UNIVERSITY OF EDINBURGH

"The Marketing of Roundwood and Sawn Wood (undifferentiated products) in the United Kingdom with particular reference to Scotland"

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PREFACE

The markets for timber and wood products have been described by Bentley (1979) as being 'comparatively well developed; complex; some are rather highly competitive; others are dominated by a few buyers or sellers; and all have a prominent geographic dimension'. This view about wood products markets is also shared by other authors like Worrell (1958) and Duerr (1960) to mention a few. Guided by this view, most past studies on marketing of timber and forest products in the United Kingdom have tended to limit their research more into presenting an understanding of the economics and the structure of the wood products industry. Notable publications on this line of study include those of the Forestry Commission (1977), the Economists Intelligence Unit (1970), and the Centre for Agricultural Strategy (1979). All of these publications have presented a clear picture of the economic environment within which timber and wood products firms operate; and they have been very useful in facilitating the understanding of the many economic relationships which exist in the industry.

I would think the excitement in understanding the marketing of wood products with regard to the complexity of their markets goes far beyond the realm of merely understanding the economics of the industry. There is need for example, to understand the effects of the undifferentiated nature of wood products on the marketing activities of firms operating in the market as well as understanding the buyer-seller relationships. These in my view, will present the principal sources of the excitement and challenge in the marketing of wood products as an industrial good.

This dissertation will therefore attempt to capture that excitement and to present that challenge by focussing upon the strategic and marketing problems facing the wood products markets. Guiding the development of this dissertation therefore, were several interrelated objectives, notably:

- to examine the buying and selling processes in the market place;
- to assess the role of middlemen;
- to assess the product and/or non-product attributes or qualities that aid buying and selling activities;
- to examine the effects of the undifferentiated nature of wood products on marketing activities;
- to examine the promotional and advertising activities in the market place;
- as well as presenting a clearer understanding of the structure and economics of the wood products markets.

This study was therefore conceived with an aim at critically examining the areas listed above. The thesis emphasises what is important and unique in the marketing of wood products rather than attempt a detailed description and analysis of a more fundamental nature.

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CHAPTER 1

1 DESK RESEARCH

1.1 The Basic Characteristics of the Production Process in the Timber Business

Forestry, the business of growing wood, has two main characteristics that distinctively give it a special status among all productive activities. One is the overwhelmingly long period of production - rotation ranging between 50-200 or more years. For example, conifers take between 50-80 years to mature while some hardwoods take 150-200 years. The other characteristic relates to the similarity of the product and the factor of production: the production apparatus of a forest enterprise consists of the following intrinsic parts:-

1. Forest land (site of production)
2. Growing stock
3. Transport facilities
4. Buildings
5. Tools and machinery
6. Labour (both administrative and forestry workers)
7. Cash in hand

The composition of the production apparatus is decisive for both revenues and costs. The physical qualities and quantities of output are determined largely by the natural site, forest conditions, and the silvicultural treatments to which the forest has been subjected. But the revenues are determined by a number of factors; one can differentiate between two determinants of revenue behabiour:-

1. internal, subjective factors attributable to the business proper;

2. external, objective factors attributable to market conditions.

The group of internal factors includes primarily the timber output and the distribution by different products, but this in its turn is dependent on the composition of the tree species and the value of the timber. For sales of timber the costs of transport to the market depend on accessibility. The extent of the transport facilities in general and the network of roads established in particular are factors which determine the accessibility i.e. location in respect to proximity to the market. The internal factors determining the revenues include also the ability of the management to organise sales and to adapt to market conditions.

Especially important in the group of external factors are the market conditions determined by the demand and the selling prices of wood products. Demand for felled timber - the raw material of the wood-processing industry is not a direct demand but is derived from the consumers' demand for the end products. Dean (1959) says in this connection that, 'demand being derived from consumption demand, fluctuates differently and generally more violently'. This has a direct relationship with price formation for wood as a raw material.

The production process in forestry as a whole comprises several stages, which as regards processing can be of a fairly varied character. Basically the stages and phases can be divided into the following:-

1. the primary or biological production (timber growing);
2. the secondary production (logging or harvesting operations); and
3. industrial wood processing.

In the later phase, it is possible to distinguish in turn a series of successive stages of which may be exemplified by the woodpulp industry and the paper industry.

This dissertation shall here deal mainly with the first stage and proceed slightly into the second in as much as it involves processing of wood into sawn wood. The basic end products to be studied, therefore, are felled timber (roundwood) and sawn wood (lumber).

It is characteristic of timber growing, contrary to the case in other branches of production, such as agriculture and industry, that production can continue even without the active participation of man. In more intensive forestry, however, the production apparatus does not comprise only the 'biological' factors of production - forest land and growing stock. It also involves 'produced' means of production or productive agencies, the building up or liquidation of which takes time.

1.2 The Demand for Wood as a Producer Good

Wood is almost entirely a producers good and, as already pointed out above, the demand for it is derived from the demand for the products made by these producers. Production, from the point of view of wood utilisation can be divided into primary production and secondary production. Most primary production of wood products consist of converting logs into a more useful form, which can then be consumed directly or used in further production. The product is still wood, although it has been improved by applying certain processes to it or by combining certain other materials with it. For these primary producers, there is no question of using some other raw materials in place of wood. The cost of wood is, therefore, a major part of their production costs. Notable in this group of primary producers are firms whose activities include sawmilling, woodpulping, veneer production, poles, posts and fencing production, and also producers of wood chemicals, mince timbers, charcoal, shingles and pilings. The demand for wood by these firms should not however be construed as being inelastic. The demand for their product may be elastic and as such if an increase in the cost of wood forces them to raise their selling price, their sales will then decrease and they will cut back on their rate of production and therefore, the amount of wood bought will be reduced. Since wood is a large item in the production costs of these producers, a change in the price they have to pay for wood will affect the amount they sell unless they can absorb the change.

In the secondary processing stage, wood products are used either as a raw material in making some new product or as a tool in the production of some other good or service. For example, woodpulp is used as a raw material in making paper; sawn wood in making furniture; veneer in making plywood, fence posts are used as a tool in animal farming and crossties in producing railroad transportation. Regardless of which way these wood products are used, they represent a cost of production to the firm using them. And therefore, it demands that a careful 'rational' judgement be used in the purchase of wood, as a producer item. It should however be stated here, that there are differences between the demand for a wood product as a raw material and that for a wood product as a tool.

The demand for a wood product as a raw material has much the same characteristics as the demand for wood as a raw material in primary processing. It depends mainly on the price of the wood product and the substitutes which might be used in place of it. As in primary processing, a secondary processing firm will adjust its rate of output in response to changes in the price of their raw material and will try to adjust the use of other factors to keep total cost to a minimum. The main difference is that in secondary processing, there is a greater opportunity to use substitute materials. The secondary processors are not specifically wood using firms. Examples of such processors can be found in furniture making, shipping containers, making paper etc. etc. These firms use sawn wood or wood pulp, or veneer and shingles because they are technologically and economically satisfactory for making their products. A great many other materials are also technoligically satisfactory. For example, furniture can be made of aluminium and plastic; paper of rags; shipping containers of steel and houses of concrete and glass - and indeed these products are in a strong competition with wood to satisfy these production processes. Definitely, the final choice of material to use in the production process will be based entirely on cost within the limits of the specifications of the final product. The connotation is that, the marketing of wood as a producer material bears severe constraints from competition from these products and other market forces - a combination of which tends to limit the scope for flexibility, particularly in relation to the pricing of wood products.

1.3 Characteristics of Wood Using Firms and Their Markets

In the United Kingdom commercial homegrown roundwood comes mainly from private and national forests (national forests established by the Forestry Commission amount to about 862,000 hectares while private forests account for about 626,000 hectares productive forest (Source: 'Centre for Agricultural Strategy' 1979). Various branches of the forest industries are the principal purchasers of industrial roundwood.

The number of enterprises buying roundwood is not only reduced by a fusion of separate firms but also by horizontal integration i.e. most big enterprises combine several branches of the forest industries and thus buy various assortments of roundwood, such as saw logs, pulpwood, and veneer logs.

The U.K. roundwood market and most especially that of Scotland, is subject to rather violent fluctuations. Seasonal variations, characterised by a concentration of sales in the period April-November are especially pronounced. This rhythm of sales is influenced by a number of factors. Basically, climatic factors result in a seasonal rhythm in the supply of labour for logging. Furthermore, cyclical variations are traditionally marked in roundwood sales within the U.K.

The marketing of timber and wood products in the U.K. tends to be highly structured and complex. Timber selling activities include sale preparation, setting price or upsetting price, advertising, seeking bids, closing sales, and supervising the harvest. Timber buyers may spend much time searching for tracts of acceptable quality, collecting and analysing price quotations, and check-cruising, scaling, or grading. Wood-product marketing activities vary substantially among firms, but generally involve pricing, inventory analysis, advertising or disseminating price information, measuring, and grading.

The sales area (marketing territory for a seller or cluster of sellers) for a wood product such as lumber or paper is generally much larger than a timbershed, encompassing a multistate region or even the entire nation or an international region (Bentley et al 1979). For lumber and plywood, the number of sellers participating in regional markets is large, and the market power of even the largest firms is limited. Usually the smaller sawmills for example distribute output over a limited area; they depend heavily on commodity-handling intermediaries for access to broader markets. Larger lumber firms and plywood firms may also depend on intermediaries. But many of these firms are integrated with wholesaling, and some even with retailing; thus they bypass all but the highest market levels. The markets for timber and wood products have been described by various authors notably, Worrell (1959), Duerr (1960), Mead (1966) and Bentley et al (1979). The authors consider the markets for lumber and plywood to be competitive with prices at times fluctuating widely. As a consequence, lumber and plywood firms must give continuing attention to their pricing, inventory and sales policies (Bentley et al 1979). But Worrell (1959) pointed out that an 'oligopoly situation (few sellers) is tending to replace competition in the wood processing industry and most especially in the woodpulp and paper industry'. Regarded from the other side, this means that the sellers of raw materials to the woodpulp and paper industry are confronted with oligopsony (Mead 1966). 'By oligopsony is meant a market in which there are only a few buyers and where these buyers are in a position, more or less to determine prices or to 'administer' prices', as it is put by Duerr (1960). And Mead is however quick at adding that oligopsony is less noticeable in the sawmilling sector.

1.4 Operation of Sawmilling Firms

The 'Economist Intelligence Unit Limited' (E.I.U.) has carried out a detailed research on wood supply and demand in Great Britain. In a report titled 'A Marketing Study of British Wood Supply' (E.I.U. 1970), one of the salient findings of the study was that sawmillers' activities were often characterised by the size of the mills. Thus six sawmill categories were identified on the basis of number of employees in a firm (see table 1.1). According to the E.I.U. report, small sawmill operators (- that is those in categories 1 and 2) have high ratios of direct labour to total staff. This the report claims is attributable to five factors in particular namely:-

i) The proprietor(s) work in the mill and often have direct involvement in production.

ii) Administrative work, including invoicing and accounting, is at a minimum.

iii) Full-time harvesting staff are rarely employed.

iv) Haulage is usually subcontracted.

v) A substantial proportion of marketing and related administration is undertaken by agents.

Table 1.1

Range of Number of Suppliers for Sawmillers in the U.K.

	Sawmiller Category	Number of Suppliers Range
1	Up to 5 employees	1- 20
2	5-10 "	2- 66
3	11-20 "	1- 35
4	21-30 "	6- 20
5	31-50 "	10-100
6	Over 50 "	6-108

Source: E.I.U. Report: 'A Marketing Study of British Wood Supply' 1970.

In medium and large-sized enterprises (i.e. those employing 11 or more staff), the ratio of direct labour to total staff falls to some three in five and the following features characterise such enterprises:-

i) Proprietors and directors spend the majority of their time on matters of administration, buying and selling.

ii) Clerical and administrative staff are employed.

iii) Harvesting, haulage and maintenance staff are often employed.

iv) Specialist staff are employed for raw material procurement and for selling (although this is common only among the largest enterprises).

The E.I.U. went on further to hint that 81 per cent of category 1 millers, 85 per cent of those in category 2, 55 per cent of those in category 3 and 57 per cent of those in category 4 normally acquire their raw materials from more than 10 suppliers; for the two categories of larger saw-millers, 45 per cent of those in category 5 have between 10 and 15 suppliers while 30 per cent of those in category 6 have between 30 and 50 suppliers (see table 1.1). The overall picture is that the upper limit of the number of suppliers tends to increase with size of sawmill.

Another feature accountable to sawmill size (by employee number categorisation) as explained by E.I.U. was that raw material input/product output increased greatly as sawmill size became bigger to the extent that the larger sawmills of categories 5 and 6 together account for two-thirds, both of the roundwood input (68 per cent) and of the sawn timber output (67 per cent) of the total sample; and that their share of the softwood output (75 per cent) was markedly greater than their share of hardwood production (57 per cent), reported E.I.U. (see table 1.2).

The E.I.U. report also claimed that generally, saw-millers were very cautious in guarding against uncertainty by ensuring that they had continuity of supply of raw materials. The seriousness of continuity of supply as a problem to millers appeared to vary with the location of area. For example, it was observed that most millers

Table 1.2

Annual Raw Material Input and Converted Output Among Sawmillers Interviewed by the E.I.U. for the Year to Mid-1969

Sawmill Category (No. of Employees)	Input	%	Converted Output - Sawn Timber: Total	%	Hardwood	%	Softwood	%
1 (up to 5)	372	(2)	281	(2)	82	(1)	199	(3)
2 (6-10)	1,033	(6)	743	(6)	492	(9)	251	(4)
3 (11-20)	2,747	(16)	1,995	(16)	975	(18)	1,020	(15)
4 (21-30)	1,480	(9)	1,049	(9)	831	(15)	218	(3)
5 (31-50)	3,902	(23)	2,957	(24)	1,826	(33)	1,131	(17)
6 (over 50)	7,699	(45)	5,179	(43)	1,311	(24)	3,868	(58)
Total	17,233	(101)	12,204	(100)	5,517	(100)	6,687	(100)

Source: E.I.U. (1970): 'A Marketing Study of British Wood Supply' Vol. 1 Stage 1.

located in Scotland claim to have no supply problem. Furthermore, it was observed that the operations with the most severe continuity of supply problem were, in most cases, hardwood mills. To ensure continuity of supply a number of measures were variously adopted by the millers and these measures were identified by E.I.U. as:-

1. forward buying;
2. medium term contracts with growers;
3. buying in excess of requirement in terms of volume and/or quality and/or species;
4. acting as a round timber merchant;
5. advertising for timber;
6. timber growing;
7. augmenting home-grown timber supplies by purchasing imported timber.

1.5 Buying Practices of Sawmillers

The most prevalent mode of procurement practised by sawmillers is the tender system, whereby bids are invited from millers by woodland owners for specified parcels or stands of timber. Other much less widespread methods of buying are negotiation of long term supply contracts with individual owners and the purchase of timber by auction. Various criticisms have however been levelled against the procurement by tender system. The E.I.U. has identified some of these criticisms as:-

i) The system contributes to uncertainty on the part of millers as to the volume and timing of round timber supplies to their mills, thus limiting their ability to plan forward.

ii. To safeguard against unsuccessful bids and to ensure a measure of continuity of supply, sawmillers feel obliged to bid for parcels of timber in excess of their true needs. This is wasteful of millers' time, and moreover, can result in unnecessarily high stocks levels.

iii. The system leads to wasted time, not only for individual sawmillers, but collectively for the industry as a whole, by virtue of the competitive bidding and overbidding it entails.

iv. From the standpoint of millers, it is argued that the bidding system inflates prices to growers, sometimes to unrealistic levels.

v. The system is open to abuse and malpractices (e.g. unfair collusion between a grower and a miller at the expense of other bidders).

1.6 Wood Production and Apparent Consumption in the U.K. - A Strategic Approach

The 'Centre for Agricultural Strategy' (C.A.S.) (1979), and Grayson (1969 and 1974) have both presented a very detailed strategic outlook for the supply and demand of roundwood and sawn wood in the U.K. According to a recent report published by C.A.S. (1979), the U.K. is a major importer of forest products in Europe, with a result that a net annual trading deficit of 37 million m^3 of roundwood raw material equivalent, representing about 35 per cent of the forest products trading deficit of the European Economic Community (E.E.C.) was incurred in the period

1974-1976. The report went on further to indicate that the demand for forest products is expected to rise with increasing Gross Domestic Product (G.D.P.) and income per head. And in another report published by the Forestry Commission (F.C. 1977) it was stressed that even if forest plantation establishment programmes are greatly increased and more timber produced at home, the demand for imported wood products is not expected to diminish. Thus, it can be rightly said that the U.K. forest products industry is heavily dependent on imported timber - over 90 per cent dependence on imports. (Table 1.3 illustrates vividly the past trends in the apparent consumption and imports of wood products for the U.K.) The implication of this is that the prices paid for forest products in the U.K. are subject to influences by world prices. The result is that the U.K. timber producer and sawn wood processor is predominantly a price taker rather than a price fixer.

1.6.1 Roundwood Use in the U.K.

Roundwood use in the U.K. is usually restricted to local markets which require relatively small lots and span the conventional division between sawlog and small wood sizes and of course, they are mainly softwood roundwood. According to the C.A.S. report, 'the transmission pole market has remained relatively steady for many years and that consumption is low, but prices are high because of strict performance requirements'. This statement is also true of mining timber consumption where growth is far less anticipated. Agricultural uses of roundwood fencing

Table 1.3

U.K. Imports, Production and Apparent Consumption of Wood and Wood Products (million m^3 wood raw material equivalent, under bark)

	Year 1950	Year 1955	Year 1960	Year 1965	Year 1970	Year 1975	Year 1976	Year 1977
Wood	11.5	17.8	18.3	18.6	15.9	10.3	13.6	13.2
Pulp	6.0	9.6	11.7	12.7	13.7	9.4	10.4	10.2
Panel	0.9	1.8	2.5	3.3	3.4	3.3	3.9	3.6
Paper	1.2	2.5	3.5	4.5	7.3	7.9	9.9	9.1
Total Imports	19.6	31.7	36.0	39.1	40.3	30.9	37.8	36.1
U.K. Production	3.1	3.1	2.7	3.0	3.2	3.2	3.4	3.7
Apparent Consumption (U.K.)	21.8	33.9	37.9	41.3	42.3	33.1	40.1	38.5
% Dependence on Imports	85.7	90.8	92.8	92.7	92.4	90.3	91.5	90.3

Sources: Centre for Agricultural Strategy, 1979; Forestry Commission 1977; and Grayson (1960 and 1974). F.A.O. (1964 and 1966).

concentrate on local markets and there is a recent trend in the increased use of preserved softwood roundwood fencing.

The C.A.S. report went on to elucidate that in 1977 about 57,000 m^3 of roundwood was used in the manufacture of wood wool for packaging and wood wool cement building product and that 50,000 m^3 of this raw material was of U.K. origin.

1.6.2 Sawn Wood Use in the U.K.

Sawn wood consumption per head is low in the U.K. - 0.180 m^3 per head and this has remained stable since 1960. This was the view of C.A.S. who went on further to forecast that the U.K. annual consumption for sawn wood would be 10.2 million m^3 by 1985 and 10.8 million m^3 in 2025. This represents a fall in consumption per head from the present level to a new 0.168 m^3 annually by 2025.

1.6.3 Consumption of Sawn Softwood

According to C.A.S.'s report, consumption of sawn softwood has risen from 5.53 million m^3 in 1949 to 7.43 million m^3 annually over the period 1973-1977. Due to the fact that technological innovation is lacking in this market sector, observers postulate a slow but steady increase in total demand into the 21st century.

Construction is the major end use and has stabilised at a high proportion of a total consumption of between 60-75 per cent since the early 1960s. Future growth is largely dependent on new construction but this has been declining for over ten years. Prefabrication techniques and industrialised building construction together with an increase in the proportion of timber-frame dwellings, is expected to stem the trend against sawn wood use, rather than increase sawn wood consumption (see Table 1.4).

Home improvements (Do-it-Yourself, repair and maintenance) is a growth sector, moving against the generally downward trend of sawn softwood consumption. Packaging, which currently accounts for about 12 per cent of sawn wood consumption has fallen in volume but is expected to stabilise at around a volume of 800,000 m^3 per year reported C.A.S. Furniture has been an area of rapid growth since late 1960s and there is potential for further growth though sawn wood is expected to lose ground except in the high price market; at present furniture accounts for 4 per cent of the sawn softwood market. The impact of technological change upon the sawn softwood market is expected to improve efficiency in use (through the revision of grading rules, glu-lam construction, finger jointing etc) which would reduce total wood use. Technical innovation (new products and new applications) may work against this. Moreover, where the natural characteristics are primary determinants for end use (e.g. ease of working, strength:weight ratio) the demand for softwood is expected to remain buoyant.

1.6.4 Consumption of Sawn Hardwood

'The U.K. sawn hardwood market is far smaller than that for softwoods and annual consumption has been falling steadily to the present level of 1.1 million m^3 - approximately half that of the 1950s' (C.A.S. 1979). In a report

Table 1.4

Sawn Softwood Consumption by the Various Market Sectors in the U.K. - 1978

Market Sector	m^3 x1000 p.a.	%
Construction:		
New house building	2400	28
Other new buildings, e.g. schools, offices	1360	16
Repairs and maintenance to buildings	1130	13
Civil Engineering	560	7
Agricultural Buildings	230	3
Sub Total	5680	67
Furniture	340	4
Fencing and Sheds	680	8
Packaging	1000	12
Do it Yourself (D.I.Y.)	260	3
Mining	200	2
Misc./Other	340	4
Grand Total	8500	100

Some historical figures are:-

Av. 1960-64	Av. 65-75	1973	1975	1982
8000	8500	9746	6435	8250

Source: Burd C.J.S. 'Adapting Softwood Sawmilling to the British Market Place - 1978'

published by the latter, it was stated that about 60-65 per cent of imports of hardwoods are of tropical origin and about 75 per cent of this is used for lumber. The main uses are in construction (joinery and flooring) and for furniture.

Hardwood timber faces severe competition from substitutes produced by advanced technology (such as photogravure printed panels) mainly because of its cost. Heavy hardwoods in load bearing applications are thought to have benefited from promotion since 1972; but for flooring, hardwood timber is losing ground to tiles and carpets. Where particular characteristics of certain hardwoods are required (e.g. acid resistance) the timber is not likely to be superseded for some time. The high cost of hardwoods relative to substitutes is the main reason for a decrease in their use in furniture production. Do-it-Yourself applications may expand consumption.

1.6.5 Consumption of Wood Based Panels

In almost all sectors of the wood based panels industry, technological innovations have been a feature of market development. New boards have been developed and the characteristics of established boards have been greatly improved. Research to reduce costs and improve performance of glues has also been of major importance: synthetic resins and natural polyphenols are being investigated. Continued innovation and development will further expand the market and the number of applications for wood based panels. The market for wood based panels is dominated by the construction and furniture industries.

1.7 Effects of the Undifferentiated Nature of Wood Products on Business Activities

One of the main characteristics that distinguishes forestry as a productive activity, identified earlier on, relates to the similarity of both the product (i.e. wood derivatives) and the factor of production. This is a feature of commodity trading as clarified by Granger (1979), and he went on to identify commodities (which basically are raw materials such as wood) as being undifferentiated products. According to Wilson and Fowler (1973), 'the approaches of marketing undifferentiated products are numerous but none can be selected or implemented unless the basic characteristics of these types of products and their markets are understood'. Any wonder then why so much attention has been devoted in this chapter at identifying these product and market characteristics as far as they relate to wood products. With regards to undifferentiated products, Wilson and Fowler identified three main features viz:-

1. users prefer and seek lower prices than improved products;
2. no significant financial or technical benefits can be obtained from the use of the product as against the use of any other of the genus;
3. there are no corporate or personal prestige factors involved in purchases.

The two authors went on further to cite an example that 'the majority of chipboard buyers would not pay one penny more for twice the quality since they use the minimum specification compatible with their needs'. Thus if a producer offered a better quality at the same price as the current product, the customer would seek a lower price on the unmodified product. If then the wood products seller is to remain in business, he has to position his undifferentiated product in a manner that he can successfully reach the several market segments he operates in. On the basis of this, the wood products seller is faced with a number of problems: How can he make his own product different (if ever he can) from all the rest? What criteria does he use to segment his markets - does he use end use criterion, or volume of purchases, or geographical location etc? And lastly, what appropriate marketing strategy does he adopt - does he, for example, use a 'total market approach' (as against market segmentation approach) whereby he identifies all the submarkets as one and the same, to which he develops and maintains the same marketing mix that he assumes satisfies **all** customer needs? These are some of the issues this thesis shall try to resolve in later chapters.

Having armed ourselves with the basic knowledge of what the wood products industry is about in relation to identifying what features characterise production, the product and the market, it is now right to devise a proper strategy that would aim at elucidating or exploring the "whys" of customer and seller behaviour. We shall therefore be interested in providing answers to:-

1. What criteria do buyers use in selecting their suppliers in the wood products business?
2. What criteria do sellers think influence the wants and buying behaviour of customers?
3. How important is the role of "intermediaries" in the wood products trade?
4. How do sellers help themselves to become better sellers (promotion)?

In order to provide relatively accurate answers to the questions raised above, it was necessary that a sort of 'Marketing Research' be conducted. The methods adopted and the procedures followed to execute the 'Marketing Research' is what makes the next chapter (Chapter 2).

CHAPTER 2

2 RESEARCH METHODOLOGY

2.1 Definition of Project

To recapitulate, the 'Marketing Research' Project was aimed at providing solutions to some problem area (or areas) of the wood products market situation in the United Kingdom with particular reference to Scotland. Only the markets for roundwood and sawn wood are being examined. The main targets of the study are:

- identifying selection and rating criteria for wood products suppliers;
- identifying what sellers think are their 'best selling tools' in the forest products markets;
- examining the relative importance of the role played by intermediaries in the buying and selling of forest products;
- examining the contribution of promotional activities in the forest products markets.

These targets shall be examined within the fact that the basic forest product is undifferentiated, which on its own is a major constraint on designing an effective marketing strategy for the overall forest products market.

2.2 Timing of Project

Table 2.1 illustrates the sequential stages followed and the timing of the 'Marketing Research' Project. It must be stated here that the project was executed within very tight timing and financial constraints. Definitely, a project that aims at providing solutions to all of the issues

Table 2.1

Sequential Stages of the Marketing Research Programme

Stage 1	Research Brief	12th May-18th June
Stage 2	Work Plan	19th June-30th June
Stage 3	Data Collection	1st July-30th Aug.
Stage 4	Data Analysis and Evaluation	1st Sept.-12th Sept.
Stage 5	Preparation and Presentation of Research Report	13th Sept.-29th Sept.

raised above demands more finance and time for a more thorough investigation. This should not however be construed as an attempt to undermine the findings of this study.

2.3 Desk Research

As a prelude to the field research planned to be conducted, it was thought fit to carry out some detailed analysis of available statistical information on the subject area. Statistical information was gathered from various published materials from reputable organisations such as the F.A.O., the Forestry Commission, Trada, the main library of the University of Edinburgh, and the departmental libraries of the Departments of Forestry and Natural Resources and Business Studies, of the University of Edinburgh. Also various weekly, monthly or quarterly reports or publications by forestry related organisations as well as commercial journals on wood products provided very valuable statistical information to this study. Most of the information gathered in desk research have been expressed and explained in Chapter 1 of this dissertation. Because the information gathered through desk research could not provide total satisfactory answers to the problems this study aims at investigating, it became apparent, after a point in the desk research phase that a qualitative and quantitative research were inevitable.

2.4 Qualitative Research

As indicated above, it was necessary to carry out a qualitative research at a point in the execution of this study, partly due, on the one hand, to the fact that the desk research conducted did not provide information to some of the salient issues this study aims at clarifying, and partly due to the fact that the qualitative research was needed in order to establish sound parameters for a quantitative research phase which was to follow.

The informational target areas which the study aims at elucidating through qualitative research were identified and these include:-

i) appraisal method for timber sale/buying;
ii) timber selling from woodland owner sale point;
iii) the bidding process in timber buying and selling;
iv) the role of middleman on timber and sawn wood trading;
v) geographical influences (if any) on the marketing of timber.

The analyses and the presentation of the information gathered through the qualitative research executed make up the main content of the next chapter (Chapter 3).

2.4.1 Interviewing Methodology

The interviewing method adopted in the qualitative research was the 'Non-Directive Interviewing' type. The decision to use the latter was made after a careful consideration of the other two methods of interviewing - i.e. the Structured Interview type and the Semi-Structured type. According to Wilson (1973) 'the structured interview is essentially a tool of consumer marketing research and is effective and cheap to use where massive interviewing is taking place, where the quality of interviewers is highly variable and always assessable, and where respondents are subject to a relatively superficial examination'. And for the semi-structured interview, Wilson has this to say, 'the semi-structured interview is not commonplace in industrial marketing research; .... although the skills needed are less than those required for non-directive interviewing, they are still of a sufficiently high order for most researchers to regard the use of interviewers capable of conducting semi-structured interviews as wasteful'. Wilson went on further to recommend that the semi-structured interview may be used where fairly heavy repetitive interviewing, usually of a low managerial or even at shop floor or clerical level, is required. And since this study does not involve 'consumers' nor does it concern low managerial and shop floor staff, as explained in Wilson's definition, the only option open was to adopt the non-directive interview. Furthermore, the non-directive method has been acclaimed to be ideal for industrial marketing research (Stacey and Wilson 1969 and Wilson 1973). Interview meetings were arranged with identified primary respondents in timber buying or selling organisations through initial telephone contacts to fix meeting dates. And thereafter, respondents were contacted on the scheduled meeting dates for the interview. The interviews in most cases were conducted in an informal atmosphere whereby I introduced the topics and allowed the respondents to comment freely on the topic. Great care was taken to validate, directly or indirectly, statements already made; probing; clarifying; developing interesting new lines of enquiry and abandoning unsuccessful ones.

Wilson's (1973) guidelines on how to 'conduct the interview' were strictly adhered to in conducting most of the interviews - and these were:-

i) Creating a friendly and informal atmosphere.

ii) Explaining the purpose of the interview.

iii) Formulating questions to produce positive answers.

iv) Ensuring that respondents understood questions put to them.

v) Observing physical activities, facial expressions, tone of voice and other indirect responses.

vi) Permitting the respondent a full reply and stopping him rambling by inserting a new question - and of course making sure at the same time that I do not stop him from talking about what he wants to talk about in as much as it falls within the objectives of the interview.

The interviews were recorded by note taking using some form of quasi-shorthand during the course of the interview. Most of the people interviewed were either Corporate Managers or Directors or their representatives. On the whole, 21 persons were interviewed and these were distributed within 13 firms - all located in Scotland.

It is gladdening to note that the respondents interviewed provided useful ideas, comments and suggestions, all of which have been carefully anlysed and presented in Chapter 3. It should however be stressed that the study could not possibly end at the interview stage (i.e. qualitative research) as there were still a lot of uncovered grounds - information to which, could best be provided for through a quantitative research.

2.5 Quantitative Research

Although the qualitative research did provide some useful information about what the business of wood selling and buying is all about, it was deficient in many respects, notably, a few respondents could be dealt with at a time; it was expensive to conduct, it was very slow; and lastly it could not be used to quantify buyer or seller attitudes, nor could it be used to quantify opinions and motivations in the overall market place of the generality of the wood products industry. These are only possible through a quantitative research (or survey).

Because of the dispersed nature of the wood products market and the fact that the product - 'wood' is undifferentiated, it was thought fit to use a Postal Questionnaire method to carry out the survey. The postal questionnaire was found to be much cheaper and quicker than most of the other alternative methods. By using the postal questionnaire it was possible to ask the same questions across the board, thereby ensuring consistency while at the same time limiting variation between different interviews. And Pearce (1966) recommends the postal questionnaire for less experienced market researchers.

The questionnaire was constructed in a manner that it could stimulate respondents; be suitable as a recording document while at the same time ensuring that it would be easy to analyse the information provided on them by respondents (see Appendix 3). In order that some form of rapport could be established with respondents, a well framed letter accompanied each copy of questionnaire sent out (see Appendix 2). It was felt that respondents should not be made to divulge their identity because past surveys conducted in the same market resulted in very low response, and one of the main reasons identified for this was the fact that respondents were asked to disclose their identity. Furthermore, it was desirable to impress on respondents that the 'interview' was free from pressure or influence from the researcher.

A total list of firms numbering 450 (i.e. the 'Universe') was compiled from telephone directories, trade journals, and customer lists of some big firms operating nationwide. Out of this list, 212 firms were selected for survey. Great care was exercised in the selection to ensure a national coverage while at the same time weighting the 'sample' to favour the bigger firms - with due regard to Pareto's Law, as recommended by Rawnsley (1978) and McTavish and Maitland (1980). Two hundred and twelve copies of the questionnaire were sent out with 'reply paid' envelopes enclosed. One hundred and eleven were returned and out of this, 104 copies were fully usable. This means that a 49 per cent response rate was achieved, which I think is high for a survey of firms such as those sampled (in that they are known for low response rates). The significance of the rate of response achieved is better appreciated when compared with some figures obtained from other similar surveys: for example Rawnsley reported having seen response rates as low as 12, 17 and 19 per cent and maintains that the results were not invalidated by this, due to the fact that sufficient control data were available from either the sampling stage or from the answers given to the questions asked in the questionnaire. The analyses and presentation of the findings from the survey conducted, make up the content of Chapter 4 and Appendix 4 and 5 of this study.

The main problems encountered in the execution of both the qualitative and quantitative research were as a result of the limitations imposed from the short time allocated to the project, which meant that there was not enough time to persuade or send a follow-up reminder letter to non-response interviewees to make them respond. There was also the problem of carrying out such a big survey within a very tight financial budget.

CHAPTER 3

3 PRESENTATION OF THE FINDINGS FROM QUALITATIVE RESEARCH

3.1 Appraisal Methods for Timber Buying or Selling

The objective of timber appraisal is to estimate its "fair market value" defined as "the price acceptable to a willing buyer and seller, both with knowledge of the relevant facts and not under pressure or compulsion to deal" as defined in the American "Forest Service Handbook". The timber alone is appraised and sold, in most cases, with land ownership being retained by the seller or land owner as the case may be. Timber appraisals are based on the proposition that the timber is worth the selling value of the products manufactured from it, minus cost of production or procurement and margin for profit and risk to the purchaser as the case may be. This approach is consistent with the derived demand status of timber as a resource. The value thus estimated is termed the "appraised price". The function of this price is to protect the seller against inadequate competition and collusion: the effective market is so 'thin' that competitive bidding under no restrictions would produce a low price - there is therefore the danger of collusion among potential buyers.

Prices differ by the size of the sale, timber species, grade, quality, accessibility, age, scaling method, tax liability and the like (see Tables 3.1 and 3.2). Appraisal begins with free-market prices (referred to in Table 3.1 as 'Estimated Selling Price'). Product yields from estimated log production must then be calculated in order to obtain an estimate of final product value. Felling costs are added to

Table 3.1

An Appraisal Method for Timber Selling - in two Product Groups (viz. Product - 01 and Product - 02)

	Product - 01 e.g. Chip		Product - 02 e.g. Millwood	
Intended Customer Number	J. Blogg		A. Jimmy	
Unit of Measure Estimated Quantity	Ton (T) 54T		Ton (T) 36T	
	£	p	£	p
Estimated Selling Price (Gross)	30	00	15	40
Felling				
+ Extraction				
+ Conversion				
+ Loading				
= Total Labour Costs	8	00	8	00
+ Other Direct Costs				
+ Haulage Costs	3	00	3	00
+ Finance Charge				
+ Profit and Overhead (at 12½%)	3	75	1	92
= Total Planned Costs	14	75	12	92
NETT PRODUCT VALUE	15	25	2	48
(Estimated Selling Less Costs)	823		89	

extraction, conversion and loading costs to arrive at a 'total labour cost'. The latter is then added on to 'other direct costs', haulage costs, finance charge (i.e. interest rates for borrowed funds), to which is added a margin for profit and overhead, which then results to what is termed 'total planned costs'. The allowance for 'profit and overhead (and risk)' is often expressed as a percentage of:-

1. capital investment in conversion facilities per unit of stumpage to be converted;

Table 3.2

Base Point Pricing of Delivered Wood Products

(TIMBER PRICES DELIVERED AT 'XYZ' PERIOD 30 SEPT. 1980-29 SEPT. 198

WOOD CATEGORY	Km. 0-40	Km. 41-80	Km. 81-120	Km. 121-160	Km. 161-200	Km. 201-240	Km. Over 24
Spruce, Pine & Fir Roundwood	£15.40	£16.20	£17.00	£17.80	£18.60	-	-
Larch Roundwood	£14.90	£15.70	£16.50	£17.30	£18.10	-	-
Hardwoods Roundwood	£14.90	£15.70	£16.50	£17.30	£18.10	-	-
Random Roundwood	£9.10	£10.00	£10.90	£11.80	£12.70	-	-
Random Peeled Hacked Chips	£7.50	£8.40	£9.30	£10.20	£11.10	£12.00	£12.90
Peeled Hacked Chips			PRICES ON APPLICATION'				
Slabwood	£6.70	£7.60	£8.50	£9.40	£10.30	£11.20	£12.10
Sawdust	£9.20	£10.00	£10.80	£11.60	£12.40	£13.20	£14.00

ALL PRICES PER GREEN TONNE

2. unit cost of conversion;

3. unit cost including stumpage value;

4. the conversion return itself, or some other basis.

In any case, the percentage tends to be derived from transactions evidence - that is, studies of what the allowances amounted to for "profit and risk" in other stumpage sales. The 'total planned costs' is subtracted from the 'nett product value' and the result is then multiplied by the 'estimated quantity' (in tonnes) to be sold, to arrive at an 'estimated selling price' (less costs) for the total quantity of timber being sold.

3.2 Timber Selling From Woodland Owner Sale Point

Marketing of timber involves a number of variables that the forest manager can manipulate to affect quantity sold and price received in both the short and long term:-These are-

1. Sale size - In timber sheds where buyers are primarily small firms, the market cannot absorb many large sales. Small sales, though inefficient, may be necessary. On the other hand, large-scale buyers are attracted to large sales.

2. Advertising and other information - The more information available in the market, the less the likelihood that one firm or the other will gain advantages in price negotiations. Advertising protects the seller of timber by stimulating competition among buyers. Price reports, such as those provided by many timber trade journals and governmen forestry agencies help all parties to know the marke

3. Sale duration - In viewing timber sources, processors consider not only price, but also security. Short term sales may provide a poor planning horizon for plant investments. If such sales discourage investment and curtail plant size to the point that processing is inefficient, then stumpage values will be reduced. Conversely, long-term sales may not reflect the full value of the stumpage in later years unless buyer and seller have agreed to special provisions for price adjustment.
4. Bidding procedure - Competitive bidding usually leads to higher prices, at least in the long term, than does negotiated sale. Sealed bidding and oral (open) bidding can lead to different results, the nature of the difference depending on market conditions (this is examined in more detail in a later section).
5. Contract specifications - Buyers' and sellers' interests can be protected or harmed by the content of contracts.
6. Sale basis - A major contractual point is what timber-property rights are sold. Two alternative forms of payment convey different rights: rights to the timber actually removed (scale basis) or rights to all timber on a specified area (lump-sum basis). The scale basis is suited to selection cuttings of marked timber. In lump-sum sales, the parties have a lot to gain from an accurate cruise of the standing timber; the seller escapes much cost of logger

supervision and log scaling; and the buyer is motivated toward close utilisation, since he pays nothing for the extra wood he removes.

To illustrate how the forest manager can shape his programme by controlling some of the foregoing marketing variables, let us consider for example a public forest in a timber shed where allowable cut greatly exceeds actual cut. The deficiency of the harvest not only affects cash flows, but also constrains thinning and other timber-stand improvements; control of insects, disease, and fire; and manipulation of timber to achieve non-timber goals. Any one of these problems may justify a major marketing effort, such as the following:-

1. Reduce upset prices. Policy officials may frown upon low upset prices, even in excess-supply areas. If sales activity is constrained by the sale-preparation budget, bid-price/appraised-price ratios may be high, but this is false evidence in favour of raising upset prices.
2. Enter into long-term sales. A firm outside a timber shed or a new firm may be encouraged to purchase substantial volumes of timber if supply security can be guaranteed for 10, 20, or more years. Arrangements will be needed for price adjustment and transfer of the buyer's long term rights.
3. Increase number of small sales. Although inefficient in the long run, small sales often are cheaper to prepare and administer per unit quantity of

timber because less detail is required in the contract. Such sales may lead to multiplication of small operators and to larger sale-preparation budgets. They are believed by many to have positive social value. Typically, the issues raised above relate to public forests (i.e. forests managed by the Forestry Commission). But there are still large private holdings that are not integrated with processing, and here the marketing problems are similar.

A quite different problem is faced by the small woodland owner with timber for sale. If he has low-value wood, he may not have many marketing opportunities and must take what offers he can get. Some thought has been given over the years to the possibilities of such owners forming marketing co-operatives - and indeed some of them have done so. However, the individual returns, low and intermittent as they typically are, have not proved sufficient to hold the members in the co-operatives.

3.3 The Bidding Process in Timber Buying and Selling

Most exchanges in forestry are consummated on the basis of verbal agreements. When the buyer and seller know each other and there is a history of satisfactory relations in the past this may be the simplest procedure. However, many forestry exchanges are not completed immediately but require a considerable period of time. During this period many changes may occur. Whenever the exchange will extend over some time or large values are involved, a written contract will safeguard the interests of both parties. This contract in many cases will briefly describe the exchange, state what each party has agreed to do, and specify the penalty which is to be imposed for failure to live up to these agreements.

The simplest type of exchange takes place when a person regularly offers to buy or sell a specified good at a known and customary price. This is the ordinary market or 'retail-store' situation. The other party to the exchange knows in advance what the price will be and the other conditions - such as delivery - which go along with a sale. Such prices do not remain fixed over time but they do not ordinarily vary with individual exchanges. A sawmill may for example advertise a price of say 15 pounds per ton of mill wood delivered to the mill yard. Mill wood suppliers know this is the price they will receive for any logs they deliver. Many forest products are bought and sold on this stated-price basis but a significant part of the forest-products exchanges are not handled this way.

A second common way of effectuating an exchange in forestry is for the buyer or seller to make an offer, which the other party then accepts or refuses. Usually this method involves more than one buyer or seller. For example, a woodland owner who has some timber to sell will see that this news gets round. Various prospective buyers will come to him and offer a certain amount for the timber. He will accept the offer that appears most attractive to him or perhaps refuse all of them. In simplest terms this is the way that timber is sold by the Forestry Commission. The

Forestry Commission makes its own appraisal of what it feels the timber should sell for. It is then put up for sale and everyone interested is given a chance to submit a bid. The timber goes to the highest bidder unless none of the bids are above the appraised value.

Two extreme variations of this method of effectuating an exchange are the public auction and the use of sealed bids. In an auction, the timber is offered at a minimum price and if no-one is willing to pay this minimum price no sale takes place. If someone offers to buy the timber at the offering price, then everyone else present is given a chance to offer a higher price. The bidding goes on until everyone drops out except one buyer who obtains the timber at the price which no-one else is willing to exceed.

With sealed bids, the timber is widely advertised and prospective buyers are invited to submit written bids before some specified date. On this date the bids are opened and the timber is awarded to the highest bidder, providing his bid is above the acceptable minimum. Purchases of sawn wood and other forest products are also made through sealed bids. The prospective purchase of a specified amount is announced and sealed offers of delivery prices are invited. The firm offering the lowest price ordinarily makes the sale.

Buyers generally do not like the sealed bid arrangement because of the danger of bidding much higher than would have been necessary to take the sale away from the nearest competitor in an open auction. Others object to the auction because prices are sometimes bid up higher than anyone would have offered on a carefully calculated sealed bid.

3.4 The Role of Middlemen in Timber and Sawn Wood Trading

The timber and sawn wood business is fraught with various types of 'middlemen' ranging from what we refer to as consulting organisations, timber merchants, wholesalers, agents, brokers and importers/exporters; the latter five being more prevalent in the timber importing trade aspect. The great majority of these middlemen represent woodland owners or firms and they help in selling wood products.

3.4.1 Brokers

A broker acts as an intermediary between two or more firms or people who are engaged in a business transaction. Brokers in forestry, although very few in the U.K., keep in constant touch with large groups of buyers and sellers. Their function is to be continuously informed of what forest products are for sale and who has them and what products are in demand and who wants them. As a result of this knowledge, they are able to bring individual buyers and sellers for mutual satisfaction. They do not take actual possession of the goods.

3.4.2 The Wholesaler

Wholesalers are common both in the internal and in the foreign timber trade business. They serve a somewhat similar function as the brokers, though they commonly take actual possession of the goods and then resell them.

3.4.3 Agents

Agent middlemen in the forestry business serve a useful role in bringing buyers and sellers together and in negotiating sales without handling the goods. They usually operate on commissions which many of them claim are lower than the margins of wholesale merchants. They do not take care of delivery, do not handle credit; thus these services must be performed by the woodland owners, principals or by the buyers - thus adding to their costs. The potential savings are realised when the shifted costs plus the lower commissions are less than the usual margins.

3.4.4 Importers/Exporters

These form of middlemen may be any of the ones discussed above, except that they specialise in the buying and/or selling of forest products in foreign trade.

3.4.5 Consultants and Timber Merchants

Timber or forestry consultants often provide small woodland owners, and some big owners too, with marketing information and advice along with other management service. Sometimes the consultants undertake complete jobs involving marking timber for cutting, sale, and supervision of the harvesting in return for a flat fee or some form of commission

Some timber merchants are themselves woodland owners while others are mere owner representatives. Many round timber merchants operating in the U.K. have very little machinery and few maintain their own haulage vehicles. Their major fixed investment is, therefore, their stock of standing timber waiting to be worked. Most merchants are based inland, some of them served by importers. They generally deal with smaller quantities of timber supplying smaller users at local level.

The majority of these middlemen are independent entrepreneurs who contract with woodland owners or processing firms to sell products within specific geographical areas. This sort of arrangement is almost always exclusive. In other words, the middleman is credited with any sale in that geographical area, whether or not he has been active in its solicitation or closing.

There are a number of immediate advantages in having forest products sold through a network of middlemen. Let's look at a few:-

1. Economics. No sales, no sales cost. Although this is an oversimplification, middlemen generally assume most of the sales expense, including salary, travel, telephone, clerical activity etc. The woodland owner's responsibility (or the manufacturing or processing firm's) is generally limited to back-up advertising, literature, assistance with quotations etc. By using middlemen, a 'small' woodland owner can establish a national or international network of sales personnel with a minimum investment.
2. Immediate entree and contacts. A middleman who has been operating within a specific territory for any length of time develops a rapport with the purchasing influences. He has many contacts and many friends. He can move a new entrant's product into the market much faster than a stranger (i.e. if the new entrant decides to do it all by himself).

3. Vital leads. The woodland owner has a job to do which requires face-to-face presentation of his product to buying influences wherever they may be found. Locating the sales personnel he needs is a rough job, and orienting them in individual territories is a formidable task. The middleman, operating alone or with his own staff, provides an 'overnight' corps of personnel who can intelligently follow leads and present the product to a customer.

The middleman has his drawbacks. Here are some of them:-

1. He's an independent cuss. By his very nature, anyone who goes in for commission selling is an independent character with a mind of his own. His primary interest is in building his own business - not the woodland owner's. A smart middleman will select his lines (in terms of species and specifications) from among those 'products' which will give the best balance over the years. He will also operate in accordance with a schedule that helps him close the most sales at the highest profit level to him.

2. Half a loaf is better than none. Since some middlemen deal with over twenty woodland owners at a time, the few hours a day they have for face-to-face contact with buying influences is cut up into many pieces. The time of the Managing Director or production engineer or purchasing officer on whom they are calling is also limited. At the end of

the day, the middleman may just be content with seeing just a handful of buying influences. Therefore there is the likelihood that the sale of some woodland owners' products would be very slow.

It is not the purpose of this section or this dissertation, for that matter, to delve into the pros and cons of selling through a middleman. The subject was introduced at this point to give a clearer concept of what is involved in the trade through the medium of middlemen and to offer a quick picture of another facet of the salesmen potential.

3.5 Geographical Influences on the Marketing of Timber

Nearly all the firms in the timber business face some limit to the area in which it can sell its product profitably. This limit is imposed by the cost of getting the product to the buyer (including the cost of selling it to him). In forestry - where the product is usually heavy, or bulky, or both - the cost of transportation is a big item. Although loading and unloading make up a large part of transportation costs, the total cost increases with the distance the product is moved. If a product sells for the same price everywhere, the farther a customer is from the mill the larger will be the part of the selling price which goes into transportation and the smaller the part which is left for profit. Eventually a distance is reached where nothing is left for profit - the marginal cost of selling another unit at a little greater distance is equal to (or larger than) the marginal revenue received from selling that unit. A firm will try to get around this by charging higher prices at greater distances from the mill or by selling its product on an f.o.b. basis at the mill with the buyer paying the transportation (see Table 3.2). This works to a certain extent but two things prevent it from entirely overcoming the distance limitation. First, as the price is raised fewer people will be interested in buying and at some distance the price may become so high - because of the large amount of transportation cost included - that no-one will buy the commodity at all. Second, there ordinarily will be competitive firms selling the same or a similar product in that area (problems of undifferentiated product selling become more apparent at this stage). As the first firm reaches out farther and farther for customers, it approaches closer and closer to the mills of these competing firms. The transportation cost of the first firm is increasing but that of its competitors is decreasing. Soon a point is reached where the competitors can under-bid any price that will return a profit to the first firm. Transportation cost thus eventually places a limit on the sales area of a firm.

The exact reverse of this situation exists for a firm buying products or raw materials. As it extends its area of supply, transportation costs increase. In order to absorb the higher transport costs it must either pay less for the material at its source or more for it delivered to the mill. Limits then appear:-

1. the necessary delivered price may be so high that the firm cannot afford to use the material;

2. it may be able to obtain enough material from other sources - usually nearer - at a lower delivered price;
3. it may lower its buying price at the source of the material to the point where no-one can afford to produce it there; or
4. it may lower its price at the source enough that competitive buyers can outbid it for the full supply. The firm, therefore, has a definite buying territory, restricted largely by transportation costs.

CHAPTER 4

4 QUANTITATIVE RESEARCH

The quantitative research was executed by the means of a mail survey - by using questionnaires (Appendix 2 and 3) to sample opinions and 'behaviour' of the forest products market. In conducting the survey, the total wood-products market was broken down into two major sub-industrial segments and questionnaires were served to the two identified segments according to the 80/20 Pareto Law. The two major sub-industrial segments identified were:-

1. Sawmilling and woodland owner representatives - whose major activities are 'internal'.
2. Importing/exporting and timber merchandising activities - the majority of the firms in this group are vertically and horizontally integrated and a considerable number of them are large firms.

The decision to break the whole market into these two sub-groups was taken on the basis of the fact that the U.K. forest products industry is dependent on foreign imports to the level that exceeds 90 per cent. Definitely such a group of firms as the firms in group 2 above would 'behave' differently from the former group (i.e. sawmilling etc. firms) whose major activities are localised within the nation and a good number of them are indeed small firms. This does not, in the least, indicate that there are no large firms in this group. Out of the 104 usable questionnaires received (or firms sampled), 63 were in the sawmilling group while the remaining 41 were of the importing/merchant type. It should however be pointed out here that it was not an easy task to categorise some of the firms as some of their activities do not give clear-cut identifications as to facilitate grouping. But by using other criteria such as the number of employees and the species sold or bought, this problem was overcome.

4.1 Geographical Spread of Activities of Firms

There does not appear to be any limitation (the sort revealed through qualitative research) in the distance covered to purchase or sale of timber products in the U.K. This was one of the findings of the survey conducted. Out of a total 104 firms sampled, 26 per cent claim they have 'operations' that go well beyond 240 kilometres while another 20 per cent claim they only go up to 200 Km. Nine per cent of the firms say they limit their operations to 16 Km (see Table 4.1). Most of the firms in this latter group are small firms - predominantly sawmillers who prefer to sell and buy within a radius of 16 Km - beyond which their operations become uneconomic. These are firms that operate within very small financial budgets and with small number of employees.

There is no significant difference between the saw-milling industrial sub-group and the merchant/importing industrial sub-group, for firms that operate above the 200 Km distance mark. Most of the firms in this group (whether sawmilling or importing/merchant group) are big firms with huge financial budgets. A considerable number of them particularly those in the merchant/importing group have branches or partnership organisations located in different parts of the U.K. for better servicing of their markets.

Table 4.1

Catchment Areas of Firms in Relation to Buying/Selling of Roundwood and Sawn Wood in the U.K. (75 per cent or more of total supplies drawn from ...)

	Up to 16 Km radius	Up to 40 Km radius	Up to 80 Km radius	Up to 120 Km radius	Up to 160 Km radius	Up to 200 Km radius	Over 240 Km radius	Total
Sawmilling (No. of firms)	8	12	9	7	5	10	12	63
Merchant/Importers (No. of firms)	1	2	1	3	8	11	15	41
Total (No. of firms)	9	14	10	10	13	21	27	104
Per cent per Catchment for Industry	9%	13%	10%	10%	12%	20%	26%	100

The writer believes it is on the basis of the existence of these branch offices or depots that firms are able to spread their operations above 240 Km. Agreeably, it would be unwise for a firm based in Edinburgh, for example, to supply a customer in London and yet expect such a transaction to be a profitable deal. But such a firm can do so economically if it has a branch located in say Birmingham. It all boils down to what was observed during qualitative research - that there is a limit to which a firm (operating as a unit or branch) can go to buy or sell its products. And in fact the E.I.U. put the optimum limit at 80.5 Km - beyond which most operations become uneconomic.

4.2 Identifying the Decision Making Unit of Wood Product Firms

While conducting the qualitative research a number of purchasing influences were identified in wood products firms. These were:-

1. The managing director of the firm.
2. Other top corporate managers or directors.
3. Middle managers.
4. The purchasing manager or department.
5. A professional forest manager.
6. Production engineer (or manager).
7. Junior technical staff.
8. Proprietor of the firm.
9. The 'partner' in a partnership.
10. Chairman of the board of directors.

Results of the survey revealed that (see Table 4.2a&b) over 75 per cent of the firms sampled restrict purchasing

Table 4.2a

Decision Making Unit and Personnel Representations in the Purchasing of Timber

		Overall Industry (in percentage)			
		Small Purchases	Large Purchases	New Purchases	Repeat Purchases
		% firms	% firms	% firms	% firms
a	Managing Director	22	50	43	33
b	Other Top Manager (Director)	29	28	29	33
c	Middle Manager	24	7	6	24
d	Purchasing Officer (or Dept.)	5	3	6	3
e	Professional Forest Manager	8	4	6	7
f	Production Engineer (Manager)	4	1	3	-
g	Junior Technical Staff	4	-	-	-
h	Outside Influencer (e.g. Supplier)	-	-	-	-
i	Others	4	7	6	-
		100	100	99*	100

*Total does not add up to 100 due to rounding.

Table 4.2b

Decision Making Unit and Personnel Representations in the Purchasing of Timber

		SAWMILLING				MERCHANT/IMPORTER			
		Small Purchases	Large Purchases	New Purchases	Repeat Purchases	Small Purchases	Large Purchases	New Purchases	Repeat Purchas
		No. of firms	No. of firms	No. of firms	No. of firms	No. of firms	No. of firms	No. of firms	No. of firms
a	Managing Director	18	33	31	25	6	19	14	9
b	Other Top Manager (Director)	22	17	18	20	9	13	12	14
c	Middle Manager	10	4	4	13	15	3	3	12
d	Purchasing Officer (or Dept.)	4	3	4	2	3	-	2	1
e	Professional Forest Manager	4	4	3	3	3	-	3	5
f	Production Engineer (Manager)	3	1	3	-	-	-	-	4
g	Junior Technical Staff	-	-	-	-	1	-	-	-
h	Outside Influencer (e.g. Supplier)	-	-	-	-	-	-	-	-
i	Others	2	1	-	-	4	6	7	-
		63	63	63	63	41	41	41	41

influences to the first three of this list - i.e. the managing director, other top corporate director, and middle managers - the latter becoming more prominent in repeat and small purchases. Out of a total of 104 firms sampled, 50 per cent indicated that the managing director is always a member of the 'Decision Making Unit' that involves large purchases, while 43 per cent indicated that the managing director is a D.M.U. member for all new purchases whether small or big. Only 28 per cent and 29 per cent of firms say the same respectively for large and new purchases where other top corporate director is present as a D.M.U. member.

One point of interest is the fact that it appears that the roles played by the purchasing manager, the professional forest manager and the production engineer and even junior technical staff and outside influencers are so insignificant in most D.M.U.s. The implication is that due to the fact that the procurement of the product (wood) does not involve high technical and much product knowledge, the participation of this latter 'expert' group in D.M.U.s is limited. In other words, due to the very simple nature of the product, the services of this group are hardly sought in D.M.U. deliberations. It seems that more emphasis is paid to matters such as financial accountability, risk evasion, public relations - hence most purchases are supervised mainly by the managing director or some other very top manager/director. Furthermore, a good number of firms in the wood products business (particularly in sawmilling) are owner-director type of businesses and therefore, there is less tendency to delegate such tasks as timber buying which involves huge financial commitments to their subordinates. Therefore, any firm doing business for the first time with a forest products firm is 75-80 per cent on the right track if he is able to sell his product to either the managing director or his immediate subordinates and not necessarily to the purchasing manager or production engineer.

4.3 Attributes Sought in Roundwood and Sawn Wood Buying

Some of the findings of the qualitative research conducted relate to identifying what qualities or attributes wood buyers seek from the products and services being sold to them. The following attributes were the main ones observed:-

1. Right price.
2. Right size (i.e. specifications).
3. Quality (in terms of grading to meet the specifications desired by the specific end use).
4. Right species.
5. Regular supply.
6. Quantity.
7. Speed of delivery.
8. Distance.
9. Image of supplier.

This list is by no means exhaustive as it is possible to find some other attributes being considered depending on the nature of the specific business a firm is in, its structure, and the geographical location of the firm. For example a number of small firms regard credit terms as a major attribute in determining where and what to buy. The overall impression in the wood product industry however is that credit terms do not constitute a major factor when buying wood products - but that it could be of a significant importance at times of recession. This of course is also true to other forms of industrial activity.

Respondents to the mail survey were asked to rank these attributes in order of importance and the findings are as shown in Table 4.3 and Appendix 4. When we view the wood products industry as a whole, we find that 'right price' is ranked as being the most important. Next in importance is quality (ranked 2nd); and the others follow in this order: right species - 3rd; right size (i.e. meeting specifications) - 4th; regular supply - 5th; quantity - 6th; 'speed of delivery' and 'distance' are joint 7th; and image of supplier is 9th.

Wood being a commodity that is undifferentiated, one is not surprised that most buyers regard price as of prime importance - even more important than quality. The wood buyer believes that, in as much as the product is wood he can 'build' quality into the product himself so long as he gets it originally at the right price. The implication of this finding is that the buyer would respond more quickly to an offer that carries price cuts than he would do to an offer which bears high quality or right specifications. Quality should however not be construed as a 'pushover' in the consideration of attributes when buying wood because a close look at Appendix 4 indicates that 20 firms rated quality as being their own 'No. 1' attribute, compared to 35 firms that rated 'right price' as first.

Table 4.3

Ranking of Attributes for Roundwood and Sawn Wood Buying

	Sawmill Ranking	Merch./Importer Ranking	Overall Ranking for Industry
a) Right Price	1st	3rd	1st
b) Right Size	2nd	4th	4th
c) Quality	2nd	2nd	2nd
d) Right Species	4th	1st	3rd
e) Regular Supply	5th	5th	5th
f) Quantity	6th	6th	6th
g) Speed of Delivery	7th	8th	7th
h) Distance	8th	7th	7th
i) Image of Supplier	9th	9th	9th

Another significant finding of this study in relation to attributes considered for wood products buying is the great differentials in ranking of these attributes by the two sub-industrial segments. While the sawmilling group goes along with the ranking for the whole industry in rating 'right price' as first, the merchant/importer group rates it as a mere third; the latter group considers right species as supreme and quality as second. This does not come as a surprise because, the merchant/importer group, as earlier explained, perform a considerable amount of their business transactions on foreign trade and therefore, as prospects, they are bound to use different criteria. Wood sellers would therefore be doing a lot of good to themselves if they take cognizance of the fact that these differentials exist and thus know how best to appeal (through their promotional tools) to their prospects in these sub-segments. It may be rightly said therefore, that the mere fact that wood is undifferentiated, does not necessarily mean that a 'total marketing approach' is the right marketing strategy.

4.4 Reliability on Buying Through Middlemen

By looking at Table 4.4, one sees the disposition of firms in relation to the number of firms that buy through middlemen and how much of their annual total wood requirements are bought through middlemen. The overall picture for the industry is that there are as many firms that buy less than 10 per cent of their annual wood requirement through middlemen as there are firms that buy over 90 per cent of their wood needs through middlemen. Far more sawmilling firms are not willing to have middlemen do their 'shopping' for them, than are importing firms ready to allow. The former group prefer to have more direct dealings with woodland owners. A reverse situation exists for the merchant/importer group - many of which depend on middlemen buyers. This is understandable in that many firms in this group have international operations and since they cannot possibly have buying offices operating in each country they buy from, they have to depend on middlemen buying. Furthermore, various species are purchased which means that they are better left in the hands of 'expert' buyers - i.e. middlemen who have been in the business for long and know these species, coupled with the fact that they can make the necessary connections in the foreign market more quickly.

4.5 The Wood Products Market Segments

Many sellers of roundwood and sawn wood sell most of their products to the construction market (see Table 4.5),

Table 4.4

Reliability on 'Buying Through Middlemen' by Firms

Annual Wood Requirement Purchased Thro' Middlemen (In per cent)	Sawmilling (No. of firms)	Merchant/ Importers (No. of firms)	Industrial Total	
			No. of firms	Per cent
0- 10	17	6	23	22
11- 20	7	2	9	8
21- 30	3	2	5	5
31- 40	3	1	4	4
41- 50	9	1	10	10
51- 60	5	2	7	7
61- 70	1	1	2	2
71- 80	2	5	7	7
81- 90	5	9	14	13
91-100	11	12	23	22
Total	63	41	104	100

Table 4.5

Market Segments Servicing by Firms (In Terms of Trade Volume Absorption by Markets)

Market	Trade Vol. (in per cent)
1) Wood Pulp	2.0
2) Chipboard	7.0
3) Fibre board	0.6
4) Wood wool	0.4
5) Fencing	14.0
6) Furniture	9.7
7) Post and Telegraph	0.3
8) Construction	26.0
9) Do-it-Yourself (D.I.Y.)	4.0
10) British Rail	1.0
11) Pallet and Packaging	21.0
12) National Coal Board (N.C.B.)	2.0
13) Others	12.0
	100%

which absorbs about 26 per cent of the total sale. This figure seems low particularly when compared to Burd's (1978) figure of 67 per cent. The marked disparity could be explained with two reasons:-

1. Burd's figure is only for softwood consumption.
2. The present recession and government spending cuts have greatly affected the construction sector to the extent that it has made the latter less ready to absorb wood products.

The pallet and packaging segment controls a handsome 21 per cent while the fencing, furniture and chipboard each absorb 14, 9.7 and 7 per cent respectively. The Do-it-Yourself sector seems to have grown from 'Burd's figure' of 3 per cent, to a new level of 4 per cent.

Table 4.6 gives an indication as to the number of market segments serviced by wood selling firms. Surprisingly, there are firms which sell their products into up to eight of these markets - hence may be regarded as pursuing a 'multi-segmental strategy'. About 68 per cent of the firms sell their products into between 3-6 different markets, while selling into 3 markets seems the most favoured. A number of firms (particularly in the sawmilling group and none from the merchant/importer group) sell their products to just one market - thus could be described as pursuing a 'concentration strategy'; these firms are predominantly small firms of the sort in categories 1 and 2 (as categorised by E.I.U.). Various reasons may be suggested to justify these two strategies:-

Table 4.6

Number of Markets Serviced by Firms

	1 Market	2 Markets	3 Markets	4 Markets	5 Markets	6 Markets	7 Markets	8 Marke
Sawmilling (No. of firms)	6	8	15	12	10	6	4	2
Merchant/Importer (No. of firms)	0	2	8	5	5	11	6	4
Total	6	10	23	17	15	17	10	6
Overall for Industry (in per cent) *	6	10	22	16	14	16	9	6

* N.B. Total percentage does not add up to 100 due to rounding.

1. For the concentration strategy - firms pursuing this strategy have a chance to specialise. By concentrating all marketing efforts on a single segment, the firm has an opportunity to analyse customers' characteristics and needs carefully and then to put all its efforts into satisfying this single group of needs or attributes. A firm can therefore, generate a large sales volume by penetrating that single segment deeply. The main disadvantage is of course that - it is a situation where the firm is putting "all its eggs in one basket". Thus if that segment's demand for the product declines, the company's financial strength also declines.
2. Multi-segment strategy - the aim is to develop a marketing mix for each selected segment. The marketing mixes used for this strategy vary in terms of product differences (if some differentiation is possible), prices, distribution methods and/or promotional methods. Firms with excess production capacity, for example, find this strategy advantageous because the sale of products in additional segments allows the company to use excess capacity and thus increases sales in the total market.

4.6 'Best Selling Tools' for Timber and Sawn Wood Selling

This study will be far from complete if no reference is made to considering the factors or qualities that wood products sellers regard as 'best selling tools'. The survey identified the following as some of the 'best selling tools':-

1. Right price.
2. Quality.
3. Regular supply.
4. Right size/species.
5. Delivery facilities.
6. Good salesmen.
7. A fair end-use knowledge by seller.
8. Good company image.
9. Availability of credit terms.
10. Nearness to buyer.

Eight of these qualities were selected and respondents were asked to rank them in order of importance. The results obtained thereof are as presented in Table 4.7 and Appendix 5. For the overall industry, again, right price ranks first; quality ranks 2nd, and right size/species rank 3rd. Regular supply, good company image and good salesmen rank 4th, 5th and 6th respectively, while 'delivery facilities' ranks 7th and 'nearness to buyer' is rated 8th.

An interesting point to observe about this result is the fact that the first three rankings (notably right price, quality and right size) are the same order of ranking obtained for wood buying. Can this then be regarded as an attempt by sellers to tailor their offerings to customer needs - hence marketing orientated as against production orientated? After all it is said that wood, as a product is undifferentiated and therefore, firms have to look for

Table 4.7

Ranking of 'Best Selling Tools' for Timber and Sawn Wood Selling

	Sawmill Ranking	Merch./Importer Ranking	Overall Ranking for Industry
a) Right Price	1st	2nd	1st
b) Quality	2nd	1st	2nd
c) Regular Supply	3rd	6th	4th
d) Right Size/Species	4th	4th	3rd
e) Delivery Facilities	5th	7th	7th
f) Good Salesmen	6th	3rd	6th
g) Good Company Image	7th	5th	5th
h) Nearness to Buyer	8th	8th	8th

other means such as those to improve their presentations to buyers since there is very little they can do to change the physical nature of their product.

'Good salesmen' is not regarded as a 'best selling tool', results of the survey show. But this view is not universally shared in that merchant/importer industrial group ranks 'good salesmen' as their third 'best selling tool'. Neither is 'good company image' regarded as a plus-factor, according to the rating. Again, great differentials exist in the ranking of these selling tools by the two industrial sub-segments (see Table 4.7).

Forty-one firms ranked right price as first - as against 21 firms that ranked quality as first and only 11 firms regard 'regular supply' as first in the ranking (see Appendix 5).

4.7 Reliability on Selling Through Middlemen

The overall picture obtained for the industry in relation to reliability on selling wood products through middlemen presents a contrasting view to that obtained for buying through middlemen. It seems most firms prefer 'doing their own thing' when it comes to selling their products, rather than rely on middlemen to do it for them. About 77 firms claim that less than 10 per cent of their annual sales volume go through middlemen (see Table 4.8). This condition is even more pronounced in the merchant/ importer industrial segment where 38 firms out of a total of 41 firms in this group claim that, less than 10 per cent of their annual sales volume go through middlemen.

Another interesting point is that, while firms are ready to buy their raw materials through middlemen, they are less inclined to sell their products under the aegis of middlemen. This may be due to the following reasons:-

1. After the products pass out of the various manufacturing factories, they come out as either semi-processed products or fully processed products - and at this stage some of the products may have some form of differentiation on them (hence they become specialised products meant for specific markets). It will therefore, be unwise to pass on the responsibility of marketing such products to 'novice' marketeers as middlemen.
2. Since these middlemen are likely to handle different products from different manufacturers, they are less likely to be fully committed to pushing one

Table 4.8

Reliability on 'Selling Products Through Middlemen' by Firms

Trade Vol. Thro' Middlemen (in per cent)	Sawmilling (No. of firms)	Merchant/ Importer (No. of firms)	Industrial Total	
			No. of firms	Per cent
0- 10	39	38	77	74
11- 20	10	1	11	11
21- 30	2	2	4	4
31- 40	2	0	2	2
41- 50	3	0	3	3
51- 60	1	0	1	1
61- 70	0	0	0	0
71- 80	1	0	1	1
81- 90	1	0	1	1
91-100	2	0	2	2
Total	63	41	104	99*

*Total does not add up to 100 due to rounding.

particular product - surely the manufacturer's own sales staff would be better off in performing this sales task.

3. Many of the sales transactions originate from contracts signed on a long term basis with buyers, and thus do not necessarily require the services of middlemen to carry the sales task through.

4. Finally, most manufacturing firms feel obliged to 'feel' and 'study' their own markets directly so that they can react much more quickly to changes in the market place. This function would agreeably be much slower if sales were to go through middlemen.

If the points discussed above explain the situation, one would then expect a good number of these firms to have large teams of salesmen in order to effectively push their products. A glance at Table 4.9 shows that this proposition is not necessarily the case. For example in the sawmilling segment, there is one salesman to every 27 persons employed in this segment; and an average of 1.5 number of salesmen in every firm - 22 firms in this group do not even have salesmen in their organisations. These figures are very alarming, more so when compared to similar figures obtained for some other industries. The situation is however better when the merchant/importer group is considered - where there is an average of 14 salesmen per firm and with salesman/employee ratio of 1 in 24 and that no firm has less than 2 salesmen. Why is this disparity? The reasons could be traced to:-

1. For the sawmilling group, a great majority of them are small firms and therefore tend to localise their marketing efforts to fewer well-defined market segments. Their main products are sawn wood and roundwood (hence little differentiation) and therefore, it would be unwise to waste hard earned money to employ a salesman who would contribute little or nothing to the selling process other than identifying who D.M.U. members are. The firm would be better off if it can manipulate the other more important sales tools most especially price, quality and right specifications to effect sales. Some other forms of processing such as e.g. pallet

Table 4.9

Salesmen/Employees Ratio per Industrial Sub-sector

	Av. No. Worker/Firm	Av. No. Salesman/Firm	Salesmen/Worker Ratio
Sawmilling	41	1.5	1-27
Merchant/Importer	333	14	1-24

manufacturing, and selling into the D.I.Y. sector may however require some product 'pushing' by salesmen.

2. As for the merchant/importing industrial sector, their huge sales force are needed for a thorough national coverage - because a good number of them have operations nation-wide. Furthermore many of the firms in this group sell into many specialised markets - therefore it demands some form of expert presentation. Besides, many firms in this group handle foreign products and therefore it demands that some aggressive marketing through salesmen be made into such market segments like the furniture, D.I.Y. and construction, if such products are to win over a fair share of consumption as against home made products. This may partly account for the high ranking given to 'good salesmen' as a super selling tool by this industrial sub-segment (see Table 4.7).

4.8 Advertising and Other Promotional Activities

This study revealed that many firms do advertise, using various media; and promote their products as well as their organisations with different promotional aids or materials. Out of the 104 firms that responded, 82 of them claim they do advertise - this amounts to about 79 per cent for the industry (see Table 4.10). Advertising incidence was higher for the merchant/importing group where a total of 36 firms out of 41 firms in this group claim they advertise. Some of the firms claim to own promotional departments of theirs as evidenced by the result shown on Table 4.11. Only 22 per cent for the total industry claim they own promotional departments of theirs. This leaves a staggering 78 per cent that depend on independent advertising agencies to execute their promotional programmes for them.

Advertising incidence for the sawmilling group, though lower than that for the merchant/importer group, looks fairly high for that group; 46 firms out of a total of 63 claim they do advertise. This figure definitely demands some comments - more so if we remember that it is this same group (sawmilling) that is reluctant to sell or buy through middlemen. Furthermore, the group had earlier on in this study regarded the services of salesmen as not really important in selling their products. Could it then be that the sawmilling group depends greatly on advertising to generate enough demand for their products? This proposition definitely requires a more thorough investigation. If however, the proposition is correct, then some advantages may be attributable to this type of strategy. With regard to the

Table 4.10

Advertising Incidence by Firms in the Forest Products Industry

	DO ADVERTISE		DO NOT ADVERTISE	
	No. of Firms	%	No. of Firms	%
Sawmilling	46	73	17	27
Merchant/Importer	36	87	5	13
Overall for Industry	82	79	22	21

Table 4.11

Incidence of Firms Owning/Not Owning Promotional Departments

	YES - PROMO. DEPT.		NO PROMO. DEPT.	
	No. of Firms	%	No. of Firms	%
Sawmilling	6	9	57	90
Merchant/Importer	16	39	25	61
Overall for Industry	22	22	82	78

nature of products and industry (i.e. in being undifferentiated and complex, respectively), the following advantages may be pin-pointed:-

1. Since many firms in the sawmilling group are small firms with limited financial resources, by advertising such firms are able to lower selling time spent in a personal sales visit by predisposing prospects toward the product.
2. If a firm believes in 'good image' building as an important selling tool, then the firm stands to benefit by advertising since the latter is likely to create a solid foundation for this.
3. By advertising, a firm is able to remind potential buyers of its products and services offered, most especially during the 'incubation period' between arousal of interest and actual sale - this may extend up to two or more years.
4. A properly placed advertising message can reach all or most of a company's prospects and customers quickly - compare this to a full nine-hour sales day in which a salesman spends only 3-4 hours in actually selling; much of which he may spend on 'no-sales' calls.

The latter viewpoint should, however, not be viewed as an attempt to undermine the usefulness of salesmen in wood products selling. In fact, as already shown in past sections of this study, a large number of firms in the merchant/importer group and a few in the sawmilling group employ the services of large teams of salesmen to sell their products.

Many advantages are also attributable to the use of salesmen in selling wood products. Some of them are:-

1. Knowledgeable salesmen can display samples of wood species to customers in person and also counter any negative impressions against the products or firm. An advertisement may not be able to achieve this.
2. A salesman can adapt or tailor his sales presentations to the needs of individual firms. An advertisement is more likely to make a "straight jacket" presentation to all firm types.
3. A salesman can ensure additional orders by acting as an on-the-spot source of service - apart from being able, physically, to get a new order.
4. A salesman can persuade and motivate prospects to buy now or in the future.

From the foregoing, there are also a lot of advantages in pursuing this strategy. It will not be proper at this stage to suggest which promotional strategy is better than the other in that, basically the strategy pursued will depend on a number of factors such as:-

1. The specific nature of a firm's product in relation to its end use - hence the range of markets it wants to sell to. If the markets include say the D.I.Y. or the pallet and packaging markets, it may need far more salesmen who would actually do the task of pushing the product. Agreeably, the same amount of salesmen may not be needed if the firm were to be selling into specialised markets like

the Posts and Telegraph's, the National Coal Board's, British Rail's, to name a few.

2. The extent of coverage of a firm's activities is: Is the coverage localised or national? A national coverage definitely demands a bit of advertising and a considerable number of salesmen. Any wonder then that the merchant/importer group does a lot of both.

3. It will also depend on whether a firm sells through middlemen or not. If it sells through middlemen, the firm may only limit its promotional activities to advertising since the 'middlemen' are very likely to have salesmen employed in their organisations who would help complete the task of selling. It could also be argued that the firm may require its own sales staff to sell the product, in the first instance, to the middlemen.

4.8.1 Advertising Media and Promotional Materials Used

Most of the advertising carried out by wood products firms go through different media - but mainly through timber or wood products journals (amounts to 53 per cent); technical magazines - 25 per cent; and daily/weekly newspapers - 15 per cent. Other media sometimes used are radio - 3 per cent; television - 1 per cent; bill boards - 1 per cent and trade-shows etc. etc. 2 per cent (see Table 4.12). Wood being an industrial raw material, it is not surprising that about 78 per cent of all the advertising done pass through wood products journals, timber trade

Table 4.12

Media Used for Advertising by Forestry Firms

Advertisement Medium	Percentage
Timber/Wood Products Journal	53
Magazines (Technical)	25
Daily/Weekly Newspapers	15
Radio	3
Television	1
Bill Boards	1
Others (e.g. Trade Shows)	2
	100

journals and other technical magazines. Some advertising also go through some professional journals, such as the 'Building and Construction Journal' and 'Panel Products Journal'. And on the promotional materials side, emphasis is laid more on product literature (35 per cent) and leaflets (34 per cent). Other promo-materials used include posters and stickers (both - 7 per cent), films - 7 per cent, and wood or product samples and audio visual aids etc. (see Table 4.13).

The choice of medium used seems to depend on the "specific" nature of the products being marketed and the target market or markets the products are meant for. For example, most of the firms selling into the D.I.Y. market are the same that do most advertising through the daily/weekly newspapers and by radio. Such firms' promotional activities, in this case, would have a lot in common with the normal promotional activities associated with consumer

Table 4.13

Disposition of Promotion Efforts into Promotion Materials by Forestry Firms

Promotion Material	Percentage
Films	7
Poster/Stickers	7
Leaflets	34
Product Literature	35
Others (e.g. Samples, Audio Visual etc.)	17
	100

marketing - of course in this case, the firm's products can rightly be referred to as 'consumer products'. Another example is - many hardwood sellers tend to channel advertisement through the 'Building and Construction Journal' since the building and construction market segment is a major market for hardwoods.

4.8.2 Advertising Objectives

Various advertising objectives or goals can be traced in the wood products industry and they are as outlined in Table 4.14 (see also Appendix 6, 7, 8, 9 and 10). The main advertising goals identified are:-

1. Product offering (Appendix 7 and 8).
2. Company image (Appendix 8 and 9).
3. Company services (Appendix 6, 8, 9 and 10).

About 41 per cent of advertising messages is directed at informing customers about the company's services, while

Table 4.14

Disposition of Promotional Goals of Firms in the Timber Trade

Promo Goal	Percentage
Product Offering	31
Company Image	28
Company Services	41
	100

31 per cent is for product offering and 28 per cent is aimed at enhancing the company's image. Some other advertising or promotional objectives pursued in the industry (although many of them still relate to the three referred to above) are:-

1. To reach hidden buyers. At times salesmen may not call on all the persons involved in buying their products because of time and other limitations. For example, a salesman selling to a large organistion may not possibly call on every influential buyer decision maker in the organisation because time would not simply permit - yet these people read technical magazines and wood products journals.
2. For fear of losing a market share. Since many firms in the industry advertise (some of them all year round), a competing firm that stops advertising may lose market share to a consistent advertiser.

3. To create a decided preference. Some of the ads and brochures used in the wood products industry, presell and postsell sales calls - thus creating some sort of decided preference. (At least there is now some evidence that supports the idea that familiarity does breed business - Wellinghouse Study - 1975.)
4. To aid middlemen. Many middlemen appreciate the advertising efforts of producer firms - this supports them in face-to-face meetings with buyers and also helps them in locating prospects.

Recently, there have been increasing campaigns aimed at 'pooling' efforts together in the wood products industry to support some form of 'Joint Promotional Campaign' to increase wood use. This is necessary because of the growing competition wood faces from other products such as steel, cement, plastic, glass etc. etc. This survey also sampled the degree of participation by firms in the 'joint promotional campaign' and the result is as shown in Table 4.15. It may be too premature to draw conclusions on this result but the general opinion in the industry is that not many firms are presently involved in this campaign and that many firms do not think it worthwhile to participate in such joint campaigns. They would rather prefer promoting their individual products - and therefore reap the benefits directly alone.

The products presently being promoted on a joint effort basis include, hardwoods, home grown timber, window frames, door frames, veneer and housing products. The writer forecasts that more and more firms will in the near future, join in these promo-efforts especially as wood products face an increasingly tight competition from these other products.

Table 4.15

Degree of Participation in 'Joint Promotional Efforts' to Increase Wood Use

	Sawmilling	Merchant/Importers	Overall (per cent)
Participated (No. of Firms)	16 (25%)	18 (44%)	33
No participation (No. of Firms)	47 (75%)	23 (56%)	67
	63	41	100
Products Jointly Promoted	Softwood, Fencing, Veneer, Housing, Chipboard, Building, Home Grown Timber	Hardwood, Softwood, Windows, Doors, Kitchen Units, Fencing, Tanalised Timber, House Building, Sheet Materials, Furniture	

CHAPTER 5

5 DISCUSSION AND CONCLUSION

5.1 Discussion

A good area to start this discussion will be to consider the viewpoint that most wood products are undifferentiated; and being of this nature, most firms in the industry are forced into practising undifferentiated marketing and typically develop similar product and marketing programmes aimed mainly at the largest segment of the market. Thus they also practise undifferentiated advertising which may be seen as enabling the firms to enjoy media discounts through large usage. Furthermore, the absence of segmental marketing research and planning offers wood products firms a chance to lower the costs of marketing research and product management. But Kotler (1980) points out that the fact that firms are practising undifferentiated marketing results in intense competition especially for the largest market segment(s) and under satisfaction of the smaller ones. Usually, wood products marketers are often carried away with the idea that by selling into bigger markets, they can make higher profits. This may not necessarily be the case. A simple example will illustrate the pit-falls more clearly:-

Let us suppose that a firm - 'Wooder and Co. Limited' sells into two markets viz:

1. To 'Mr D.I.Y.' (in the D.I.Y. market)
2. To 'Mr Construction' (in the Building and Construction Market)

'Wooder & Co.' offers 'Mr D.I.Y.' at £40 m^3 (this price includes other costs for sawing and planning which may equal £5). So in fact the actual price less this cost of £5 would have been £35.

Now 'Wooder & Co.' offers the same volume of wood to 'Mr Construction' at £70.

At first sight the gap between these two deals seems enormous but if we rationalise the costs incurred in transacting business with 'Mr Construction' a different picture becomes apparent. The costs incurred for preparing the product for 'Mr Construction' includes: i.e. £70 less:

	£
Preservation costs	7
Planing and resawing costs	2
Sawing tolerance and planing losses	1
Yield loss for special size	4
Drying costs	3
Value reductions for rejects	3
Accurate cross cutting costs	1
Stress grading costs	4
Shrinkage (of 4%)	2
Cost of delivery (to a far away place)	3
Total Reduction	= £30
And £70 - £30	= £40

This example illustrates how some firms can be carried away blindly into thinking that they make higher profits by selling into bigger markets, with a resultant neglect of smaller markets. From this example, it is evident that a firm selling into a smaller market can equally make the same profit as when it sells into a big market. All that is required is getting its marketing mix right as well as developing a sound marketing strategy.

With regard to the loci in the organisational structure of the individuals involved in each of the major buying decisions, Hill and Hiller (1977) have this to say: 'there are "lateral loci" representing the functional area, and the "vertical loci", representing the level in the managerial hierarchy'. The main members in the vertical loci identified in this study are the Managing Director, other top Director and Middle Managers, with the Purchasing Manager and the Professional Forest Manager making the main members in the lateral loci. And according to Hill and Hiller, 'there are occasions on which some functions become more important in the buying process than the others' and rightly the situation presented in the wood products industry portrays this. For example, large and new purchases seem to be controlled mainly by the top vertical loci of organisations while small and repeat purchases are controlled mainly by the lateral loci. This should not however be interpreted as a 'straight-edged' situation as it is possible in some organisations for the Managing Director to partake in all purchases including both small and repeat purchases.

With reference to the buying-selling relationships, one classification of buying-selling situations has been proposed by Hakanson et al, who define three types of uncertainty facing buyers:-

1. Need uncertainty - when product need is difficult to define and measure and when product characteristics are hard to measure and specify clearly.
2. Market uncertainty - when there are many sellers and the market changes rapidly with the result that

sellers are hard to compare and there are likely to be high opportunity costs associated with the decision.

3. Transaction uncertainty - when there are likely to be significant problems of actually getting the product from seller to buyer.

All of these three considerations typify the U.K. wood products market. As a remedy to the conditions listed above, Webster (1979) has the following to offer:-

"When need uncertainty is high, buyers are likely to be more concerned with quality than with price and are likely to demonstrate high source loyalty.

When market uncertainty is high, buyers can be expected to contact more suppliers and to seek the help of specialists both within the organisation and outside who have experienee with these high uncertainty markets.

When transaction uncertainty is high, the buyer is most likely to insist upon multiple sources of supply - with a focus upon the supplier's ability to deliver the item in necessary quantities and with sufficient reliability."

Whether Webster's propositions are actually practicable in the U.K. situation would surely require a more thorough investigation. What Webster and Hakanson et al bring to light is that, the mere fact that 'right price', 'quality' and 'right specification' of products are the main factors considered for buying and selling of wood products, should not be viewed as axioms; but rather that they should be seen as organisational 'desires' in relation to buying problems such organisations are experiencing.

Paradoxically, many wood products firms (most especially sawmillers) often reduce the quality of the sales force due to the fact that many wood products are similar and largely because prices tend to move towards cost and the salesman is seen as an order taker, whose job is to arrive at the buyers' office when an order is about to be taken. Wilson and Fowler (1973) argue that because there is no difference between products, the buyer purchases at the most convenient moment, which might happen to be when the salesman calls - both authors consider this act to be primitive. The authors believe that undifferentiated products require high quality selling and indeed often executive selling. Therefore, the sort of 'primitive' selling presently being practised in some sectors of the wood products industry is a wrong strategy; and in fact such firms that practise this strategy would be better advised to aim at up-grading their sales force beyond that of their competitors rather than depend solely on price cuts and heavy advertising to effect sales.

Theodore Levitt (1962) propounded the view that in highly competitive situations the process of getting and keeping customers requires that the generic product must be augmented in order to sell well. That is, the product must be defined broadly in terms of the whole cluster of satellite attributes which produce distinct customer satisfaction. In order to achieve this, Wilson and Fowler suggest that an effort must be made to find out what the customer wants and values. The author suggests that non-product advantages which can be built into undifferentiated products (such as wood products) are numerous and that such ideas for non-product features come from the market. And this information on users' attitudes and needs, both total and limited must be probed; coupled with an internal examination of a company's own strengths, so that they can be exploited fully in the market place. In this connection, Wilson and Fowler suggest the following as non-product features:-

* guarantee improvement
* capture of a major distributive channel
* high quality selling
* image development

Ideally these non-product factors should also be the main promotional messages if ever they are to be useful for selling wood products (undifferentiated products).

5.2 Conclusion

Some of the conclusions drawn from this study are that wood is an undifferentiated product, hence it generates peculiar marketing problems. The demand for wood products such as roundwood and sawn wood comes largely from companies engaged in the following industries: furniture, building and construction, pallet and packaging, fencing, wood pulp and chipboard. It was noted that all these industries are subject to a widely fluctuating demand for their output - a demand rising rapidly on the upswing of the business cycle and falling rapidly on the downswing. This cyclical movement means that the demand for roundwood and sawn wood is also subject to rapid changes. Because of keen competition from such materials as cement, steel, aluminium, and glass, industry wide promotion is a common practice - although there is less desire to partake in joint promotional campaigns.

The channels of distribution for wood products vary from one of direct sale to one made up of three or more middlemen. Many of the firms in the industry are large enough to make it economical to build their own sales organisations and sell their products direct to industrial users. Some companies cover such a broad area that they have established sales offices and branches out of which their salesmen work. Some other firms carry out their direct selling mainly by trade paper advertisement.

The main attributes or qualities considered in buying and selling wood products are 'right price', quality, right specification (in order of importance). These may vary in order of importance depending on the nature of the firm, its business environment and its markets. The main D.M.U. members handling the bulk of purchasing decisions in the industry are the managing director, other top directors and middle managers. The roles of purchasing manager, professional forest manager and production engineer are limited in the purchasing of wood products.

The main media used for advertising are through wood products journals, timber trade journals, and other allied technical and professional magazines. Promotional messages often stress services, company image and product qualities.

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MSc Dissertation - Proposal

NAME OF CANDIDATE Edirin Eduweye ARUBAYI

1. The Research Proposal:

- To examine the nature of the wood products industry (mainly roundwood and sawn wood) in order to understand its structure and its economics.
- To examine buying and selling processes as well as product attributes and/or organisational qualities that aid buying and selling activities.
- To examine the promotional activities in the industry within the limits of the undifferentiated nature of wood products.

2. Why Is It Worth Doing?:

Due to the fact that past related studies have tended to concentrate more on the structure and economics rather than exploring for instance what buyer needs and wants are, and how sellers go about trying to supply and influence the wants and buying behaviour of customers.

3. Previous Research:

- 'A Marketing Study of British Wood Supply'. Vol. 1 and 2 by 'The Economist Intelligence Unit' - 1970.
- 'A Forestry Strategy for the U.K.' by the 'Centre for Agricultural Strategy' - 1979.
- The Wood Production Outlook in Britain - A review by Forestry Commission 1977.

4. Intended Methods:

Mainly by quantitative research (through the aegis of postal survey) supported strongly by qualitative and desk research.

5. Name of Firm or Sources of Data:

- Tilhill Forestry Advisory Limited.
- Forestry Commission.
- And numerous other firms visited furing the survey exercise.
- Also from firms sampled by questionnaire method.
- F.A.O. - Rome.

Universities of Glasgow, Edinburgh and Strathclyde

Scottish Business School

University of Edinburgh Division
Department of Business Studies
William Robertson Building, 50 George Square
Edinburgh EH8 9JY
Telephone 031-667 1011 Extension 6577/8

21st. July, 1980

Dear Sir,

We are undertaking a survey of the Industrial Market situation for Timber and Sawnwood in the United Kingdom in preparation for a study to be published some time around September this year.

We have designed a questionnaire to enable us effectively to carry out this study and we shall be glad if you would be willing to help us complete the few questions in it. In order that this study should be truly representative, we hope that you will return the questionnaire to us.

Please rely on your experience in answering most of the questions - as it may not be necessary to check your answers in your records, since, when all replies are analysed, trends will become apparent.

All replies will be treated as confidential and will be used for statistical purposes only so that information contained will not be associated with any one firm or person. Please do not write your name or company.

Yours faithfully,

E. E. Arubayi.

Encl. Stamped, addressed envelope.

A SURVEY OF THE INDUSTRIAL MARKET FOR TIMBER AND SAWNWOOD IN THE UNITED KINGDOM.

General Information.

1/ What is (are) the specific nature of your business (e.g. Timber Agent, Sawmilling,etc,etc) ? ____________;____________;____________

2/ How many employees are in your organization?______

3/ What is the geographic spread of your activities (in terms of the distance of your main customers) ?

(a) Below 10 miles___(b) 25 miles___(c) 50 miles___(d) 75 miles____

(e) 100 miles___ (f) 125 miles____ (g) Over 125 miles____

4/ Which are the major species bought or sold by your organization ?

(a) Bought:____________;____________;____________;____________

(b) Sold :____________;____________;____________;____________

Timber And Sawnwood Buying.

1/ Who is (are) involved in the buying process for your organization ?

	Small purchases	Large purchases	New purchases	Repeat purchases
a) Managing Director				
b) Other Top Manager(Director)				
c) Middle Manager				
d) Purchasing Officer(or Dept)				
e) Professional Forest Managr.				
f) Production Engineer				
g) Junior Technical Staff				
h) Outside Influencer(e.g. Supplier)				
i) Others____________				

2/ With regard to the particular nature of your business, what are the most important factors considered in the timber or sawnwood buying process ? (Kindly rate in order of importance 1st. -- 9th.)

(a) Right species____ (b) Right size____ (c) Right price____

(d) Regular supply____ (e) Quantity________(f) Quality__________

(g) Speed of delivery___(h) Image of supplier___(i) Distance____

3/ How much of your annual wood requirement do you buy through independent timber contractors, brokers, or agents (in percent)____________

Timber And Sawnwood Selling

1/ Which of these markets do you sell your products to ? (Kindly rate trade volume in percentage term with different markets as applicable to you).

(a) Wood pulp_____ (b) Chipboard______ (c) Fibreboard___________

(d) Wood wool_____ (e) Fencing_______ (f) Furniture____________

(g) Post & Telegraph______ (h) Construction______ (i) DIY________

(j) British Rail______ (k) Pallet & Packaging______(l) Others_______

2/ How many active salesmen do you have in your organization ? ________

3/ How much of your wood products do you sell through selling agents, brokers, contractors, etc, etc (in percent)___________

4/ Which of these factors or features do you regard as 'best selling tools' (Kindly rate in order of importance 1st. - 9th.)

(a) Good Salesmen______ (b) Regular supply____ (c) Right price _______

(d) Right size/species_____ (e) Good Company Image____ (f) Quality____

(g) Delivery facilities_____ (h) Nearness to buyer_____(i) Others_____

Promotion

1/ Give 'Yes' or 'No' Answers.

a) Do you advertise your company or products in any Timber or Wood Products journal_______; magazines_______; daily news papers______; radio_______; TV.________ or bill boards__________.

b) Is there any department or section in your organization in-charge of promotional activities ? ________

c) Does your organization have promotion materials such as films______; posters______; leaflets______; product literatures____; others_______

2/ Is promotion in your organization mainly directed to enhance:

(a) Product offering______ (b) Company image_____ (c) Company services__

3/ Does your company contribute towards 'joint promotional efforts' to increase wood use generally ? ________. If your answer is 'yes', which product(s) are/mainly concerned with ? ______________; ______________

Kindly make additional general comments; cases; experience; problems; etc, etc.

* Remember to use enclosed, stamped, addressed envelope when returning completed questionnaires.

APPENDIX 4

Total Number of Firms That Ranked Each Attribute for Wood Products Buying Into Each Rank.

Attribute	Rank	No. of Firms That Ranked
a) Right Price	1st	35
	2nd	24
	3rd	18
	4th	21
	5th	4
	6th	2
	7th	0
	8th	0
	9th	0
		Total = 104 Firms
b) Right Size	1st	11
	2nd	20
	3rd	23
	4th	26
	5th	13
	6th	8
	7th	3
	8th	0
	9th	0
		Total = 104 Firms
c) Quality	1st	20
	2nd	32
	3rd	21
	4th	22
	5th	9
	6th	0
	7th	0
	8th	0
	9th	0
		Total = 104 Firms
d) Right Species	1st	25
	2nd	16
	3rd	30
	4th	17
	5th	9
	6th	5
	7th	1
	8th	0
	9th	1
		Total = 104 Firms
e) Regular Supply	1st	1
	2nd	3
	3rd	5
	4th	10
	5th	28
	6th	26
	7th	21
	8th	10
	9th	0
		Total = 104 Firms

Attribute	Rank	No. of Firms That Ranked
f) Quantity	1st	0
	2nd	0
	3rd	5
	4th	10
	5th	21
	6th	30
	7th	22
	8th	12
	9th	4
		Total = 104 Firms
g) Speed of Delivery	1st	0
	2nd	1
	3rd	0
	4th	3
	5th	6
	6th	20
	7th	30
	8th	26
	9th	18
		Total = 104 Firms
h) Distance	1st	0
	2nd	3
	3rd	5
	4th	3
	5th	10
	6th	14
	7th	25
	8th	24
	9th	20
		Total = 104 Firms
i) Image of Supplier	1st	0
	2nd	0
	3rd	6
	4th	2
	5th	11
	6th	11
	7th	19
	8th	20
	9th	35
		Total = 104 Firms

APPENDIX 5

Total Number of Firms That Ranked Each 'Selling Tool' for Wood Products Selling Into Each Rank.

Selling Tool	Rank	No. of Firms That Ranked
a) Right Price	1st	41
	2nd	32
	3rd	15
	4th	10
	5th	4
	6th	1
	7th	1
	8th	0
		Total = 104 Firms
b) Quality	1st	21
	2nd	36
	3rd	23
	4th	16
	5th	4
	6th	4
	7th	0
	8th	0
		Total = 104 Firms
c) Regular Supply	1st	11
	2nd	12
	3rd	20
	4th	29
	5th	17
	6th	12
	7th	3
	8th	0
		Total = 104 Firms
d) Right Size/Species	1st	10
	2nd	14
	3rd	27
	4th	20
	5th	16
	6th	13
	7th	3
	8th	1
		Total = 104 Firms
e) Delivery Facilities	1st	0
	2nd	0
	3rd	6
	4th	12
	5th	18
	6th	19
	7th	37
	8th	12
		Total = 104 Firms

Selling Tool	Rank	No. of Firms That Ranked
f) Good Salesmen	1st	12
	2nd	9
	3rd	1
	4th	9
	5th	14
	6th	23
	7th	17
	8th	19
		Total = 104 Firms
g) Good Company Image	1st	9
	2nd	4
	3rd	20
	4th	12
	5th	23
	6th	20
	7th	9
	8th	7
		Total = 104 Firms
h) Nearness To Buyer	1st	0
	2nd	0
	3rd	0
	4th	0
	5th	7
	6th	7
	7th	26
	8th	64
		Total = 104 Firms

An announcement to gladden the hearts of all MBM customers.

WE HAVE NOTHING NEW TO OFFER FOR 1979!

MBM's plans for 1979 are quite straightforward. We intend, as yet, to make no changes in our policy.

We intend to go on doing what you know we do better than anyone else.

Selling you the timber you want when you want it and how you want it.

Holding stocks for you so you've no need to gamble by buying ahead. Or, when conditions demand it, moving stocks in and out quicker than anyone else.

Sometimes, you see, no news is good news. And this is one of those times.

MBM

MacMillan Bloedel Meyer Limited

Quality Redwood

Royal.

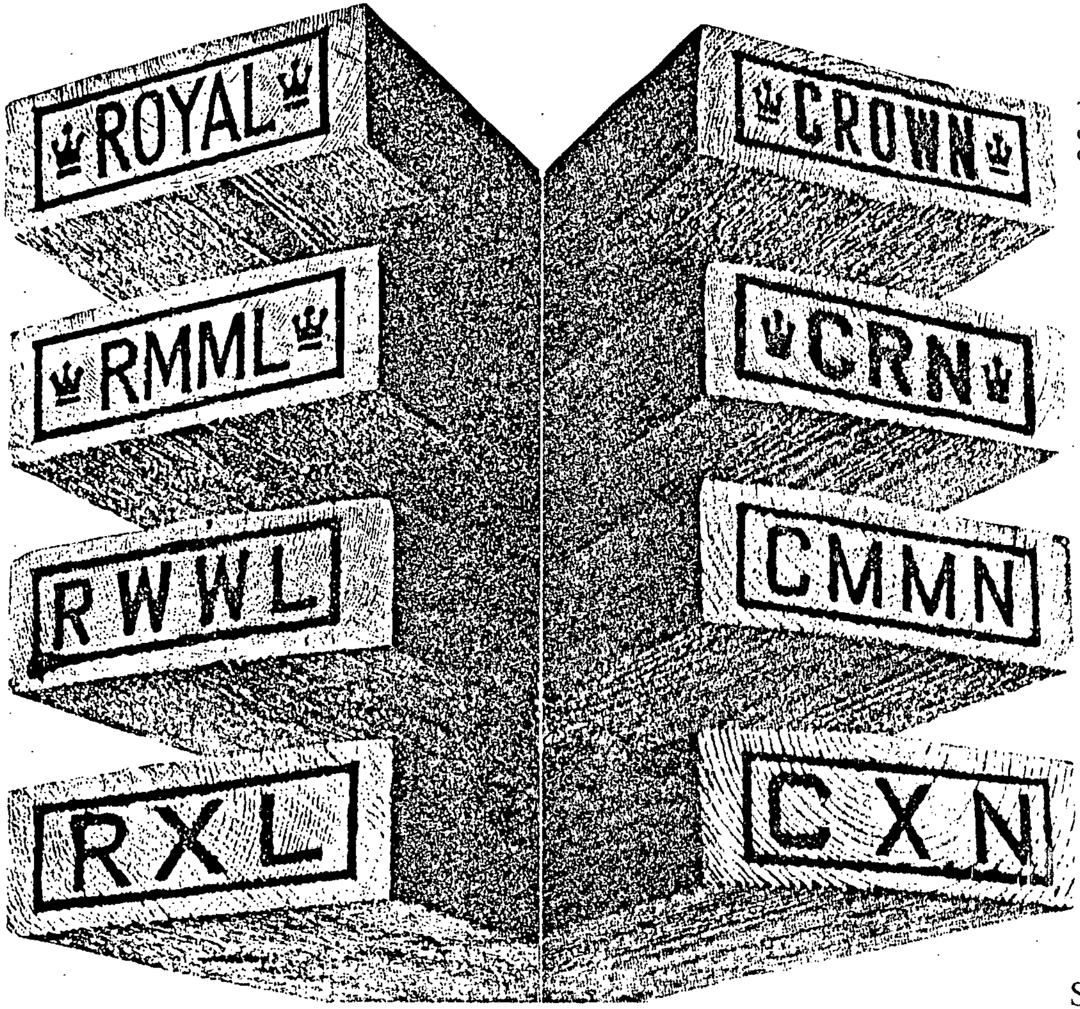
Crown.

A unique grading producing the highest unsorted quality obtainable from Scandinavia. Widely demanded by quality joinery users.

The outstanding mark accepted by leading joinery manufacturers for its consistent high quality and value.

A competitive 5th quality characterised by the attractive red appearance only obtainable from raw material drawn from the extreme North. Suitable for standard joinery, panelling etc.

A 6th quality acceptable for packaging, most carcassing requirements and many other purposes.



Traditionally graded U/S. This mark ensures high and consistent quality demanded by top joinery manufacturers.

A well established and reliable 5th quality. Excellent machining properties widely used for joinery and D.I.Y. purposes.

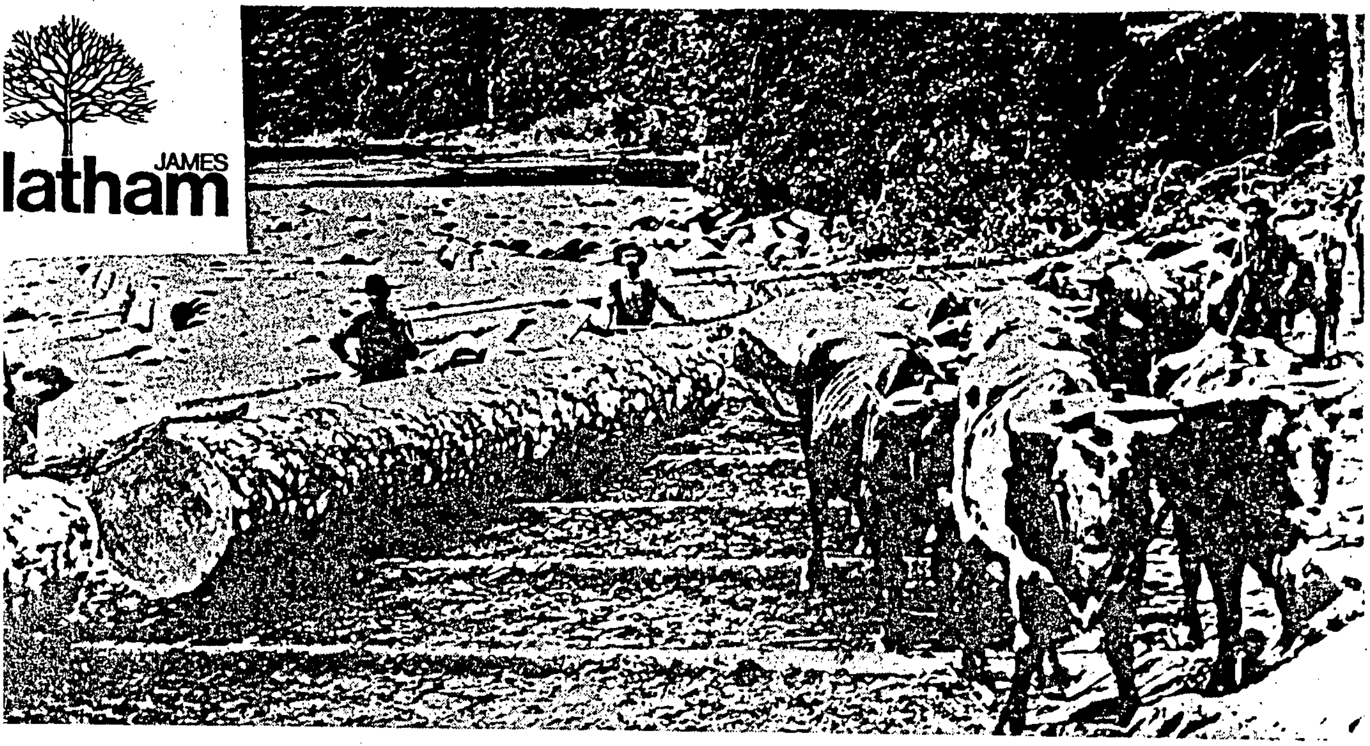
A superior constructional and general purpose (including low-grade joinery) quality, produced only in limited dimensions, mainly 50 mm.

A top 6th quality, renowned for its consistency. Suitable for carcassing, packaging etc.

assi
TIMBER

Address: S-10522 STOCKHOLM
Phone: 08-22 11 40, Telex: 13204 ROYAL S.

Sales office UK:
Statens Royal Sales Ltd, Croydon,
Tel: 01-686 5341, Telex: 264033.



Latham have been in the timber business for over 200 years

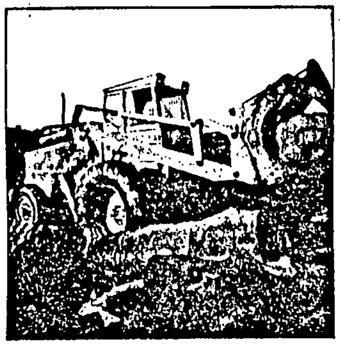
Timber from Latham means timber you can trust – with the backing of over 200 years experience.

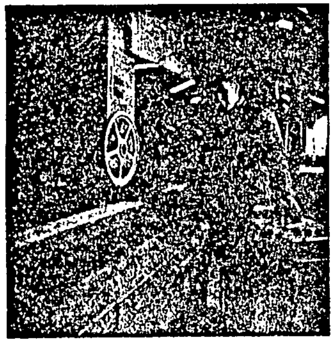
Selected by experts from world wide sources Latham timber may be kiln dried, sawn, planed or moulded to your specification.

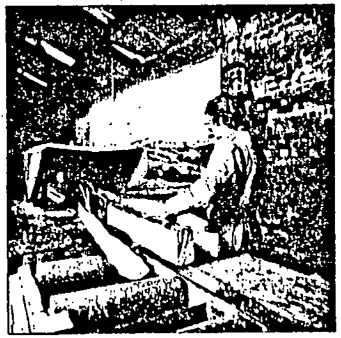
A large choice of Hardwoods, Softwoods and Panel Products is available in a wide variety of sizes and thicknesses for maximum economy and we are always ready to provide expert advice on specific goods.

Wherever you are Latham delivery is fast and reliable from strategically placed depots throughout the country. Telephone your nearest depot now and find out more about the Latham service.

Castle Pallets are in the materials handling business, making pallets and stillages of all types.
As part of the John Dye sawmilling company we can produce timber to meet all customer requirements and specifications. So pallets can be 2-way, 4-way, your-way.

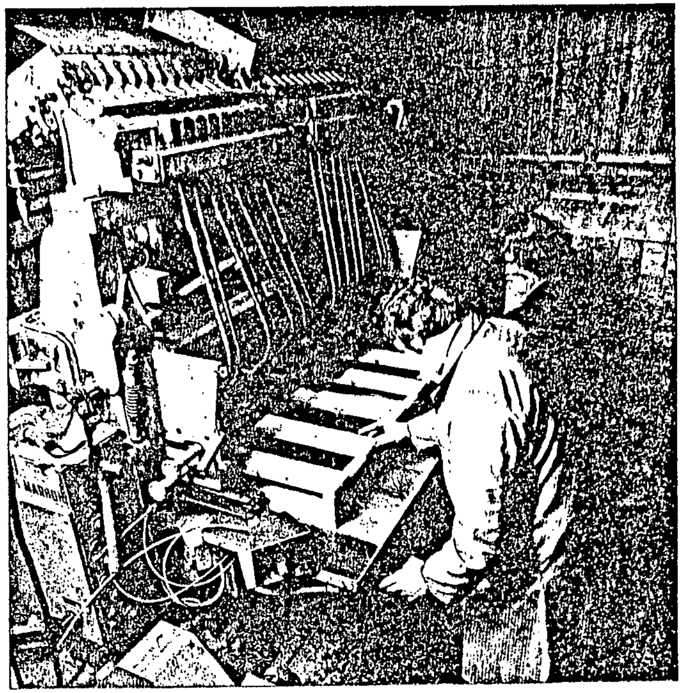






Our pallets are constructed from accurately machined selected softwoods and hardwoods, fastened with either annular ring, cement coated nails or plain wire nails, and produced under strict quality control. We can even fire and rot-proof the timber!

Whatever the size of your order we can offer prompt deliveries at competitive prices. In addition we can give you advice on the best way to handle your materials and design according to your needs. Finally we provide a comprehensive repair service.

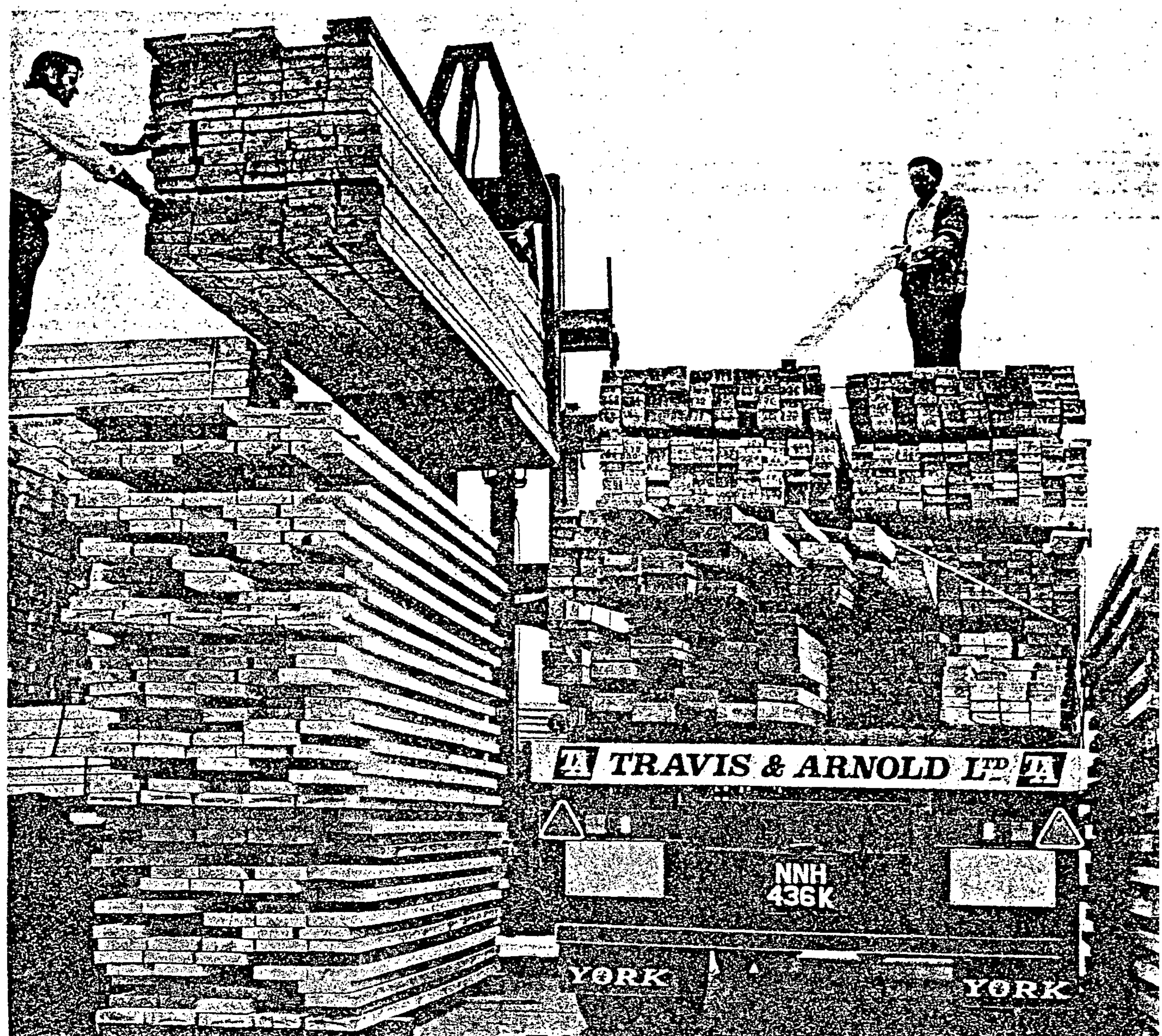


So the next time you are in the market for pallets please give us the opportunity to quote.

Contact:

Sales Department,
Castle Pallets Limited,
Sandport,
Kinross.

Telephone: Kinross 62562



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No leaves and no branches — except our 48 depots throughout the country. At all of them you will find comprehensive softwood stocks for every building requirement.

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