At that point, according to Solecki, it is entirely possible that the emphasis may shift to the forest industry. Yet, since the return on investment in the forest industry is not as great as in other areas the second class status of wood production is likely to persist. As Solecki stated:

"It cannot be said categorically that changes in priorities will not happen, but it is not likely for the U.S.S.R. to engage in forest industry competition (in the Japanese market) because it is a high cost industry. (Personal Interview, August 1980)

It can also be mentioned that even if a change in government policy occurs, it could take 5 years to a decade for it to result in any substantially increased timber production capability.

It would appear then, that unless the Japanese are willing to invest in eastern Siberia to the great extent necessary to stimulate forest production they cannot count too strongly on the steadiness of their timber supply from the
U.S.S.R. Indeed, the large investments that have already been made do not serve as that strong a guarantee of future supply. Furthermore the territorial conflicts with the Soviets over Sakhalin and other northern islands north of Hokkaido, to say nothing of the differences in political systems, militates against the building of extensive Japanese investment commitments in Russia.

In conclusion then, while Russia is still a very prominent source of lumber supply, the condition of the Russian forest industry does not bode well for the future. Japan may have to consider itself fortunate simply to maintain its present level of softwood imports. Any expansion of imports would not seem justifiable in the light of the amount of investment that Japan would have to offer. It would appear therefore that Japan will have to make up the projected expansion in domestic lumber consumption elsewhere.

3.2.3 British Columbia (Canada)

Canada is a distant third as a supplier of softwood to Japan exporting only about one-fifth as much as either the U.S. or the U.S.S.R. Since well over 90% of the wood shipped to Japan from Canada originates in or near British Columbia this section will be primarily concerned with the B.C. lumber industry. At present this industry is in an interesting position. As stated earlier a decline in U.S. lumber demand has caused a lowering of exports, a fall in lumber prices, and
generally a depressed situation in the lumber industry as a whole. The sawmills in the interior have been particularly hurt as they rely heavily on the performance of the U.S. market. On the other hand, the devaluation of the Canadian dollar against American currency during the last two years has led to healthy profit margins in the forest products industry. This is presently encouraging large capital expenditures on plant modernization and expansion which will reportedly soon total $3 billion. (B.C., Ministry of Economic Development, 1979, pp.67) Thus, despite the present production downturn, the industry is healthy and well poised to take advantage of boosts in lumber demand in either the United States or Japan during the coming decade.

An important question then, is whether there is a sufficient and accessible supply of timber to enable much expansion in production. This is a difficult question to answer. The timber supply situation varies according to the area of the province. Production falldowns are imminent in the Kamloops Region while the supply in the Peace River Region seems virtually inexhaustible. (B.C., Ministry of Forests, March 1980, pp.15) According to the recent resource analysis undertaken by the British Columbia Ministry of Forests, the timber harvest projected as being needed to meet the potential demand for B.C. forest products is as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>MM³</th>
</tr>
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<tbody>
<tr>
<td>1977</td>
<td>70.0</td>
</tr>
<tr>
<td>1980</td>
<td>75.1</td>
</tr>
<tr>
<td>1990</td>
<td>83.7</td>
</tr>
<tr>
<td>2000</td>
<td>91.1</td>
</tr>
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</table>
The report goes on to show that the maintenance of timber production in line with these projections could cause serious supply falldowns beginning in 5 to 20 years. Unfortunately, the figures used do not take into account the 5% of productive forest lands which are privately owned. This is not just the marginal oversight which it may appear to be since much of this private forest land is among the most productive forest in the country.

Despite this oversight, it is clear that potential problems of timber supply do exist. It would therefore be impossible to foresee B.C. increasing production dramatically by 1990. It is equally impossible then, for B.C. to supply a significantly larger proportion of the Japanese market without shifting lumber away from the United States. It would seem, given the increases in U.S. demand for lumber imports projected by Darr and Lindell, and the even greater import demand projection by Haynes and Adams, that the British Columbia lumber industry will have its hands full in the coming decades in simply supplying the U.S. market.

Nor is the tightness in the B.C. timber supply situation likely to lead to any pronounced overtures from Japan to increase lumber imports from British Columbia. The Japanese are not likely to forget past Canadian fickleness regarding the supply of lumber. The Canadian lumber industry has been known to develop markets in Japan during slumps in U.S. demand and then drop them when the American market has picked up
again. (Laird Wilson, Seaboard, Personal Interview, May 1980)

It would seem therefore, that the status quo, in terms of the relative proportion of B.C.'s lumber that is exported either to the U.S. or to Japan, will be preserved. This, however, need not be the case. As stated before a larger Japanese market for B.C. lumber would probably add to the level of stability in the industry by offering an important alternative market when the U.S. market takes one of its periodic dives. Also the Japanese appreciate, and are willing to pay for quality lumber. B.C. still has large reserves of high quality lumber and the maintenance of a healthy Japanese market will help support the best possible price for the resource. Indeed it has been mentioned that, "The Japanese are expected to pay more (than the Americans) for exactly the same product." (Henrik Blichfeld, Eacom, Personal Interview, May 1980) Of course the better price obtainable in Japan is in no small part responsible for the recent increased proportion of B.C. lumber bound for Japan.

The question of what course B.C. lumber exports to Japan may take over the coming decade given "present" conditions will be examined in the next chapter. Suffice it to say here that there are supply problems which will inhibit expansion of the lumber market in Japan, and, that while the province is an important source of lumber supply to Japan it will never move into a dominant position comparable to the U.S. or the U.S.S.R.
3.2.4 New Zealand

The only other major exporter of softwoods to Japan is New Zealand though its market share is only half that of Canada's. New Zealand cannot be expected to expand exports to Japan much beyond the present volume. Limitations in the size of the forested areas alone clearly show the limited possibilities for further export expansion. New Zealand possesses only 6.4 million acres of forest compared to 191 million acres in Canada and even 91 million acres in Japan. (Jaakko Poyry and Co., 1975, pp. 23, 38, 47) While timber production has increased over the last decade, it has done so slowly. In the last few years total wood exports to Japan have hovered around the 1000 mm³ mark. (Japan Eternal Trade Organization, White Paper on International Trade 1977, 1978, 1979) Given that Japan already accounts for 80% of total New Zealand log exports there is little possibility of shifts from other markets to open up more wood for shipment to Japan. Thus, while New Zealand will probably remain an important source of softwood logs for Japan, there will not be much increase in present volumes for at least a decade.

3.2.5 South America

With over 1300 million acres of forest coupled with rapid tree growth and the potential of a very short rotation period, South America possesses a potential for wood production which is greater even than that of the Soviet Union. While perhaps only 75 million acres are softwoods this is still a
significant area. (Jaakko Poyry and Co., 1975, pp.52) Present exports to Japan from the entire continent, however, still amount to less than 10% of Canada's volume. (Japan External Trade Organization, White Paper on International Trade, 1979) There are also many obstacles confronting efforts to increase timber production including difficult terrain, weather, and a generally inhospitable climate. At present, Chile is the best prepared to expand wood exports and has already established a permanent sales mission in Japan. (Economist, May 24, 1980, pp.44) But given the very careful Japanese style of developing new business relationships it is very doubtful whether any major inroads into the Japanese market will be made during the coming decade. Nevertheless, depending on the seriousness of any timber supply shortfall that Japan may face during the coming decade, South America may serve to fill some of the gap.

3.3.0 Conclusion

While Japan derives its softwood timber from many sources there is no denying the dominance of two nations - the U.S. and the U.S.S.R. Both may, however, have reached the limit of their export capabilities. No other existing source of softwood is able to export to the Japanese much more than they are supplying at present if they are still to maintain other supply commitments. South America has yet to develop large scale exports to Japan and to do so will require time. New Zealand cannot expand exports much further simply because the resource base is not large enough. Similarly Canada/B.C. without a major shift in exports from the U.S. to
Japan could not hope to handle a market in Japan much greater than the present one.

An expansion in the Japanese demand (as projected earlier) of between 4 and 12 mm$^3$ of lumber annually by 1990, even though perhaps half may be hardwoods, will therefore leave the Japanese hard pressed to find sufficient sources of softwood supply. This is especially so when it appears that both the United States and the U.S.S.R. may cut back log exports - the U.S. because of government regulation, and the U.S.S.R. because of declines in production and volume available for export.

The implications of this situation and the path which B.C. lumber exports to Japan seem likely to follow in the 1980's will be discussed in the following chapter.
CHAPTER 4

THE B.C. LUMBER INDUSTRY AND THE JAPANESE MARKET

British Columbia is in somewhat of a unique position in the Japanese market in that B.C. is Japan's largest source of softwood lumber. So far in this study the differences in Japanese demand for either imported softwood sawlogs or softwood lumber have been minimized and the two types of wood have been dealt with as easy substitutes in regard to Japan's total softwood demand picture.

The rationale for this has come from two directions. First, much of what passes for "lumber exports" to Japan is little more than squared timber. Most of the milling of this wood is still left to be done in Japan. About 47% of the softwood shipped to Japan from B.C. in 1979 was in the form of either logs (13%), or light squares (23%), heavy squares (11%), and cants (.2%). (Japan Lumber Journal, March 20, 1980, pp.10)

Secondly, while it could be posited that in Japan wood demand is a specific amount, say "X" for sawlogs and "Y" for lumber, it seems to make sense to expect that if the logs are not available than lumber of similar species and quality will be rapidly substituted. Thus if the world softwood sawlog supply situation is tight, as it appears it will be with world (including Japan) demand increasing and the U.S. and U.S.S.R. slowing export growth, then it would doubtless not take Japan's wood importers long to find a greater market for imported lumber, and more specifically, B.C. lumber. In other words, if there is a demand
for softwood lumber in Japan that is not being satisfied by either domestic or external sources of softwood sawlog supply, while international sources of softwood lumber are available, then the proportion of imported lumber will increase.

It is necessary, then, to develop here a description of the business relationship that exists between the B.C. lumber industry and Japan if we are to make some estimation of how the industry will fare in Japan over the coming decade. To do this the following aspects will be examined: 1) past experience in developing a lumber market in Japan; 2) the export of CLS lumber; 3) the Japanese trading companies and their relationship with the B.C. lumber industry; and 4) the overall supply-demand outlook.

4.1.0 Building A Lumber Market In Japan

Lumber from overseas is not an easy commodity to sell in Japan. At times cost and price relationships create very frustrating problems. For example, when the supply situation for sawlogs is tight the price of sawlogs in Japan can easily rise above the price of processed wood, even though the latter would naturally cost more to produce. The strength of this market for sawlogs is directly related to the quality of lumber that the Japanese mill is able to provide. Steve Kaufman, managing director of MacMillan Jardine, pointed out that the Japanese lumber buyer often requires small amounts of precisely sawn lumber which are impossible to supply from overseas. Not only are the quantities too small for most overseas sawmills to
bother with, but also, in the interim between milling and delivery from an overseas mill, the lumber may change slightly in dimensions due to drying or shipping stress and may no longer meet the exact measurements of the highly demanding Japanese buyer. (Steve Kaufman, Personal Interview, August 1980)

In spite of this, B.C. has been more successful in exporting to Japan lumber cut to specific sizes than any other region or country. It has often been assumed that this has been due solely to the British Columbia policy restricting log exports. A study by Eden Shand on the development of the Pacific Northwest lumber market in Japan argues that it was partly the B.C. lumber industry's more enlightened approach to the Japanese market, as opposed to their American counterparts, which allowed B.C. to become so successful in selling lumber in Japan. (Eden Shand 1968) However, as Shand also states,

"It would be an oversimplification to say that B.C. overtook Washington and Oregon in the Japanese lumber market because she decided to cut hemlock baby squares to Japanese requirements while the Americans could not be bothered... It was not mere apathy on the part of the American Northwest lumbermen that caused them to ignore Japanese requests. It was a matter of dollars and cents. They simply could not manufacture to Japanese specifications and deliver to Japan at a price as competitive as that of B.C. (Eden Shand, 1968, pp.144)

Shand gives several reasons for this, all of which hinge on the fact that B.C. was more export oriented than the Americans. First, British Columbia lumbermen had more finesse. The two main lumber marketing agencies - MacMillan Bloedel Ltd. and
Seaboard Lumber Sales Ltd.- were better equipped to put large shipments together and take best advantage of economies of scale. (Eden Shand, 1968, pp.145) These two companies also graduated very early from working strictly through the Japanese trading companies to either developing an appointed trading agent in Japan, as did Seaboard with Aall and Co., or establishing a joint venture with an East Asian trading company, as did MacMillan Bloedel with the old and distinguished Jardine, Matheson and Co. (Eden Shand, 1968, pp.145) Since Shand's study Seaboard has moved a step further creating their own trading agent - Seaboard Lumber and Plywood Sales Asia Ltd., or simply Seasia - to deal with the Japanese. These kinds of initiatives gave, and continue to give, greater access to Japanese buyers and more flexibility in shipping to, and maneuvering shipments within the Japanese market.

Certainly these initiatives have paid off. Table 24 shows the advantage B.C. has developed and maintained over the four states of Alaska, Oregon, Washington, and California in exporting lumber to Japan. Much of B.C.'s superiority lies in the area of "customer cuts" (listed in Table 24 as "Other Lumber") of which British Columbia accounts for 63% of the total volume in that category and this amounts to almost 47% of B.C.'s total export volume to Japan.

Since 1975 B.C. has managed to increase the volume of lumber exports to Japan from 407 million board feet to 1,013 million board feet. (Council of Forest Industries, April 1980) During the same period the value of Canadian lumber shipments to
### Table 24
Exports of North American Lumber to Japan by Region

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</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>990</td>
<td>871</td>
<td>691</td>
<td>754</td>
<td>557</td>
<td>567</td>
<td>694</td>
</tr>
<tr>
<td>B.C.</td>
<td>1,372</td>
<td>1,177</td>
<td>967</td>
<td>1,341</td>
<td>1,164</td>
<td>1,745</td>
<td>2,115</td>
</tr>
<tr>
<td>Oregon</td>
<td>113</td>
<td>107</td>
<td>111</td>
<td>97</td>
<td>73</td>
<td>73</td>
<td>251</td>
</tr>
<tr>
<td>Washington</td>
<td>189</td>
<td>406</td>
<td>366</td>
<td>305</td>
<td>284</td>
<td>288</td>
<td>492</td>
</tr>
<tr>
<td>California</td>
<td>10</td>
<td>5</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>


### Table 25
Exports of B.C. Wood to Japan by Form of Wood

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Logs</td>
<td>90</td>
<td>174</td>
<td>159</td>
<td>239</td>
<td>309</td>
<td>287</td>
<td>311</td>
</tr>
<tr>
<td>Light Squares</td>
<td>376</td>
<td>425</td>
<td>431</td>
<td>511</td>
<td>568</td>
<td>588</td>
<td>562</td>
</tr>
<tr>
<td>Heavy Squares</td>
<td>314</td>
<td>364</td>
<td>285</td>
<td>330</td>
<td>418</td>
<td>291</td>
<td>277</td>
</tr>
<tr>
<td>Cants</td>
<td>-</td>
<td>55</td>
<td>78</td>
<td>40</td>
<td>26</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>CLS</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>69</td>
<td>80</td>
<td>145</td>
</tr>
<tr>
<td>Other Lumber</td>
<td>681</td>
<td>388</td>
<td>250</td>
<td>1498</td>
<td>598</td>
<td>785</td>
<td>1,132</td>
</tr>
</tbody>
</table>

# - included in Other Lumber

Japan, in current dollars, has tripled (jumping 650% since 1972) from $145 million in 1975 to $468.8 million in 1979. Increases in volume account for much of the increase in value, but also important are the proportional increases in more processed lumber, i.e. more custom cuts and less heavy squares (Table 25), as well as the Japanese willingness to pay for quality Canadian lumber. Japan already accounts for over 15% of the "value" of total B.C. lumber shipments, but only 8% of the "volume". (Council of Forest Industries, March 1980) This imbalance, given present trends, should be expected to increase.

4.2.0 The Introduction Of CLS Lumber To Japan

The latest example of the B.C. lumber industry's ability to undertake novel and ambitious approaches to penetrating the Japanese market has been the introduction, beginning in 1973, of CLS lumber, that is 2x4's and similar cuts, and the promotion of the platform frame method of housing construction. Compared to early expectations - the Japanese Ministry of Construction projected that 30% or about 450,000 houses would be constructed using CLS lumber by 1976 - the progress of CLS lumber exports has been disappointing. These early projections of the Ministry of Construction, however, are now thought unreasonable and the program is still considered a modest success. In 1979 Canadian exports to Japan of CLS amounted to 145,000 m³ or 6% of total export volume. This is perhaps enough to build between 10,000 and 12,000 units or about .8% of total houses constructed. (N.R. Dusting, September 1979, p.2)
The introduction of CLS lumber into Japan has not been easy. It has involved obtaining permits, attracting builders, training tradesman, and encouraging public acceptance. Fortunately the platform frame method possesses several important advantages over the traditional Japanese "post and beam" method. The first of these is that with the North American system, the construction material is highly standardized. While this is true, Robert Forster has pointed out that the traditional method is not as complex as is often believed. In the traditional method 10 sizes of lumber make up 90% of the production. The building of a platform frame house can involve a wide variety of sizes eg. 2x4's, 2x6's, 2x8's, 2x10's, 2x12's, 1x3's, 1x4's etc., in a variety of lengths. The difference is that with the North American system a house can be completely framed with approximately three sizes, while the Japanese system requires approximately 10 different sizes. (Robert Forster, 1978, pp.38-9) Thus the latter is somewhat more complicated, but not as complicated as has often been suggested. This is perhaps responsible for the Ministry of Construction's overestimation of the acceptance level of CLS lumber in the early 70's.

The second, and perhaps foremost beneficial feature of the platform frame method is that less laborers are needed per house during the construction process. With North American construction the contractor builds the foundation, then frames the house, roofs it, and calls in the plumber, electrician, drywall team, and finishing carpenter and the house is ready for
Using the traditional method a carpenter and apprentices work from beginning to end and call in a plumber or electrician as needed. Plumbers or electricians may come to the site 7 to 9 times during the construction period. As they are paid for travel, similar to here in North America, the costs incurred are serious. Forster also reasons that with the platform frame method these subtrades could be platooned allowing a contractor to build 7-8 houses per year rather than the usual 3 or 4.

A third beneficial aspect of the platform frame method is that the construction itself is simpler and therefore the labor training period is much shorter. This facilitates both the initial introduction of the system into Japan and the growth of trade skills within the profession. A program funded by the Council of Forest Industries and the B.C. and Federal Governments is aimed at creating a base of tradesmen experienced with the platform frame method. As yet, however, the number of trained tradesmen is limited.

Given the above factors the platform frame method is expected to reduce the cost of housing construction by between 20% and 43%. Such substantial savings would seem to lead to optimistic forecasts for further CLS lumber acceptance in Japan. However, there are serious problems as well. As already stated there are, as yet, an insufficient number of experienced tradesmen. Consumers are hesitant about risking investment in a house that was not built by tried and
true methods, especially in earthquake-prone Japan. Also the additional savings in construction have not been passed along to consumers. (Forster, 1978, pp. 89) On the other hand western style homes have a proven market in Japan and a very favorable image. For example, a very common saying among Japanese men is that happiness is an American house, Chinese food, and a Japanese wife.

The expected trend is that there will be a steady, long term, but gradual increase in CLS lumber exports to Japan. Between 1977 and 1979 exports grew from 69,000 to 145,000 m$^3$. This was the fastest rate of growth of any form of lumber shipped from B.C. to Japan. As such it does not seem impossible to expect CLS lumber shipments to Japan of between 1 and 1.5 mm$^3$ by the end of the decade.

The most important factor here is not necessarily that the volume of total lumber exports to Japan will increase, but that the value of the shipments will increase as they include a greater proportion of CLS or other more processed forms of lumber. There are several reasons for this. First, the industry is better suited to produce CLS lumber which will result in lower production costs per unit volume of lumber exported. Secondly, the price of CLS lumber will be bid up as Japanese demand grows. Thirdly, CLS lumber is a more processed and, by and large, more costly form of lumber than simple cants or squares. Thus, while the expansion of export volume to Japan is uncertain, the growth in value, through greater exports of CLS lumber, should help maintain the growth of the lumber
4.3.0 The Sogo Shosha And The B.C. Lumber Industry

The success of the Canadian lumber trade with Japan is also a product of the trade relationships that have been established between the major Canadian lumber exporters through the large Japanese trading companies, the sogo shosha, to Japanese buyers. While contacts and deals are aided and abetted by the trading branches that MacMillan Bloedel, Seaboard, or Eacom have established in Japan almost all of the marketing transactions pass, at one point or another, through the hands of one of the major sogo shosha. These are the companies that grease the operations of the Japanese market. Without their experience in dealing and distributing goods within Japan, or without their skill in coping with the highly informal nature of Japanese business "contracts", the Japanese market would prove virtually impenetrable to foreign trade.

There are a wide variety of sogo shosha in Japan. Some, like Mitsui or Mitsubishi are enormous conglomerates that import and export a great range of products. Mitsui and Mitsubishi are among the largest companies in the country, and thus also in the world. Other sogo shosha are far smaller and tend to specialize in particular products or market sectors.

It is generally wise when entering the Japanese market to make initial contacts through a large sogo shosha, if possible, and then branch out to more specialized firms. (Yoshi Tsurumi, 1977, p160) There are several reasons for this. The
large trading companies lend credence and respectability to a foreign firm's presence in Japan. The large sogo shosha have long and established reputations with large financial reserves to back up their dealings. Also, once a trade relationship has been established the large trading firms will help maintain a steady flow of goods almost regardless of whether the market is healthy or not. The smaller sogo shosha are less reliable, but often their specialized contacts and more personalized service can give better market penetration for particular goods than the larger trading firms. Also the former try to make up in vigor and drive what they lack in physical size and international reputation.

There are approximately nine major sogo shosha involved in the lumber trade between the Pacific Northwest and Japan. Each large Canadian lumber company has allegiances to two or three of the sogo shosha, eg. MacMillan Bloedel with Mitsui, Marubeni and Kanematsu, or Seaboard with Nissho Iwai and Sumitomo among others. (Laird Wilson, Seaboard, and Al Bates, MacMillan Bloedel Personal Interview, May 1980) C. Itoh and Mitsubishi also own and operate lumber mills on the West Coast. These sogo shosha encourage steady reliable trading relationships and are quite prepared to take heavy losses in bad times in order to maintain this image of business stability. The B.C. lumber industry has fairly well proven itself as a reliable source of lumber supply. The continued strengthening of the ties between the major sogo shosha and the major Canadian lumber exporters almost ensures the maintenance of a good market for Canadian lumber in Japan. There are, however, problems
involved in relying too heavily on the sogo shosha and these will be dealt with in Chapter 5.

4.4.0 B.C. Lumber - Supply And Demand

The basic question to be asked here then, is whether the fairly consistent increases in volume and value of lumber exports to Japan during the last five years will be maintained over the coming decade. As has already been discussed Japanese demand for Canadian lumber, due to limits in the international supply situation, growing markets at home, and the long steady relationships between the sogo shosha and the B.C. lumber industry, will probably remain healthy. Again then, it is necessary to speak of B.C.'s willingness and ability to supply.

According to the 1979 "Annual Report" of the Ministry of Forests 71.4% of the AAC within the province is committed, which, at least in theory, leaves 29.6% for further harvest expansion. (Annual Report, 1979) Unfortunately, but not surprisingly, most of the uncommitted AAC lies in the least accessible regions of the province. Fully 77.6% of the surplus AAC is in the northern Prince George and Prince Rupert Forest Regions. (B.C., Ministry of Forests and Ministry of Economic Development, 1979, pp.16 see Table 26) Simply put, this timber is more expensive to cut and ship than timber elsewhere. Thus much of the allowable cut will remain unharvested indefinitely or until it becomes economically viable to do so.

Further to this, the Ministry of Forests predicts that almost 22% of the existing 47.4 billion hectares of forest land
Table 26  Committed Timber Volumes in Public Sustained Yield Units in B.C. by Forest Regions

<table>
<thead>
<tr>
<th>Forest Region</th>
<th>AAC</th>
<th>Commitment</th>
<th>% Committed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vancouver</td>
<td>7,751.2</td>
<td>6,835.7</td>
<td>88.2</td>
</tr>
<tr>
<td>Prince Rupert</td>
<td>14,616.5</td>
<td>7,363.7</td>
<td>50.4</td>
</tr>
<tr>
<td>Prince George</td>
<td>21,614.2</td>
<td>14,456.2</td>
<td>66.9</td>
</tr>
<tr>
<td>Cariboo</td>
<td>7,060.5</td>
<td>5,817.0</td>
<td>82.4</td>
</tr>
<tr>
<td>Kamloops</td>
<td>7,347.7</td>
<td>6,613.4</td>
<td>90.0</td>
</tr>
<tr>
<td>Nelson</td>
<td>6,028.5</td>
<td>4,890.7</td>
<td>81.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>64,418.6</strong></td>
<td><strong>45,976.7</strong></td>
<td><strong>71.4</strong></td>
</tr>
</tbody>
</table>

will become alienated by the year 2000 due to increases in farmland, urban areas, and conservation areas. (B.C., Ministry of Forests, Forest and Range Resource Analysis Technical Report, March 1980, pp. 776) This figure includes the economically and physically inaccessible areas mentioned above.

Still the Ministry of Forests predicts an increase in lumber production by 1990 of about 3 mm³ or approximately 10%. (B.C., Ministry of Forests, March 1980, pp. 754) According to the Ministry 1/3 of this increase, or 1 mm³, is destined for the U.S. market, and about 20% each to Japan and the E.E.C. (B.C., Ministry of Forests, March 1980, pp. 756) The 33% figure for exports to the U.S. does not seem reasonable according to past trends. In 1975 and 1977 B.C. accounted for about 80% of total Canadian lumber exports to the United States. (Council of Forest Industries, April 1980) Darr and Lindell's report discussed earlier predicted an increase of 3.1 billion board feet in Canadian lumber exports to the U.S. This translates into roughly 7 mm³ of lumber. Against this the Ministry of Forests prediction of an increase of only 1 mm³ from B.C. seems far too low. Indeed for B.C. to maintain its 80% share of the U.S. market the necessary exports would consume more than double the Ministry of Forests' total projected increase in lumber production for 1990, let alone the growing markets in the rest of Canada, Japan and the E.E.C. As stated earlier then, it appears that there will be no shortage of markets for B.C. lumber by the end of the decade.

Therefore, unless the market structure shifts,
dramatically increased exports of lumber to Japan, in volume terms, are unlikely. It is then very possible that B.C. will continue to supply between 2 mm$^3$ and 2.36 mm$^3$ of lumber per year to the Japanese market as the Ministry of Forests suggests. (Ministry of Forests, March 1980, pp. 756) This, however, is probably the bottom end. Depending on the growth of CLS lumber exports, which is very hazardous to predict with any hope of accuracy, total B.C. lumber exports to Japan could easily reach 3 mm$^3$ to 4 mm$^3$ by the end of the decade. The important factor to remember, and which most of this study seems to support, is that there is little danger of the bottom falling out of the Japanese market, (or for that matter of it going through the roof) but that there will be a limited yet healthy demand in Japan for B.C. lumber for the decade and beyond.

4.5.6 Conclusion

This leads to an interesting situation. Between the U.S., Japan, and an expected growing market for B.C. lumber in the E.E.C., B.C. will have more than enough markets for its lumber. This may be the case by about the middle of the decade. Unfortunately the limitations of the AAC will not allow for much increase in timber harvest. The B.C. lumber industry then, in seeking to maintain its profits, will be limited in its ability to increase production volume in order to increase the total value of its export shipments. The only solution then is to seek more markets for lumber end products which inherently means more fully processed lumber, more manufactured lumber products, and overall, more value added to the lumber before it is shipped.
from B.C.'s borders.

Added to this is the original dilemma which draws the attention of B.C. lumbermen towards the Japanese market - creating an alternative market to the U.S. thus enabling greater stability in the lumber industry, and also, developing a strong Japanese market for B.C. lumber products to boost the international value of those products. It has been shown earlier in this chapter that it is very unlikely for Japan to develop into a large volume market for B.C. lumber like the United States. The B.C. lumber industry is not that interested because to do this would mean withdrawing from large American markets, which is, undoubtedly, a hazardous act. Also, as stated above, B.C. will probably not need another large volume lumber market in 5 years if other world markets for B.C. lumber grow as they should. The major problem is increasing the value of the present volume of exportable lumber. A volume which is not likely to grow that much.

This problem can be tackled in two ways. 1) We can do nothing and sit back and wait for the other world markets for volume lumber to build and eventually bid the price of lumber up. Or 2) we can develop markets in other areas, like Japan, for more valued and more processed lumber products. The first course is not only unworthy of the relatively dynamic past of the B.C. lumber industry, it is also dangerous. The markets might not develop naturally. And the industry as a whole, if it becomes lackadaisical about foreign markets, could easily lose its competitive edge. Emphasis should be put, then, on the
second course of increasing the value of lumber exports to Japan to accomplish the greater income and market stability that the lumber industry seeks.

It seems clear that efforts have been, and are being made to increase the value of existing shipments by encouraging more processed wood exports (custom cuts, CLS) and less baby or heavy squares. (Table 23) The question yet remains, however, as to how more value can be obtained for B.C. lumber exports and specifically, B.C. lumber exports to Japan. The succeeding chapters will deal with the obstacles to be overcome and the possible means of approach to achieving this optimal value for the lumber B.C. exports to Japan.
CHAPTER 5

BARRIERS TO TRADE IMPROVEMENT

There is little denying that Canada faces many problems and obstacles in dealing effectively in the Japanese market. Some of these problems are common to all Canadian businessmen who have dealings with Japan. The lumber industry itself has other more specific difficulties. Finally, Canadians who wish to export manufactured goods must overcome different obstacles. In order to evaluate Canada's/B.C.'s future position in marketing more processed lumber and finished lumber products in Japan it is necessary to examine each of these areas separately.

5.1.0 General Problems In Marketing Effectively In Japan

It is important perhaps to begin an examination of marketing practice in Japan by pointing out the differences in economic perspective between the two countries. This has been described very well by Keith Hay the economic advisor to the Canada-Japan Trade Council:

"While Japan figures very importantly as second buyer and second supplier for us, I think we should recognize that on the Japan side Canada is the number 5 supplier to Japan. We are not number 2, we are number 5. Now, of course, in the four nations ahead of us there are countries that are principally selling oil. But bear in mind also that for Japan, Canada is only the 16th largest purchaser of Japanese products. So it is a somewhat asymmetric situation. Japan is very important to us, Canada is obviously important to Japan. In my view
however, since 1960 we should have been aware that, while Japan is becoming progressively more important to us, I do not think that the same thing can be said about Canada's importance to Japan. Japan has looked for more markets and found them. Japan has looked for more suppliers and found them. So that, in a sense, we have become relatively less important to Japan and they have become more important to us... (and) in the future, this is likely to be accentuated if anything."(Keith Hay et al., Nov. 22, 1979, pp. 23)

The thrust of Hay's statement here is that Canada is not in a position to throw her weight around in the Japanese market. It is often thought that because Canada is a supplier of primary materials that their markets need us more than we need them. This argument is not valid for many Canadian resources. This is not to say that Japan should be treated with kid gloves. Over the years continuing criticisms have been made of Japan's failure to purchase Canadian manufactured goods, recently repeated by Minister of Industry Herb Grey, and these are valid and warranted. Only 2% to 3% of Canadian exports to Japan are fully manufactured goods, virtually the opposite of the situation regarding Japanese exports to Canada. However, to escalate these criticisms into policy action creates risks of a reaction that might hurt us more than them.

The blame for the sad performance of Canadian manufactured goods in Japan, however, may be laid at the doorsteps of both countries. Japan's ascendancy as a Canadian trading partner has not proceeded hand in hand with Canadian awareness and familiarity with the Japanese market, economy and culture. A good example of this is our continued reliance on trade missions led by high profile politicians in an attempt to
bring attention to Canadian desires to increase exports to Japan. These have achieved little success and will continue to achieve little success. Japanese businessmen do not make quick decisions and will seldom allow themselves to be pressured into doing so. They prefer long standing business relationships where trust and confidence are gradually built up. This requires time. Trade missions simply do not allow such time. Creating a strong business tie with a Japanese firm also requires a certain awareness of Japanese business etiquette. There is, for example, no denying the importance of a few drinks at a local bar to help seal a business deal - though it is difficult to have anyone admit it. Obviously, the ability to speak Japanese in this type of situation is a distinct advantage. It is an ability possessed by remarkably few Canadian businessmen involved with Japan.

Increasing the level of Canadian exports around the whole of the Pacific Rim also faces serious geographical barriers. Canada has been terribly slow to promote the better placement of industry to take advantage of the growing economic opportunities around the Pacific. Part of the reason for this is no doubt due to the proximity and dominance of the U.S. market. The major U.S. market concentrations extend from New York City through to Chicago, and Canadian industrial development has centred around Ontario and Quebec to take better advantage of these markets. However, the extent of the industrial concentration in that area of the country has now frozen us into those markets and prevented Canadian exports from expanding rapidly overseas. Thus the dominance of the American
market is due partly to the isolation of the Canadian industrial heartland from the coastal sealanes and markets abroad. It would appear to be time to start investigating means of creating a greater industrial/manufacturing capacity on the west coast if we are ever to expand exports to the growing markets not only in Japan but around the entire Pacific Rim.

One of the bases for Japanese success in exporting manufactured goods to Canada can be found in the area of international business expertise. Resident Japanese businessmen in Canada easily outnumber their Canadian confreres in Japan by a wide margin. While exact numbers for Canada are not available it is likely similar to the U.S. situation where in 1977 the U.S. had 162 trading offices in Japan with 1,901 employees, while Japan had 764 offices in the United States employing no less than 20,884. (Subcommittee on Trade of The Committee On Ways And Means, January 1979, pp.42) Yoshi Tsurumi has defined market information as one of the four vital factors in generating international trade. (Yoshi Tsurumi, 1977, pp.7) Certainly on this point the Japanese have earned their superiority in penetrating international markets.

Any discussion of trade relationships with Japan cannot ignore the question of tariff and non-tariff barriers to entry in the Japanese market. There is a common perception among foreign businessmen that these barriers are endless. In many cases this view is a carry over from a period not long ago when exporting to Japan was far more difficult than now. Thanks to the GATT negotiations many barriers have been relaxed or
removed. Thus some of the lack of initiative by foreign businessmen to increase markets in Japan is often the result of simple misunderstandings of the trade situation. Other problems are solvable through simple negotiations. Still others, of course, involve an enormous amount of work. The means of remedying this was suggested in the Task Force Report on U.S.-Japan Trade:

"What is needed is a format for Japanese and Americans to work together in a non-confrontational atmosphere to identify perceived trade barriers, define the facts in each case, and see what mutual steps can be taken to remove the trade irritant." (U.S. Subcommittee on Trade Of The Committee on Ways And Means, 1979, pp.19)

The same can be said for Canada-Japan trade.

The Japanese trading companies can also be as much of a hindrance as an aid to entering the Japanese market. Simply put, they wish to monopolize all trade with the Japanese market. The sogo shosha do not look kindly on any trade, especially involving past clients, being done outside their control. While specific examples of retaliation by a trading company for such misbehavior was not stated specifically during the interviews undertaken for this study, it was often implied. Certainly it is not difficult to imagine what a company with the financial resources of a Mitsui or Mitsubishi is capable of doing. The threat in itself is sufficient.

The sogo shosha also strive to monopolize business contacts and knowledge of the complex Japanese distribution and financing system. Neither this nor the market protectionism of the sogo shosha is "necessarily" bad. However, there are
definite instances not only of price gouging by the sogo shosha (U.S. Subcommittee On Trade Of The Committee On Ways And Means, 1979, pp.77), but also where the company was not doing an adequate job. (Mitsuaki Shimaguchi and Larry Rosenberg, 1979, pp.39) In such cases it would definitely be worthwhile to be able to operate outside of the control of the sogo shosha.

In varying degrees the B.C. lumber industry encounters all of the above problems. There are, however, others which relate specifically to the lumber industry.

5.2.0 The Problems Of Marketing B.C. Lumber In Japan

By and large the B.C. lumber industry has been more successful perhaps than many other sectors of Canadian industry, perhaps "any" other sector of Canadian industry in resolving at least some of the problems given above as they relate to exporting lumber. In large part this is due to the establishment of solid trade relations with the prominent sogo shosha in conjunction with other trading organs- MacMillan Jardine, Seasia - which allow for more maneuverability within the confines of the Japanese marketing system. There is also, of course, the Council of Forest Industries which is funded by both industry and government, and which promotes market development in Japan and elsewhere for most B.C. forest products.

Nevertheless the major problem the B.C. lumber industry has to deal with in Japan is its limited ability to influence or control any sector of the Japanese lumber market.
This is odd considering that the province is the largest lumber exporter to Japan and the largest lumber exporter in the world. On the other hand, however, B.C. is truly a minor actor in terms of Japan's total sawlog and lumber supply picture. Also with Japan's wood imports handled by the large trading companies there is little way for the B.C. industry to pressure or influence particular buyers since it has little direct access and is far from being in a position of being the dominant source of supply. The great size of the trading companies' lumber and sawlog dealings allows them to easily play off the B.C. lumber industry against that from the U.S. and elsewhere. In this way Japan maintains its ability to manipulate the sources of supply in order to obtain lower prices and less outside interference. It would therefore appear to be in the best interests of those countries which supply Japan, like Canada, to establish alternative marketing agents in order to circumvent the machinations of the large Japanese trading companies.

The extensions of this major failure to influence the Japanese market manifest themselves in a number of small problems which hurt the B.C. lumber industry's overall performance in Japan. The most important of these is the 10% tariff on SPF lumber, which will be reduced to 6% in 1984 for wood in the rough. This is an odd situation for which there is no imminent resolution. For example, in the introduction of CLS the Japanese have been concerned about adequate supply. (N.R. Dusting, "Briefing Paper Re-Premier Bennett Visit To Japan", Sept. 1979, pp. 2) The tariff is designed to protect the 3,000 Japanese mills which cut similar wood. It has been
pointed out through the course of past negotiations that SPF cut to CLS would not compete with the squares these mills produce. Nevertheless, it is the perception of the sawmills that it would. "And it is the perception that is the politically important consideration." (M. Sasges, The Vancouver Sun, June 2, 1980, pp. B7)

The other factor involved here is that the sawmills which feel themselves vulnerable to SPF imports provide employment for a traditionally outcast segment of the Japanese population. (Robert Forster, 1978, pp. 97) As such, the tariff is a politically potent issue in Japan. Further negotiations on the elimination of the tariff therefore, will have to concentrate on the exclusive nature of SPF imports in CLS form so as to diminish as much as possible the political backlash. Even now, many of these small Japanese mills suffer from low levels of efficiency and high operating costs, and have been going out of business even with the tariff. This trend is likely to continue. As a result the removal of the tariff for any SPF lumber would probably be blamed for the continuation of this trend whether it was actually responsible or not.

Mention has already been made of the difficulties involved in gaining a wider acceptance of the platform frame house and CLS lumber. Problems exist not only with consumer acceptance, but also with the insufficient number of builders and tradesmen who are familiar with the platform frame system. Also important is the ability to ensure adequate distribution of CLS lumber to retailers. This, however, would involve mastering
the complexities of the Japanese distribution system. Few inroads have been made by any foreign company into this area of the Japanese market. Needless to say, if B.C. lumber was a vital concern to the Japanese we would not be faced with any of these problems.
5.3.0 Problems Involving The Export Of Manufactured Goods To Japan

The export of more fully manufactured goods, especially of lumber, provides advantages to Canada in a number of areas. To begin with exporting manufactured goods creates more employment in Canada. The increased value added inherent in manufactured products as opposed to the raw materials boosts the dollar value of exports and likewise strengthens the domestic economy. Also as suggested by Griffin (as quoted earlier page 12, 13) the export of manufactured goods enables greater control within a foreign market since the demand for manufactured goods is more elastic for price decreases and less elastic for price increases. As a result, the volume of exports of manufactured goods will grow more than comparable units of raw materials when the price is lowered, and will shrink less when the price is raised.

Lastly, and particularly in the case of manufactured goods made from lumber (knock-down kitchens, prefabricated houses, millwork etc) the supply of the raw materials necessary to build the goods is abundant in Canada, but increasingly tight internationally. To explain more fully the importance of this factor it is necessary to discuss theories of international trade, and particularly the Product Life Cycle (PLC) model.

The PLC model has generally survived empirical testing (Hircki Tsurumi, Journal of Econometrics, Spring 1977) and is useful for analysing trade patterns. Yoshi Tsurumi defines it according to four basic premises:
1) information in regard to products, production processes and markets is not possessed equally by prospective manufacturers at home or abroad and also is often restricted from flowing easily across international boundaries;

2) not only the attained level of technological capability of the manufacturing industries, but also the direction and speed of change in technological competence, vary both in time and degree from one nation to another;

3) product characteristics in a given market change over a period of time as the product goes through a life cycle consisting of introduction, growth, maturation, and decline; and

4) such competitive forces as monopoly of export products, both imagined and real product differentiation, and static and dynamic scales of economy of production and marketing activities determine the patterns of trade of manufactured goods. (Yoshi Tsurumi, 1977, pp.8)

In addition, throughout the life cycle of a given new product the world trade market goes through the phases of monopolistic suppliers market (few innovators), to oligopolistic competition (more imitators), and finally competition among many producers (many more imitators). (Yoshi Tsurumi, 1977, pp.9) Consequently, for a particular country to remain on top in the export of a particular manufactured good it must continually be 1) attaining the latest information in regard to products, production processes and markets, both at home and abroad, 2) improving its technological capabilities to produce new and better products faster, and 3) maintaining economies of scale in both the production and marketing of goods.

Canada is at a distinct disadvantage in a number of these areas when dealing in and with Japan. Our technological
capacity is not as great and our investment in research and development in order to keep up is less. The Canada Yearbook readily admits that Canada's ratio of R&D to GDP expenditure is only 30% to 50% of the ratios of other developed nations including Japan. (Canada, Statistics Canada, Canada Yearbook, 1978-1979, pp.399) Our access to market information in Japan is limited due to the small number of Canadian researchers and businessmen dealing regularly with the Japanese market. Language difficulties, cultural barriers etc. etc., also enter here. Our own small domestic market does not allow us to take much advantage of natural economies of scale in product development, production or marketing. Further to this, Canadian manufactured goods face a variety of both tariff and non-tariff barriers to entry in the Japanese market.

Among the only areas where Canada possesses an innate advantage in the production of a manufactured goods lies in our possession of the natural resources from which the products are made. Lumber, in particular, lends itself quite readily to further processing prior to export. Certainly it is more conducive to this use than than our other major exports to Japan, i.e. wheat, coal, rapeseed etc. Lumber can be fashioned without extraordinarily high capital costs into a variety of products from kitchen cabinets to furniture to factory-built housing. Some Canadian companies, like Pan-Abode Buildings have quickly achieved annual sales of over $2 million exporting factory-built houses to Japan. (David Thompson, Pan-Abode Buildings, Personal Interview, September 1980) As such prefabricated houses have rapidly become one of Canada's largest
manufactured exports to Japan.

The question is, how possible is it to rely on existing marketing mechanisms to help increase trade in these types of products. All of the problems outlined above stand in the way of the expansion of trade in manufactured lumber products. Furthermore, much of our trade with Japan is initiated or governed by the sogo shosha, which, though they attempt to refute it, are undeniably oriented towards importing raw materials and exporting manufactured goods. The trading companies try to rationalize this imbalance in their trade structure in various ways. For example, they point to their large trading volumes and small profit margins and state that they would lose money if they dealt in the smaller volumes of most manufactured products. Most manufactured goods are considered too difficult to handle and distribute in the Japanese market. One trading company representative simply said that manufactured goods are a "pain in the neck." (I have refrained from using a more graphic English equivalent)

Behind this line of reasoning lies the self-proclaimed image of the soga shosha as both importers and exporters who attempt to be as competent and unbiased in both areas as possible. This does, however, contradict a position that has been admitted to this author on a number of occasions by friends/employees of sogo shosha which is that implicitly upper management in the sogo shosha favor raw-material-imports and fully-manufactured-good-exports.

It would appear then that the expansion of
manufactured exports to Japan requires increased government and industry support to overcome the significant barriers presented there. Unfortunately the performance of Canadian manufactured exports abroad is inhibited by the limited amount of government funding and other support available for the initiation of new export markets or for the expansion of old ones. In proportional terms Canada falls far short of other western nations in the proffering of such support. According to the U.S. Import-Export Bank no less than 42% of Japanese exports in 1977 benefited from government credits or guarantees. (Quoted in Keith Hay, 1979, pp.54) The comparable figure for Canada was only 6% of total exports. While the U.S. stands at only 7% of exports receiving government subsidization the U.S. Export-Import Bank is expected to increase export funding by 60% over the next few years. (Keith Hay, 1979, pp.53) While Canada's adherence to limited export subsidization may seem a laudable example to free trade economists it could also be viewed as a dangerously naive approach to the hard, and sometimes underhanded dealings of international trade. It could be suggested that if no moves to counter the shrinking markets for Canadian manufactured goods are made soon we could lose any comparative advantage we still maintain in our domestically manufactured products. As Keith Hay has stated, "Canada still lags the field (in government subsidization of exports) and this is an important factor in the continuing uphill struggle of Canadian manufacturers to sell overseas, particularly in Japan." (Keith Hay, 1979, pp.53)
export products? And how does this effect the lumber trade? The avenues for possible rectification of the many and varied obstacles raised above to market development in Japan and the ramifications for the lumber trade are discussed in the next chapter.
CHAPTER 6

IMPROVING MANUFACTURED LUMBER EXPORTS TO JAPAN

To restate some of the many conclusions arrived at thus far in this study it has been determined that first, the future of the B.C. lumber industry is bright insofar as possessing sufficient markets for its lumber is concerned. Secondly, it therefore appears to be time to investigate means of increasing the value added of existing lumber shipments and, more specifically, increasing the export of more manufactured or finished lumber products, i.e. prefabricated housing, kitchen cabinets, etc. Thirdly, Japan will remain a good market for B.C. lumber, but the expansion of manufactured lumber exports to Japan faces many obstacles. And fourthly, the expansion of finished lumber exports to Japan may be one of the most viable means of achieving an increase in the proportion of manufactured goods exported to that country.

The questions to be investigated here then are: 1) what needs to be done, 2) what is being done, and 3) what can be done to effectively increase the export of manufactured lumber products to Japan?

6.1.0 What Needs To Be Done?

In this section this author has developed from a personal perspective a picture of the favorable conditions that would facilitate the expansion of manufactured lumber exports to Japan. On the marketing side there are five basic elements:
1) there would be an established Canadian company or agency governing the trade in manufactured goods with Japan, and this firm would serve as a source of assurance that the products would not only be of the expected quality, but also that the goods would be delivered on time and in good condition,

2) this agency or firm would have the ability to locate buyers in Japan with or without the aid of the sogo shosha, negotiate the deals itself, provide credit, incentives, etc. to the Japanese to ensure the continued acceptance of the product,

3) this firm would provide to Canadian producers accurate market information including possible alterations that should be made to their products to best meet the wishes of the Japanese buyer,

4) this firm would be capable of negotiating the removal or relaxation of trade barriers or be capable of the necessary machinations to get around such barriers,

5) this firm would either be supported by the government or have access to government support which would provide the necessary incentive both to itself and, if necessary, the Canadian manufacturer to merit undertaking the recognizably substantial risk of marketing products in Japan, at least in the initial stages.

On the production side there are three further aspects:

1) the Canadian producer would have access to sufficient technology to manufacture the product competitively,

2) the Canadian producer would be manufacturing a product that is internationally known by its quality and design,

3) the Canadian manufacturer would be so located as to be able easily to transport its products to Japan, i.e. located on the west coast.

At present the only point among the above which meets the reality of the existing Canadian manufactured lumber industry is
the last point, in that most of this industry is located on or near the coast of British Columbia. At present there is no Canadian firm designed to guide or conduct the marketing of manufactured lumber products as described above. As previously stated the sogo shosha should not be relied upon to effectively market Canadian manufactured products in Japan. It is necessary to examine then, the manner in which such a firm may be developed so that both the marketing of Canadian manufactured lumber products can be assisted in Japan and the production capabilities of Canadian companies can be improved.

The first prospect to come to mind to undertake this role is the existing trading industry. Mention has already been made of the small trading firms that the larger Canadian lumber exporters have established in Japan to handle better their affairs. However, these firms shy away from manufactured goods for reasons similar to the sogo shosha, that is, manufactured goods are a problem to distribute and the volumes are far smaller than those for raw materials or lumber and likewise the profits. MacMillan Bloedel and Seaboard also include within their productive capacities little industry directed towards the manufacture of finished lumber products. Thus they have limited vested interest in expanding trade in this area. Factory-built houses and the like are manufactured by smaller independent companies such as Pan-Abode, Orchardson Forest products, Starmark Housing Corp. etc. Yet it is outside the capabilities of these smaller firms to undertake the costly placement of a permanent sales representative in Japan to gather information, conduct negotiations or promote their products until, like Pan-
Abode, substantial success makes it possible. Thus for many of the existing trading firms to become involved in this area they will either have to be subsidized or coerced into promoting manufactured lumber exports. This is perhaps especially true for companies like MacMillan Jardine or Seasia. It is worthwhile to point out that B.C.'s third largest lumber exporter - Eacom - markets Danish kitchens in Japan. But Eacom has made no effort to launch similar product lines made in Canada, no doubt a result of their Danish orientation. (Hans Blichfeld, Eacom, Personal Interview, May 1980) It would therefore appear then, that MacMillan Bloedel's or Seaboard's trading firms could also be utilized to move Canadian manufactured lumber products in Japan.

There are perhaps four policy options, outside of the improvement of existing government trade support programs, which would serve to expand the marketing of Canadian manufactured lumber products in Japan. The first of these would be the creation of a Canadian trading company, the equivalent of a sogo shosha, but a Crown Corporation. A second would entail the subsidization of firms such as Seasia or MacMillan Jardine to stimulate these firms to promote the trade of Canadian manufactured lumber products in Japan. A third may be through government regulation similar to that which boosted B.C.'s pulp producing capacity by the tying of the renewal of timber harvesting rights to the construction of a pulp mill. (B.C. Royal Commission on Forest Resources, vol.1, 1976, pp.105) In this instance the production and sale of a certain proportion of finished lumber products could also be tied to the extension of
timber rights. A fourth and more serious alternative, would be the nationalization of existing Canadian lumber industry trading firms in order to use their personnel and trading expertise to market manufactured lumber products as well as ordinary lumber in Japan.

In addition to these four options related to the marketing of lumber products there are also options related to product development and production. The first of these would involve the upgrading of the line of lumber products produced in Canada through the creation of some form of "Wood Design Institute". A second would be increased government subsidization of firms to support technological improvements in the lumber remanufacturing industry.

Before these options are discussed, however, it is wise to investigate present government and industry endeavours to support the expansion of lumber and manufactured lumber exports to Japan.

6.2.0 What Is Being Done.

Most industry and government efforts to expand and promote Canadian lumber exports to Japan are channeled through the Council of Forest Industries (COFI). COFI receives funding from member industries (most of the major forest product companies in B.C., but not the manufactured lumber products industry) and both the provincial and federal governments. It conducts market research, prepares briefs for trade missions,
and organizes and funds promotional work. The training of Japanese carpenters in platform frame construction and the presentation of model platform frame houses in many areas of Japan is one of the more recent activities of the Council of Forest Industries. The Council operates a permanent office in Tokyo and employs about 8 people there.

Companies which manufacture prefabricated housing and other finished lumber products must generally travel another route since COFI is not particularly geared to their marketing needs in Japan and overseas. (Larry Fournier, Orchardson Forest Products, Personal Interview, Sept. 1980) These types of firms like all Canadian firms which seek to break into the Japanese market, are able to make use of Canadian embassy trade attaches, and the various research and information services provided mainly by the Ministry of Industry, Trade and Commerce. The Provincial and Federal Governments offer a good range of programs designed to assist manufacturers of exportable products. While it is beyond the capabilities of this study to examine in detail the effectiveness and the efficiency of these programs, it is perhaps important to give some idea of the types of support available.

It appears that the three most important programs are the Program for Export Market Development (PEMD), the Promotional Projects Program (PPP), and the Enterprise Development Program (EDP). EDP is slightly different in that it supports all Canadian manufacturers and not just those producing exportable goods.
PEMD is designed to "develop and increase the export of Canadian goods and services by sharing with the business community the financial risks of entering new markets." (Canada, Ministry of industry, Trade and commerce, Program for Export Market Development, 1979, pp.4) Essentially the program pays one-half of the pre-contractual personnel and transportation costs of Canadian companies trying to enter foreign markets. PEMD will also 1) pay one-half the cost of bringing foreign buyers to Canada, 2) support participation in international trade fairs, and 3) support the organization of Canadian consortiums to engage in complex "turnkey" projects. If any business results from the support offered by PEMD the Canadian company(ies) is expected to pay back the costs incurred at the rate of 1% of the sales value of the particular deal.

PPP offers support for Canadian companies to participate in trade fairs, and trade missions. It also assists in the bringing of foreign business and government representatives to Canada to examine products and industrial capability. Such support is also duplicated in programs offered by the B.C. Ministry of Economic Development.

The objectives of the EDP is to "help the growth of the manufacturing and processing sectors of the Canadian economy by providing assistance to small and medium size firms to make them more viable and internationally competitive. (Canada, Ministry Of Industry, Trade And Commerce, Enterprise Development Program, 1977) Through the EDP there are grants available for product development, product design, and product improvement.
Loan insurance is also available for firms unable to obtain financing at reasonable terms. Similar support is also available to B.C. firms through the Technical Assistance Program of the Ministry of Economic Development. In addition to this apparently substantial amount of support there are a number of other government departments and agencies offering assistance for international trade. (B.C., Ministry of Economic Development, Directory of Assistance Programs for B.C. Business)

Yet there also appear to be serious failings in these programs. David Thompson of Pan-Abode Buildings stated the government has provided almost no support for their expansion of factory built housing exports to Japan. (David Thompson, Personal Interview, Sept. 1980) All of the government programs, in fact, were written off by Thompson as being more trouble than they are worth.

This, it is hoped, is something of an extreme position, but the failure of these programs to result in the expansion of manufactured exports is certainly supported by the dismal performance of Canadian exports of manufactured products to Japan in recent years. There are still many serious deficiencies in the manner in which trade with Japan is supported by the government. It is now necessary to turn to an assessment of the previously suggested policies for improvement of the trade situation.
6.3.0 What Can Be Done

Within the realm of possibilities for the establishment of Canada's position as an exporter of manufactured lumber products to the Japanese there are two basic areas for policy action. The first involves the development of exportable products here at home. The second concerns the marketing of these products outside of our borders.

6.3.1 Product Development

If time and money are going to be spent to aid the marketing of Canadian manufactures it would first seem necessary to ensure that there are products worth selling. As stated earlier Canada ranks poorly in comparison with other developed countries in its support of research and development. The manufactured lumber industry would appear to be a prime target for the rectification of this situation. To begin with it has been shown that the international lumber supply situation is tight. The manufactured lumber industry in Canada, however, has access to a good supply of raw materials and therefore considerable comparative advantage. Thus any markets that are developed will likely be held onto for a long time since the international competition will be naturally limited by the internationally limited sources of supply. In the light of the Product Life Cycle model this means that funds applied to technological development in the manufactured lumber industry will result in products with a very long life cycle, and an equally long term return on investment.
Secondly, since the wood in B.C. is of high quality the products produced from it should be readily recognizable as being of high quality. This will further reduce the competitiveness of other nations' industry in this area. Thirdly the manufactured lumber industry, as exemplified by such companies as Pan-Abode Buildings, Atco, Gregory Industries Ltd., and Orchardson Forest Products, is successful and reasonably competitive internationally. In other words, it is not a sickly industry, but a healthy one, and growing. Lastly, much of the manufactured wood products industry is located near the B.C. coastline and thus has good access to the major sea lanes.

Given this, one of the best avenues for channelling funds into the creation of better wood products would be through the development of some kind of research establishment for creative wood products design, i.e. a "Wood Design Institute". Such an institute could help develop wood products around which the industry could create an international reputation. Comparison could be made here with the success stories of Danish furniture, English china, Japanese cameras etc. There is no denying that worldwide, and particularly in Japan, products with valued reputations, be these products made of wood, metal or textiles, command very high economic returns. The creation of lines of quality wood products that are identifiably Canadian could enable a similar situation here.

Of course the manufactured lumber industry could also benefit from more direct research and development assistance. For the reasons stated above the lumber manufacturing industry
should possess greater eligibility for incentives to support R&D. Particular emphasis should be placed on improving the level of technological sophistication of the industry and increasing its production capacity. This should serve to preserve international competitiveness and maintain the quality of the manufactured products.

6.3.2 Marketing

The future of government, or combined government and industry support of the marketing of manufactured export products may follow either of two courses. The first is the present course whereby embassy staff or trade missions generally provide initial contacts, while programs like PEMD provide funding to reduce transportation and communication costs during the pre-contractual period of trade relations. These programs may be increased in number, or preferably improved in effectiveness, in an effort to spur export growth. But even if these programs are further upgraded they may still fall short of creating the best situation for the marketing of products in Japan. The existing arrangement fails by a wide margin in actively promoting the products of Canadian companies to specific Japanese businessmen. Nor is this the job of the embassy staff or the existing programs. As pointed out by John Lang of the Ministry of Industry Trade and Commerce, the task of selling the product is still wholly the responsibility of the Canadian businessman. (John Lang, Personal Interview, Sept. 1980)

Unfortunately, Canadian businessmen have never been
renowned for their aggressive marketing stance. One can imagine that their performance in Japan would be further damaged by the language barrier, differing business customs, to say nothing of culture shock and jet lag. Would it not be far simpler and more effective to have a more or less permanent representative of a specific industrial sector actively selling the products of that sector in the Japanese market. One can even imagine the expertise that is gained in the marketing of one line of products being moved to other lines to slowly expand the marketing presence in Japan of a wide range of Canadian manufactured goods. In essence the format and structures that would result in a trading agency or firm and which were outlined earlier in this chapter make a great deal of sense.

Thus the second course of action to step up Canadian penetration of the Japanese market with manufactured goods is to develop a trading arm, outside of the embassy staff, which can take a more involved and active role in the marketing of Canadian products in Japan. Neither of these two courses precludes the other, but there is little denying the latter represents a significant altering of the existing means of developing markets in Japan. There are, however, two major problems with this more novel form of policy direction. One is locating the necessary expertise, of which at least some should be Canadian, to deal effectively in the Japanese market. The second is deciding which Canadian manufacturing sectors would benefit the most, and would benefit Canada the most, if they received assistance in penetrating the Japanese market.
To the first of these problems the easiest solution would be to somehow utilize the manpower of the existing Canadian trading firms operating in Japan. As already suggested existing trading firms can be coerced (that is nationalized) or subsidized into building more markets for manufactured goods. The slow development of a competent staff through the creation of a Crown Trading Corporation is also possible, but will probably mean greater operating losses in the short run while the people learn the ropes.

In attempting to decide which manufacturing sectors' products should be pushed in Japan many of the arguments lodged above favoring increased support to the manufactured lumber industry for product development also support the same industry as a worthy recipient of marketing assistance for its products in Japan. Other circumstances also appear to justify increasing marketing support for this industrial sector. First, perhaps the best and largest trading staffs dealing with Canadian products in Japan are those of MacMillan Jardine and Seasia. As such these people would be already familiar with the problems of the lumber trade, and thus many of the problems of the manufactured lumber trade as well. Secondly, with the growing tightness in the lumber supply situation in Japan, and in view of the recently often stated desire of the Japanese to expand imports of processed materials, the time would appear to be ripe to apply pressure in this area. Especially important here would be pressure to reduce tariff and non-tariff barriers to the manufactured lumber industry's products.
How, then, if manufactured lumber products are worthy of greater marketing assistance, should this assistance be provided. It is now necessary to speak of the four policy options raised earlier (page 115).

6.3.3 The Formation Of A Canadian Trading Corporation

The creation of a Crown Corporation to handle Canadian trade abroad is not a pipe dream. At present, Ed Lumley, Minister of Industry, is preparing a report on the potential of such a venture. (Kurt Copeland, Personal Interview, Ministry of Industry Trade and Commerce, Ottawa June 1980) Furthermore as stated by Patricia Anderson in the Financial Post:

"Lumley's determined there will be a national trading corporation - and it will take aim at the $17 billion deficit in manufactured trade and help small- and medium-size industries find foreign markets." (The Financial Post, July 5, 1980, pp. 7)

Of course, developing a corporation of this kind is no small task. Besides problems of staffing, locating, and learning the business there is also hostility in the business community from those who: 1) hate the thought of "more government intervention," 2) fear competition from a fat government opponent, and 3) do not know what a trading company is. (Patricia Anderson, July 5, 1980, pp. 7) Further to this, international trade is something of a complicated business and it is probably correct that a Crown Corporation would have difficulty maneuvering successfully in this world. Lastly, most successful sogo shosha rely for their profits on their large volume products. Canadian manufactures are definitely not such an
entity. Thus a company formed expressly to export small volume manufactured goods would likely operate at a substantial loss.

On the positive side a trading company operated by the Canadian Government may accomplish most of the functions necessary to improve the marketing of Canadian manufactured lumber products in Japan. It could be a distinctly Canadian presence, representing and promoting Canadian interests, aiding Canadian exporters, and serving as a liaison for public and private sectors between both countries. Also, and as stated often in this study, it may enable the establishment of long term, trustworthy trade relationships, and serve to nurture the necessary expertise in dealing with the Japanese market and distribution system that together are vital to the expansion of manufactured exports, including those made from lumber, in Japan.

There is at least one successful example of a government-run trading company. This is the New Zealand Export-Import Corporation which was formed in 1974 for the purpose of increasing overseas markets for New Zealand agricultural and manufactured goods. While the corporation operated at a net loss for the fiscal year ending March 31 1979 of $66,592, most of this was due to the amortization of the cost of a new trade center in Australia. (Report of the New Zealand Export-Import Corporation, 1979, pp. 8) The actual operating loss was only $10,892 while fostering the export of over $10.7 million worth of goods and imports of $2.5 million worth. (Report of the New Zealand Export-Import Corporation, 1979, pp. 5, 8) In addition
the Corporation points out that:

"While our client list now numbers hundreds of companies including many of the major ones, we pride ourselves on the fact that the bulk of them are still small to medium sized enterprises whose products are often equal to or better than similar items manufactured anywhere else in the world, but who need additional access to additional export management skills and welcome the opportunity of sharing overseas market development costs with others. (New Zealand Export-Import Corporation, pamphlet, pp.3)

The New Zealand Export-Import Corporation has not made any effort, however, to break into the difficult Japanese market. Nevertheless it appears that the establishment of a Crown Trading Corporation to increase the export of domestically produced manufactured goods is feasible.

6.3.4 Subsidizing Existing Trading Firms

The easiest and probably the most successful method for aiding the marketing of manufactured goods and lumber products in Japan would be to provide economic incentives to existing trading firms to engage more in this type of trade. This is the route the Americans are likely to take with the "Export Trading Company Act" which is now in the Congressional hearings stage. As regards the manufactured lumber trade in Canada, the most obvious recipients for this type of support would be firms such as MacMillan Jardine or Seasia. The value of this form of subsidization is that it provides most of the same benefits as a Crown Corporation trading company yet leaps over the great hurdles of building a company from the ground up. Established companies like MacMillan Jardine and Seasia already
possess good reputations and business contacts to aid them in their dealings. Subsidization of existing trading companies is (perhaps next to doing nothing at all) the route favored by private industry. Public subsidies are seldom snubbed. Also small lumber remanufacturing industries as comprised in the Independent Manufacturers Association among others see no major problems in selling their products through companies like MacMillan Jardine - if the latter is "willing to do the paper work and help negotiate the deals." (Larry Fournier, General Manager, Orchardsen Forest Products Ltd. Personal Interview, Sept. 1980) The Managing Director of MacMillan Jardine, Steve Kaufman, also sees this as a worthwhile route to export expansion. (Personal Interview, August 1980) The exact form this type of subsidization would take, however, is the work of another study.

6.3.5 Government Regulation Of The Forest Industry

Regulation of this type would probably involve tying timber harvesting rights to the production or export shipment of more finished or remanufactured lumber products. Needless to say the forest industry does not favor this policy option. The forest industry is not pleased with the prospect of forced involvement in the higher risk ventures of expanding finished lumber product exports, especially in the difficult Japanese market.

The best argument in favor of government regulation of the forest industry to support the export of more fully
processed lumber products is the success in boosting pulp production which has been attained since timber rights were tied to pulp mill development in 1962. The strongest contrary argument is that more regulation in this manner may eat indelibly into the forest industry's economic viability. The adequate assessment of either of these two points requires more detailed study which is unfortunately beyond the capability of this study. It should be pointed out, however, that the forced creation of a pulping capacity has recently enabled the forest industry to reap handsome dividends due to the strong international market for pulp.

Of course, neither regulation nor subsidization policies are mutually exclusive. Indeed they could be combined in a carrot and stick manner to further spur the forest industry on towards further processing of exported lumber at minimum cost to the taxpayer. Again the possible forms this policy may take are essentially outside the range of this study, but definitely worthy of further investigation.

6.3.6 Nationalization Of Existing Trading Firms

The last and definitely most dramatic means of gaining control of the lumber trade and the trade in manufactured lumber products is to nationalize one or more trading firms and guide the trade through this instrument. At present there is no sign of this being an implementable policy option, no doubt due to the uproar that such a policy would draw from the forest and trading industries. Also with the weakness of the support in
the West of the present Federal Government it is highly unlikely that the western based forest industries would be antagonized in this manner. It would appear that nationalization is, at best, a policy of last resort.

6.4.0 Conclusion

If Canada is to improve its record for exporting manufactured products the manufactured lumber industry has been shown to be a worthwhile sector in which to concentrate marketing and production assistance from government. Support for production would largely mean increasing assistance for R&D. There are also very interesting prospects for an educational establishment geared to wood design.

It would appear that the best course of action for supporting the marketing of manufactured lumber products would be through either the subsidization of existing trading firms or regulation of the forest industry to force them to expand exports of these products if they wish to renew their timber licenses. Also a combination of the two, carrot and stick style, may be worthwhile.
CHAPTER 7

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

This study originally sited as its objective an examination of the factors governing the Japanese market for B.C. lumber in order to determine the best means for utilizing that market to overcome deficiencies in the lumber industry's, as well as Canada's trade with Japan. It was proposed that Japan could become a larger market for B.C. lumber and thereby bring greater income and stability to the lumber industry by reducing some of its dependence on the fluctuating American market.

However, expanding simply the volume of lumber shipped to Japan does not seem to be the proper objective. This is not because the Japanese market is unstable, nor that the demand for imported timber and lumber will decline. On the contrary, the Japanese market should continue to require substantial imports of wood, probably in even greater volumes than in the peak import years of the 1970's. Rather it is because B.C. is now facing limitations in its lumber supply. The present production surplus appears to be only very temporary. Increasing the volume of lumber shipped to Japan may eventually entail diverting stocks from either the U.S. or the E.E.C. Such a situation may very well create antagonism towards the B.C. lumber industry from all three market areas if levels of supply are not kept up. The best course of action then appears to be one of increasing the value, and thus the level of
processing, of the lumber shipped to Japan, and thus not over-committing the export volume.

Increasing further processed and manufactured lumber exports offers many advantages. It supports an area of Canada's trade with Japan that is in poor condition - the 2% of total exports which is comprised of manufactured goods. It will generate more employment in the forest products industry, boost overall revenues, and also allow greater Canadian control of goods within the Japanese market. This last factor is not only due to the better economic position that trade in manufactured goods (as opposed to raw materials) places the exporting nation within a given foreign market, but also, the increasing of Canada's exports of manufactured lumber products to Japan should allow for the development of the trade relationships, and more importantly, the expertise necessary to open markets in Japan for other Canadian manufactured products.

Efforts have already been made by the lumber industry to increase the level of processing of the lumber exported to Japan. The introduction of CLS lumber is a good and praiseworthy example of this. More can be done, however.

The problem is that the onus for building markets for manufactured lumber products cannot fall solely on the shoulders of the large lumber exporters if only because they produce little fully manufactured lumber products. And the companies which produce manufactured lumber products are generally too small and do not have the economic wherewithal to develop the type of trading relations that are necessary to penetrate the
Japanese market, unless, of course, they have an outstanding product. But such commodities are not easily found. Present government support for the lumber re-manufacturing industries to develop products and market them overseas still appears to be lacking sufficient punch. Probably the best source of the necessary Canadian operated expertise, though still in nascent form insofar as manufactured goods are concerned, lies with the trading ventures that have already been set up in Japan by the large lumber exporters such as MacMillan Bloedel, Seaboard, and Eacom. The question is whether it is possible to join the two i.e. the lumber trading firms of the large corporations and the relatively small manufactured lumber producers.

Certainly there are gains to be made for both the lumber and manufactured lumber producers. The latter will sell more products. The former will sell the latter more lumber. Also the former may come to profit from the marketing of the latter's products in Japan. Why, then, do not the large lumber exporters utilize their trading firms to market Canadian manufactured lumber products in Japan?

First, it must be acknowledged that the Japanese lumber market is a difficult nut to crack. Not many foreign firms have achieved success in marketing manufactured products in Japan, except for the world famous name brands. The multitude of barriers to be overcome need not be reiterated here. Suffice it to say that marketing manufactured goods in Japan is risky and difficult. Secondly, it is questionable whether the Canadian manufactured lumber product industry
possesses sufficient technological and design capabilities to manufacture goods that can be marketed competitively in Japan. Lastly, the sogo shosha which govern most of the trade between Canada and Japan are not terribly interested in manufactured products. Japanese tariff and non-tariff barriers definitely support this stance whatever may be said to the contrary.

To overcome these obstacles some assistance, some incentive, and perhaps some coercion in both Canada and Japan may need to be proffered. The only logical initiator of any of these three options is the Federal or Provincial Governments. Assistance would be in the form of increased investment in R&D in the manufactured lumber industry including the development of some kind of creative design institution that will put an indelibly Canadian stamp on the products to be marketed in Japan. Assistance could also be offered in the form of a Canadian Trading Corporation with offices in Japan, for the purposes of increasing exports of manufactured products. Incentives may entail subsidization of existing trading firms operating in Japan for the risks and losses they may take in marketing manufactured products in that country. Coercion would involve both the cajoling of the Japanese Government to reduce or remove tariff barriers, as well as possible enforcement of a timber harvesting policy tying timber rights to the increased export of manufactured lumber products by the large lumber exporters.

The manufactured lumber products industry is not unworthy of special government attention in all these areas.
There are proven successes in the industry such as Pan-Abode. As well, the development of viably marketable products made of lumber will benefit from limited international lumber supplies and the high quality of B.C. lumber and result in products with a long marketing life cycle and equally long period of return on investment. Few other sectors of the Canadian industry can boast of such favorable economic circumstances.
RECOMMENDATIONS

In the light of the foregoing analysis this study makes two basic recommendations.

1) Provincial and/or Federal Governments should enter into negotiations with the representatives from the major B.C. lumber exporters to Japan to investigate the possible avenues for increasing support for the marketing of manufactured lumber products in Japan. These negotiations should revolve around the possible costs and benefits to all parties of the policy following policy options:
   1) subsidizing the exporters to market more manufactured lumber products in Japan,
   2) tying timber harvesting rights to the further export of manufactured or more fully processed lumber products, and
   3) other possible means which would serve the same ends.

2) Provincial and/or Federal Governments should enter into negotiations with the principal representatives of the manufactured lumber products industry to determine the kinds of R&D support the latter require. One of the subjects of discussion should include the form and nature of a creative wood design institution to aid the development of products and processes that could be marketed in Japan.
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