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STUMPAGE AND CONTRACT PRICES OF  
PULPWOOD IN NORWAY, SWEDEN AND  
FINLAND IN THE FELLING SEASONS  
1958/59—1968/69 AND 1969/70

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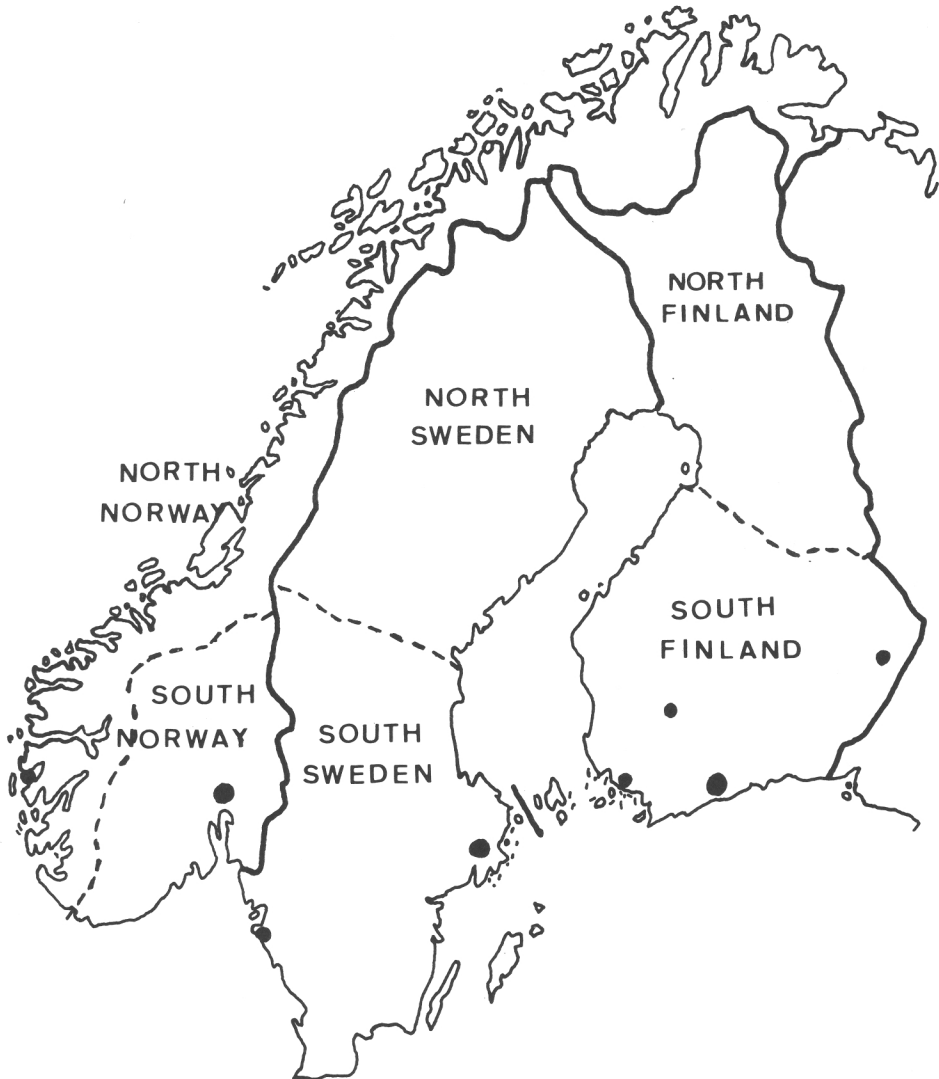
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SWEDEN AND FINLAND IN THE FELLING SEASONS  
1958/59–1968/69 AND 1969/70



SCANDINAVIA EXCLUDING DENMARK

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STUMPAGE AND CONTRACT PRICES OF PULPWOOD IN  
NORWAY, SWEDEN AND FINLAND IN THE FELLING  
SEASONS 1958/59–1968/69 AND 1969/70

Lauri Heikinheimo,  
Seppo Paananen and Hannu Vehviläinen

This inter-Scandinavian comparison of pulpwood prices in private forests was carried out by the Forest Research Institute, Department of Forest Economics, in the winter 1968/69 at the request of the Central Association of Finnish Woodworking Industries, which provided funds for this purpose. The work was done under the supervision and on the responsibility of the undersigned, but the planning and calculation were carried out by Seppo Paananen and Hannu Vehviläinen, then students of forestry. Jan Heino, also a student of forestry, assisted me in collecting the data for Sweden and Norway. A great deal of invaluable help in the collection of data was given to us by Sulo Väänänen, M.Sc., of the Forest Research Institute in Helsinki; Erik Ullberg, the Manager of Sydsvenska virkesföreningen (The Timber Association of Southern Sweden), and Zachris Tam-

minen, Departmental Chief of the National Board of Private Forestry of Sweden; the late Odd Gjelsvik, Director of the Skogsindustrienes Økonomiske Institutt (The Economic Institute of Forest Industries); J. C. Rafn, Director of Norges Treforedlingsråd (The Norwegian Pulp and Paper Industry Council) in Oslo, and Frits Jørgensen, Professor of Norges Landbrukshøgskole (Agricultural College of Norway), Vollebakk, Norway.

The translation into English was done by Hilkka Kontiopää, M.A. and checked by Michael Jones, B.A.

While the manuscript was in press, further calculations of contract and stumpage prices of pulpwood were made for 1969/70. These are briefly discussed in paragraph 13 and the results presented in the table in appendix 3 and in figures 1 to 16.

Lauri Heikinheimo



## EXPLANATION OF SYMPOLS AND ABBREVIATIONS

x Provisional or estimated figure  
 . . Data not available  
 " Repetition

Fmk Finnish marks  
 Scr Swedish crowns  
 Ncr Norwegian crowns

f<sup>3</sup> tr = cubic foot by measuring at the top and  
           the bottom of the log  
 f<sup>3</sup> fl = floating cubic foot

## EXCHANGE RATES (IN FINNISH MARKS)

logging year	Scr	Ncr
1958/59	61.9	44.80
59/60	62.0	"
60/61	62.2	"
61/62	62.4	"
62/63	62.3	"
63/64	62.3	"
64/65	63.5	"
65/66	62.5	"
66/67	62.5	"
67/68	81.1	58.80
68/69	81.1	"
69/70	81.1	"

## 0. THE OBJECTIVE

The object of the study was to obtain the most comparable data possible on the stumpage and contract prices of pulpwood during the fel-

ling seasons 1958/59–1968/69 for private forests in Finland, Sweden and Norway.

### 1. STUMPAGE PRICES OF PULPWOOD IN FINLAND

The initial data consisted of the mean stumpage prices for privately owned forests, calculated by the Mathematical Department of the Forest Research Institute according to economic regions, and the quantities sold in 1961/62–1967/68. For comparison, the mean prices and quantities sold by economic regions were also calculated for 1958/59–1960/61 from information per commune. The prices were con-

verted to the equivalent of the stumpage prices per cubic metre, piled measure, of 2-metre pulpwood including bark. Combining economic regions, the mean stumpage prices, weighted by the quantities sold from privately owned forests, were calculated for 4 control regions (see attached appendix 1). The prices for the felling season 1968/69 were estimated on the basis of the current price recommendation agreement.

### 2. COST OF PULPWOOD FELLING IN FINLAND

The mean annual felling cost was studied by taking separate samples for southern and northern Finland, comprising 10 per cent of the communes in each economic region in southern Finland and 50 per cent in northern Finland. From these samples, the mean contract price and the quantity of timber sold by delivery contract were calculated per commune. Mean contract prices weighted by timber quantities were calculated for South and North Finland. The mean stumpage prices, weighted by the

quantities of sales on the stump, were calculated for the same areas. Both mean prices were calculated per cubic metre, piled measure, of 2-metre pulpwood, including bark. The difference between these mean prices is the estimated felling cost per cubic metre, piled measure, of 2-metre pulpwood, including bark. The felling cost so obtained contains the possible difference which may arise if the stumpage price remaining under delivery contracts is lower than the mean stumpage price paid for standing timber sales.

### 3. CONTRACT PRICES OF PULPWOOD IN FINLAND

The contract price was calculated as the sum of stumpage price and felling cost. The regional stumpage prices were weighted by the total quantities sold per region, and the mean felling cost for South and North Finland were weighted by delivery and the quantity of timber sold at the road side. The reason why contract prices per economic regions were not calculated directly from the contract price data is that the per-

sonnel available was not adequate for calculation of all the data. The sample made it possible to determine the cost of felling with a fair degree of accuracy, and when the stumpage price was used as the second component of contract price, the regional stumpage price differences could also be seen in the contract prices.

## 4. CONTRACT PRICES OF PULPWOOD IN SWEDEN

### a) General

The Swedish price data were all obtained from the Timber Association of Southern Sweden (Director Eric Ullberg/Sydsvenska Virkesförening). The prices were based on the South Swedish price recommendation agreements. The contract prices for South Sweden were calculated on delivery at a motor road, and therefore correspond to the Finnish contract prices. The

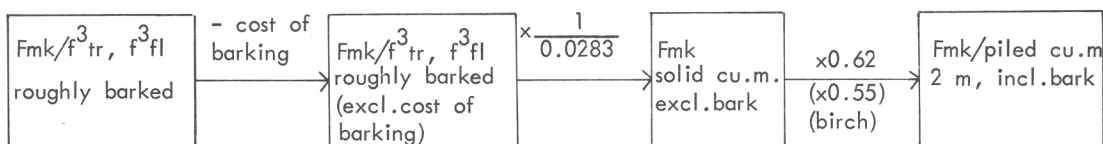
prices of coniferous pulpwood for price districts 1 and 2 were the prices after the final sorting, from which were subtracted the mean floating costs weighted by quantities floated. They were obtained from the Skogsstatistisk årsbok (Statistical Yearbook of Forestry), Table 18, per annum. The prices of birch pulpwood for price districts 1 and 2 were calculated free at the mill.

### b) Conversion coefficients

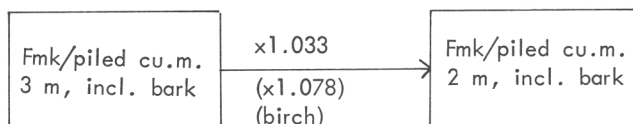
The necessary conversion coefficients were obtained from the National Board of Private Forestry of Sweden, Timber Mensuration and Statistical Department (Mr. Z. Tamminen/Avd. för virkesmätning o. statistik/Kungl. Skogsstyrelsen). The contract prices per cubic foot ( $f^3_{tr}$ ) for price districts 1 and 2 were converted to equal the contract prices per cubic metre solid measure excluding bark, and these in turn

to equal the prices per cubic metre piled measure of 2-metre pulpwood including bark. The contract prices for price districts 3, 4 and 5 were obtained per cubic metre piled measure of 3-metre pulpwood including bark and were directly converted to equal the contract prices per cubic metre piled measure of 2-metre pulpwood including bark. The conversion was carried out according to the following formulae:

Price districts 1 and 2:



Price districts 3, 4 and 5:



$f^3_{tr}$  = cubic foot by measuring at the top and the bottom of the log  
 $f^3_{fl}$  = floating cubic foot

### c) Exchange rates

The per annum exchange rates of the Swedish crown were obtained from the Bank of Finland Institute for Economic Research. The yearly rate is the arithmetic mean of the rates of exchange quoted daily. For the year of devaluation, 1967, it was assumed that devaluation

divided the felling seasons 1966/67 and 1967/68 so that the pre-devaluation rate applied for the former and the post-devaluation rate for the latter. This is likely to be what really happened that year.



## 5. COST OF PULPWOOD FELLING IN SWEDEN

The cost of felling was determined by price districts, based on the cost of harvesting per administrative county, weighted by quantities logged per county. The information on the cost was obtained from Skogsstatistisk årsbok (Statistical Yearbook of Forestry), Tables 31 and 32, and since 1963/64 Table 44. The mean quantities felled per administrative county in 1957/58–1966/67 were obtained from the

Kungl. Skogsstyrelsen (The National Board of Private Forestry of Sweden). The cost of harvesting was converted to correspond to that of 2-metre pulpwood including bark, apart from price districts 2, 3, 4 and 5 for the years 1958/59–1963/64 where it was converted to equal that of 2-metre pulpwood roughly bark-ed.

## 6. STUMPAGE PRICES OF PULPWOOD IN SWEDEN

The stumpage prices were determined by subtracting the cost of felling from the corresponding contract prices. Weighted by the quantities logged, the mean stumpage prices were

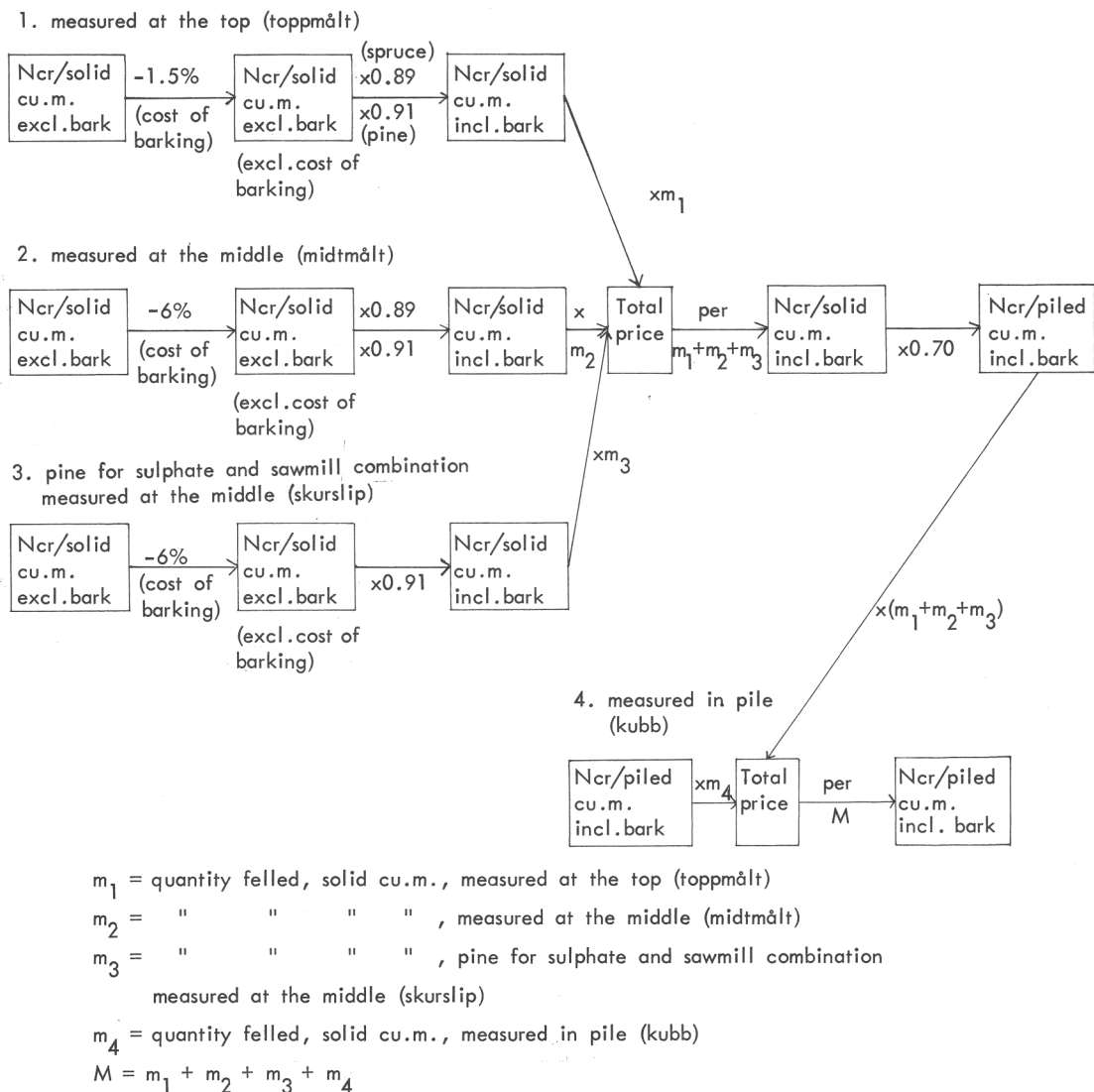
calculated for South Sweden, which included price districts 2, 3, 4 and 5; for North Sweden, which covered price district 1; and for the whole of Sweden.

## 7. CONTRACT PRICES OF PULPWOOD IN NORWAY

The contract price data for Norway were obtained from Norges Treføredlingsråd (The Norwegian Pulp and Paper Industry Council). The contract prices, which depend on annual negotiations between the Norwegian forest owners' association and the organisations of the forest industry, cover practically all roundwood trade in Norway. Fifty per cent of the timber harvest in Norway are measured at the top (toppmålt), the rest being pulpwood measured at the middle (midtmålt) or in pile (kubb). Due to shortage of pulpwood, a large percentage of timber measured at the top is bought by the pulp and paper industry, even though the price for this assortment has been fixed on the basis of sawmill operations. Sales contracts thus usually include timber measured at the middle

or in pile. In the past the Norwegian pulp and paper industry has also purchased pine at a price in between the price for timber measured at the top and at the middle. This specially measured assortment is called "skurslip".

The contract prices of conifers were indicated as prices per cubic metre solid measure excluding bark, except for timber measured in pile (kubb) which was quoted per cubic metre piled measure, both including and excluding bark. The contract prices for deciduous species were quoted directly per cubic metre piled measure of 2-metre pulpwood. The overall mean contract price of all types of timber assortments of each tree species, weighted by the quantities delivered, was calculated according to the following formulae:



The contract prices in Norwegian crowns were converted into Finnish marks at the rate 44.80 for felling years 1958/59–1966/67 and

58.80 for felling years 1967/68–1968/69. The rates were those supplied by the Bank of Finland Institute for Economic Research.

## 8. STUMPAGE PRICES OF PULPWOOD IN NORWAY

The Crown Forest Administration of Norway (Direktoratet for Statens Skoger) provided the felling cost for state-owned forests (Statens skoger) and church-owned forests (Opplysningsvesenets Fonds skoger). The felling cost for North Norway (Nordenfjells) was determined

by adding N cr. 2–3 per cu.m solid measure to that for state-owned forests and weighting with the total quantities felled. The basis of the felling cost for South Norway (Sonnenfjells) was the felling cost for church-owned forests which was increased by Ncr. 3–4 per cu.m

solid measure and weighted with the total quantities felled. The additions were made and the weighting with total quantities felled undertaken according to a recommendation by Norwegian experts, in order to bring the felling cost into agreement with the mean cost of felling pulpwood. Since the original contract

prices and felling costs were calculated per cubic metre, solid measure, excluding bark, the stumpage price obtained by subtraction was converted to the equivalent of the price per cubic metre piled measure including bark. The stumpage prices, as a result, were determined according to the following formulae:

1. (toppmålt)

Ncr/solid  
cu.m.  
excl.bark

2. (midtålt)

Ncr/solid  
cu.m.  
excl.bark

3. (skurslip)

Ncr/solid  
cu.m.  
excl.bark

4. (kubb)

Ncr/piled  
cu.m.  
excl.bark

Total  
price

$xm_1$   
 $xm_2$   
 $xm_3$   
 $xm_4$

per  
M

Contract  
price

Ncr/solid  
cu.m.  
excl.bark

(Ncr/solid cu.m.)

-felling  
cost

Stumpage  
price

Ncr/solid  
cu.m.  
excl.bark

$x0.70$

Ncr/piled  
cu.m.  
excl.bark

$x0.91$  (pine)  
 $x0.89$  (spruce)

Ncr/piled  
cu.m.  
incl.bark

$x1.43$

Ncr/solid  
cu.m.  
excl.bark

$m_1$ ,  $m_2$ ,  $m_3$ ,  $m_4$  and  $M$ , see page 8.

The stumpage prices were converted into Finnish marks in the same way as the contract prices above.

## 9. COMPARABILITY OF THE PRICE SERIES

Official rates of exchange are often poor conversion factors for international price and wage comparisons. This emerges particularly clearly from the figures for 1967/68 and 1968/69 of the price series quoted. According to whether or not the 1967 devaluation of the Finnish mark is taken into consideration in the

calculations, the Swedish and Norwegian prices converted into marks are very different. For example, if the official rates of exchange and thus the Finnish devaluation in 1967 are taken into account in Table 2.1. for Sweden, the result is that the contract prices in Sweden appear to have increased throughout in 1967/



68 and 1968/69, compared with the 1966/67 level. Yet the Swedish contract prices, in terms of Swedish money, fell very noticeably from 1966/67 to 1967/68. This price drop was naturally a reality for the forest owners and industrialists in Sweden. The increase in the Swedish and Norwegian prices (in terms of marks) would only be realistic if pulpwood

were bought from Sweden or Norway for Finnish marks. Since this is not usual, it would seem more sensible to compare the periods of time discussed, disregarding the changed rate of exchange due to devaluation. These prices have in fact been entered for the last two years of the tables and drawings.

## 10. RATIO OF EXPORT PRICES TO STUMPAGE PRICES

To create a comparison of prices not affected by the rates of exchange, inter-Scandinavian comparisons were also carried out by measuring certain export prices of each country by the pulpwood prices. Mean export prices were calculated from the Finnish, Swedish and Norwegian foreign trade statistics for the items listed below. The ratio between one export unit and the stumpage price of the quantity of roundwood required reflects the margin within which the harvesting of timber, and manufacture and marketing of the products, takes place. Detailed comparison would have presupposed analysis of the prices of export items of homogeneous contents and figures on the yield from the production processes concerned. For the present study, it was considered adequate to determine the export prices of some of the most common items in Scandinavia (which due to the differences in production structure were not necessarily of identical content) and to compare the price of an export unit (price per ton) with the stumpage price of the roundwood (price per cu.m piled measure). Using this method, the numerical differences between the ratios obtained do not deserve too much attention, whereas the general trend in the development of the ratios and the intensity of changes in different countries provide an indication of the economic situation in which industry operates in each country.

The items analysed were mainly produced from spruce pulpwood and were entered in the foreign trade statistics of the respective countries as follows:

Article	Item
Roundwood	
Finland	4701101/103
Sweden	4701101
Norway	4701104
Sulphite pulp	
Finland	4701501/505/509 (=unbleached)
Sweden	4701500 (=unbleached)
Norway	4701692 (=bleached)
Newsprint	
Finland	4801110
Sweden	4801111
Norway	4801111

The export prices for these items in 1958–1969 are given in Table 5.1. The ratio between export price and stumpage was calculated as follows:

$$\frac{A}{b} = C$$

A = export price per ton  
b = stumpage price per cu.m piled measure including bark

It should be noted that the ratios were calculated with price measured in terms of the money of the respective countries. As a result, for example, the advantage of devaluation to Finnish exports is illustrated by the turn of the curves for the ratio into a fairly steep rise. The export surcharge payable by the exporters in Finland was disregarded.

The ratios calculated for the items listed are given in Table 5.2. and the graphs illustrating these ratios in Figs. 15, 16 and 17.

## 11. GENERAL CHARACTERISTICS OF THE RESULTS

Price agreements determine the regional prices in Finland, Sweden and Norway. The Finnish agreements, however, are based on a much more detailed regional division than those in Sweden and Norway. This, and the earlier absence of the price agreement practice in Finland, meant that the gap between the highest and lowest stumpage and contract prices paid is distinctly wider for all tree species than in Sweden and Norway.

The price differences between the species run a parallel course in all three countries. The stumpage price of spruce pulpwood is highest, next comes pine, and birch fetches the lowest price. At the moment the widest gap between spruce and pine prices is recorded for Norway (average, about Fmk 3.50). In Finland and Sweden the gap is practically the same (about Fmk 2.00). The stumpage price of birch pulpwood in Finland and Norway is remarkably low compared with spruce and pine pulpwood, whereas in Sweden — especially in North Sweden — the stumpage prices of spruce, pine and birch are very close to one another.

When the prices fetched by the different timber assortments in the three countries are compared, the result depends again on whether the changes caused by devaluation in the stumpage prices measured in terms of Finnish

money are considered. The mutual ratios for each country are presented in the following without regard to the devaluation. When the southern parts of the countries are compared, the stumpage prices of pine and spruce pulpwood were highest in Finland and lowest in Sweden, whereas birch pulpwood is most expensive in Sweden, while in Finland the stumpage price level of birch is apparently slightly lower than in Norway (the Norwegian price data for the last felling season are not available). When the northern parts of the countries are compared, the stumpage price of both spruce and pine pulpwood is highest in Norway and lowest in Sweden. If the comparison is based on price series converted by the official rates of exchange, the ratios are slightly changed. The stumpage price of spruce pulpwood for the southern half is highest in Norway and for pine pulpwood highest in Finland. The Swedish price level is lowest for both. The stumpage price for the northern halves, for both spruce and pine pulpwood, is highest in Norway and lowest in Sweden.

All the ranking orders quoted above are based on the situation in the felling year 1968/69. The attached figures show that the ranking of the countries has fluctuated slightly during the period under review.

## 12. RELIABILITY OF THE RESULTS

With the exception of the Finnish contract prices, the results obtained have been calculated on total series of data, and hence no statistical and mathematical reliability calculations can be presented. The Finnish prices are based on the true stumpage and contract prices paid, except in the felling year 1968/69, whereas for Sweden and Norway the basis was the contract prices in delivery sales. This detracts from the confidence level, especially in the inter-country comparison.

Bias may be produced by the uncertainty of the conversion coefficients used for each country. The comparison of inter-country levels suffers from the fact that the definitions in the different countries are not always identical. In ten years the purport of definitions can undergo changes, which may not necessarily be the

same in all three countries. The clearest example is, perhaps, the differences in the pulpwood definition between Norway and the other Scandinavian countries.

A special problem is whether, on the whole, international levels can be compared on the basis of official rates of exchange. A more objective method would be to compare, for example, the consumption patterns among stumpage price recipients in the different countries. The stumpage price brought into proportion with consumption patterns would provide a truer idea of the differences between stumpage price levels than a comparison of levels based on rates of exchange alone. This method is, however, laborious and results in several different yet equally "correct" price ratios.

### 13. STUMPAGE AND CONTRACT PRICES OF PULPWOOD IN THE FELLING SEASON 1969/70

Approximate contract prices were determined on the basis of the price recommendation agreements which took effect in summer and autumn 1969. The prices in Sweden and Norway were converted to correspond to the prices of a cubic metre, piled measure, incl. bark in Fmk applying the same methods as previously used in the study. The stumpage prices in each of the three countries were determined by subtracting the cost of felling from the corresponding contract prices. In Finland the cost of felling has been agreed upon in the price recommendation agreement and therefore those figures

were used, whereas in Sweden and Norway the cost of felling in the season 1968/69 was applied.

An appreciable increase has been the overall tendency in the development of the contract prices in the Scandinavian countries during the felling season 1969/70. The contract prices increased about 2 Fmk/cu.m in Finland, nearly the same amount in Norway and were appreciably higher in Sweden; if the present exchange rates are applied.

Table 3 shows the prices.



## TABLES

### 1. Finland

- |   |   |
|---|---|
| 1.1. Stumpage prices for privately-owned forests in Finland by economic regions, 1958/59–1967/68                  | 1.5. Cost of pulpwood logging in Finland by the regions compared in the study, 1958/59–1968/69                    |
| 1.2. Stumpage prices for privately-owned forests in Finland by the regions compared in the study, 1958/59–1968/69 | 1.6. Contract prices for privately-owned forests in Finland by economic regions, 1958/59–1967/68                  |
| 1.3. Stumpage prices for privately-owned forests in South and North Finland, 1958/59–1968/69                      | 1.7. Contract prices for privately-owned forests in Finland by the regions compared in the study, 1958/59–1968/69 |
| 1.4. Stumpage prices for privately-owned forests in the whole of Finland, 1958/59–1968/69                         | 1.8. Contract prices for privately-owned forests in South and North Finland, 1958/59–1968/69                      |

### 2. Sweden

- |   |   |
|---|---|
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1.1. Stumpage prices for privately-owned forests in Finland by  
economic regions, 1958/59 - 1967/68

Fmk/cu.m. piled measure, 2-m pulpwood incl. bark												
Felling season	1958/59		1959/60		1960/61		1961/62		1962/63		1963/64	
Economic region	1	2	1	2	1	2	1	2	1	2	1	2
Uusimaa	7.93	5.84	8.61	6.12	14.03	7.84	14.70	7.77	11.84	7.28	15.93	11.68
Varsinais-Suomi	8.31	5.94	9.21	5.50	14.48	7.94	14.79	8.89	11.82	7.27	15.31	10.93
Satakunta	8.61	5.81	9.76	5.75	14.60	8.16	15.40	8.89	12.46	7.16	15.33	10.61
Tammermaa	8.26	5.75	8.63	6.12	13.27	8.19	14.35	8.33	11.80	6.68	14.69	10.19
Etelä-Häme	8.40	5.98	8.67	6.09	12.56	7.95	13.95	8.03	11.91	7.43	14.67	10.94
Kaakkois-Suomi	9.08	6.29	9.61	6.35	13.09	7.82	14.75	7.91	12.47	7.76	15.60	11.49
Etelä-Savo	7.40	5.35	7.89	5.74	10.55	6.80	12.12	7.06	11.00	6.89	13.68	10.57
Pohjois-Karjala	4.62	3.04	4.72	3.37	8.08	4.74	9.60	5.20	8.33	4.84	11.18	8.19
Pohjois-Savo	5.73	3.70	6.32	4.46	9.63	6.19	11.31	6.31	10.02	6.16	12.49	9.02
Keski-Suomi	7.37	5.25	9.16	5.42	11.49	7.52	13.13	8.07	11.22	6.77	13.37	9.60
Etelä-Pohjanmaa	7.74	4.13	9.09	3.64	13.76	6.97	14.38	7.96	10.86	6.92	14.49	10.21
Keski-Pohjanmaa	7.26	4.48	8.08	4.32	12.48	7.34	13.52	8.27	10.78	6.84	13.64	10.05
Kainuu	2.85	0.79	2.64	0.57	7.09	2.33	8.09	2.00	6.64	1.92	8.04	3.62
Pohjois-Pohjanmaa	3.16	2.14	2.56	1.23	6.92	2.83	8.15	3.37	6.80	2.67	7.79	5.08
Lappi	1.89	0.11	2.14	0.44	5.54	0.86	8.11	1.53	7.21	1.79	7.05	2.84

Felling season	1964/65		1965/66			1966/67			1967/68		
Economic region	1	2	1	2	3	1	2	3	1	2	3
Uusimaa	17.43	13.94	17.02	13.45	3.49	14.72	11.11	2.43	12.06	8.44	3.34
Varsinais-Suomi	17.18	13.61	16.71	13.19	3.38	14.31	10.64	2.76	11.41	7.88	3.92
Satakunta	17.33	13.68	16.67	13.03	3.40	14.53	10.81	3.71	11.63	8.00	4.13
Tammermaa	16.24	12.58	15.62	11.98	3.32	13.46	9.85	2.48	10.82	7.26	3.28
Etelä-Häme	16.32	12.70	15.91	12.34	3.24	13.55	10.17	2.44	10.91	7.68	4.03
Kaakkois-Suomi	17.48	13.72	16.87	13.26	3.11	14.72	10.99	2.81	12.15	8.56	3.55
Etelä-Savo	15.56	12.22	15.23	11.93	2.75	12.63	9.53	2.14	10.39	7.44	2.97
Pohjois-Karjala	13.16	10.03	13.02	9.67	1.65	10.29	6.81	1.33	7.71	4.52	1.66
Pohjois-Savo	14.09	10.67	13.72	10.16	3.05	11.07	7.42	2.20	8.92	5.45	2.53
Keski-Suomi	15.55	11.93	15.10	11.48	3.37	12.80	9.10	2.68	10.35	6.87	3.40
Etelä-Pohjanmaa	16.40	12.71	15.75	12.04	3.40	13.67	9.93	2.71	10.64	7.12	..
Keski-Pohjanmaa	15.29	11.52	14.85	10.77	2.60	12.71	8.69	2.38	9.90	6.28	..
Kainuu	9.16	6.45	9.05	6.40	1.06	6.54	3.59	..	4.41	1.63	..
Pohjois-Pohjanmaa	9.40	7.51	8.67	6.62	0.58	6.43	4.24	1.30	5.36	2.97	..
Lappi	8.65	4.41	8.05	4.23	0.90	5.27	1.62	..	4.47	0.68	..

- 1 = spruce pulpwood  
2 = pine pulpwood  
3 = birch pulpwood

1.2. Stumpage prices for privately-owned forests in Finland by the regions compared  
in the study, 1958/59 - 1968/69

Fmk/cu.m. piled measure, 2-m pulpwood incl. bark

Regions compared	Region 1		Region 2			Region 3			Region 4		
Felling season	spruce	pine	spruce	pine	birch	spruce	pine	birch	spruce	pine	birch
1958/59	1.89	0.11	5.85	2.09	..	7.06	4.82	..	8.43	6.14	..
1959/60	2.14	0.44	6.42	1.58	..	7.55	5.03	..	9.18	6.17	..
1960/61	5.54	0.86	10.54	4.55	..	10.90	6.10	..	13.98	7.88	..
1961/62	8.11	1.53	11.25	4.31	..	12.30	6.96	..	14.85	7.87	..
1962/63	7.21	1.79	8.60	4.39	..	10.69	6.50	..	12.16	7.46	..
1963/64	7.05	2.84	11.52	7.71	..	13.23	9.66	..	15.59	11.33	..
1964/65	8.65	4.41	12.97	9.88	..	15.10	11.62	..	17.38	13.73	..
1965/66	8.05	4.23	12.11	9.02	..	14.73	11.23	..	16.86	13.25	..
1966/67	5.27	1.62	10.44	7.19	..	12.28	8.75	..	14.60	10.90	..
1967/68	4.47	0.68	8.34	5.03	..	9.90	6.53	2.91	11.84	8.25	3.57
1968/69*	5.80	3.60	9.75	7.50	2.60	11.80	9.65	3.60	13.00	10.95	3.80

\* Here and in the following tables, this figure is an advance estimate

1.3. Stumpage prices for privately-owned forests in South and  
North Finland, 1958/59 - 1968/69

Fmk/cu.m. piled measure, 2-m pulpwood incl. bark

Felling season	South Finland			North Finland	
	spruce	pine	birch	spruce	pine
1958/59	7.49	5.02	..	2.54	0.83
1959/60	8.11	5.26	..	2.43	0.69
1960/61	12.00	6.57	..	6.48	1.73
1961/62	13.19	7.22	..	8.12	1.88
1962/63	11.03	6.75	..	6.88	1.96
1963/64	13.94	10.13	..	7.60	3.44
1964/65	15.81	12.26	..	9.05	5.65
1965/66	15.34	11.70	..	8.55	5.35
1966/67	13.10	9.45	..	5.96	2.72
1967/68	10.53	7.05	2.96	4.66	1.32
1968/69*	12.15	10.00	3.70	6.40	4.40

1.4. Stumpage prices for privately-owned forests in the whole of Finland, 1958/59 - 1968/69

Fmk/cu.m. piled measure, 2-m pulpwood incl. bark		
Felling season	Finland	
	spruce	pine
1958/59	6.85	4.22
1959/60	7.30	4.37
1960/61	11.03	5.55
1961/62	12.30	6.12
1962/63	10.16	5.60
1963/64	12.85	8.62
1964/65	14.58	10.44
1965/66	13.84	9.70
1966/67	11.67	7.62
1967/68	9.55	5.52
1968/69*	11.05	8.50

1.5. Cost of pulpwood logging in Finland by the regions compared in the study, 1958/59 - 1968/69

Fmk/cu.m. piled measure, 2-m pulpwood incl. bark						
Region compared	Region 1		Region 2		Regions 3 and 4	
Felling season	spruce	pine	spruce	pine	spruce	pine
1958/59	10.13	9.63	7.83	9.06	6.43	6.91
1959/60	9.96	9.06	7.94	8.37	6.71	6.02
1960/61	10.26	9.34	8.11	7.86	6.43	5.90
1961/62	9.81	9.20	8.47	8.15	7.26	6.64
1962/63	9.16	8.26	8.11	7.58	6.86	6.86
1963/64	9.62	9.46	8.70	8.54	8.01	7.91
1964/65	10.55	10.93	9.18	9.53	8.06	8.46
1965/66	10.44	10.46	9.18	9.52	7.92	8.65
1966/67	11.35	11.14	9.73	9.88	8.56	9.09
1967/68	12.48	12.71	10.95	11.25	10.07	10.35
1968/69*	12.00	10.50	11.50	10.15	11.25	10.00

1.6. Contract prices for privately-owned forests in Finland by  
economic regions, 1958/59 - 1967/68

Fmk/cu.m. piled measure, 2-m pulpwood incl. bark

Economic region	1958/59		1959/60		1960/61		1961/62		1962/63	
	1	2	1	2	1	2	1	2	1	2
Uusimaa	14.36	12.75	15.32	12.14	20.46	13.74	21.96	14.41	18.70	14.14
Varsinais-Suomi	14.74	12.85	15.92	11.52	20.91	13.84	22.05	15.53	18.68	14.13
Satakunta	15.04	12.72	16.47	11.77	21.03	14.06	22.66	15.53	19.32	14.02
Tammermaa	14.69	12.66	15.34	12.14	19.70	14.09	21.61	14.97	18.66	13.54
Etelä-Häme	14.83	12.89	15.38	12.11	18.99	13.85	21.21	14.67	18.77	14.29
Kaakkois-Suomi	15.51	13.20	16.32	12.37	19.52	13.72	22.01	14.55	19.33	14.62
Etelä-Savo	13.83	12.26	14.60	11.76	16.98	12.70	19.38	13.70	17.86	13.75
Pohjois-Karjala	11.05	9.95	11.43	9.39	14.51	10.64	16.86	11.84	15.19	11.70
Pohjois-Savo	12.16	10.61	13.03	10.48	16.06	12.09	18.57	12.95	16.88	13.02
Keski-Suomi	13.80	12.16	15.87	11.44	17.92	13.42	20.39	14.71	18.08	13.63
Etelä-Pohjanmaa	14.17	11.04	15.80	9.66	20.19	12.87	21.64	14.60	17.72	13.78
Keski-Pohjanmaa	13.69	11.39	14.79	10.34	18.91	13.24	20.78	14.91	17.64	13.70
Kainuu	12.98	10.42	12.60	9.63	17.35	11.67	17.90	11.20	15.80	10.18
Pohjois-Pohjanmaa	13.29	11.77	12.52	10.29	17.18	12.17	17.96	12.57	15.96	10.93
Lappi	12.02	9.74	12.10	9.50	15.80	10.20	17.92	10.73	16.37	10.05

Economic region	1963/64		1964/65		1965/66		1966/67		1967/68		
	1	2	1	2	1	2	1	2	1	2	3
Uusimaa	23.94	19.59	25.49	22.40	24.94	22.10	23.28	20.56	22.13	18.79	13.09
Varsinais-Suomi	23.32	18.84	25.24	22.07	24.63	21.84	22.87	20.09	21.48	18.23	13.67
Satakunta	23.34	18.52	25.39	22.14	24.59	21.68	23.09	20.26	21.70	18.35	13.88
Tammermaa	22.70	18.10	24.30	21.04	23.54	20.63	22.02	19.30	20.89	17.61	13.03
Etelä-Häme	22.68	18.85	24.38	21.16	23.83	20.99	22.11	19.62	20.98	18.03	13.78
Kaakkois-Suomi	23.61	19.40	25.54	22.18	24.79	21.91	23.28	20.44	22.22	18.91	13.30
Etelä-Savo	21.69	18.48	23.62	20.68	23.15	20.58	21.19	18.98	20.46	17.79	12.72
Pohjois-Karjala	19.19	16.10	21.22	18.49	20.94	18.32	18.85	16.26	17.78	14.87	11.41
Pohjois-Savo	20.50	16.93	22.15	19.13	21.64	18.81	19.63	16.87	18.99	15.80	12.28
Keski-Suomi	21.38	17.51	23.61	20.39	23.02	20.13	21.36	18.55	20.42	17.22	13.15
Etelä-Pohjanmaa	22.50	18.12	24.46	21.17	23.67	20.69	22.23	19.38	20.71	17.47	..
Keski-Pohjanmaa	21.65	17.96	23.35	19.98	22.77	19.42	21.27	18.14	19.97	16.63	..
Kainuu	17.66	13.08	19.71	17.38	19.49	16.86	17.89	14.73	16.89	14.34	..
Pohjois-Pohjanmaa	17.41	14.54	19.95	18.44	19.11	17.08	17.78	15.38	17.84	15.68	..
Lappi	16.67	12.30	19.20	15.34	18.49	14.69	16.62	12.76	16.95	13.39	..

1 = spruce pulpwood

2 = pine pulpwood

3 = birch pulpwood



1.7. Contract prices for privately-owned forests in Finland by regions compared  
in the study, 1958/59 - 1968/69

Fmk/cu.m. piled measure, 2-m pulpwood incl. bark											
Regions compared	Region 1		Region 2			Region 3			Region 4		
Felling season	spruce	pine	spruce	pine	birch	spruce	pine	birch	spruce	pine	birch
1958/59	12.02	9.74	13.68	11.15	..	13.49	11.73	..	14.86	13.05	..
1959/60	12.10	9.50	14.36	9.95	..	14.26	11.05	..	15.89	12.19	..
1960/61	15.80	10.20	18.65	12.41	..	17.33	12.00	..	20.41	13.78	..
1961/62	17.92	11.34	19.72	12.46	..	19.56	13.60	..	22.11	14.51	..
1962/63	16.37	10.05	16.71	11.97	..	17.55	13.36	..	19.02	14.32	..
1963/64	16.67	12.30	20.22	16.25	..	21.24	17.57	..	23.60	19.24	..
1964/65	19.20	15.34	22.15	19.41	..	23.16	20.08	..	25.44	22.19	..
1965/66	18.49	14.69	21.29	18.54	..	22.65	19.88	..	24.78	21.90	..
1966/67	16.62	12.76	18.48	17.07	..	20.84	17.84	..	23.16	19.99	..
1967/68	16.95	13.39	19.29	16.28	..	19.97	16.88	12.66	21.91	18.60	13.32
1968/69*	17.80	14.10	21.25	17.65	12.50	23.05	19.65	13.35	24.25	20.95	13.55

1.8. Contract prices for privately-owned forests in South and  
North Finland, 1958/59 - 1968/69

Fmk/cu.m. piled measure, 2-m pulpwood incl. bark					
Felling season	South Finland			North Finland	
	spruce	pine	birch	spruce	pine
1958/59	13.92	11.93	..	12.67	10.46
1959/60	14.82	11.28	..	12.39	9.75
1960/61	18.43	12.47	..	16.74	11.07
1961/62	20.45	13.86	..	17.93	11.08
1962/63	17.89	13.50	..	16.04	10.22
1963/64	21.95	18.04	..	17.22	12.90
1964/65	23.87	20.72	..	19.60	16.58
1965/66	23.26	20.35	..	18.99	15.81
1966/67	21.66	18.54	..	17.31	13.86
1967/68	20.60	17.40	12.71	17.14	14.03
1968/69*	23.40	20.00	13.35	18.25	14.75

2.1. Contract prices for privately-owned forests in Sweden, as recommended by agreements, by price districts, 1958/59 - 1968/69

Felling season	District 1				District 2				District 3				District 4				District 5			
	spruce	pine	birch		spruce	pine	birch	<sup>2)</sup>	spruce	pine	birch		spruce	pine	birch		spruce	pine	birch	
1958/59	14.85	12.81	..		15.12	13.63	..	..	15.35	13.11	..	..	16.79	13.11	..	..	15.35	12.47	..	..
1959/60	16.47	14.70	..		16.99	15.23	..	..	17.93	14.41	..	..	19.06	15.05	9.02	..	17.78	14.09	..	..
1960/61	19.23	17.45	..		19.85	17.39	..	..	22.17	17.02	13.41	13.41	22.81	18.32	13.08	..	23.29	18.32	..	..
1961/62	19.10	17.33	..		19.64	17.16	..	..	22.24	17.09	13.45	13.45	22.88	18.37	13.12	..	23.37	18.37	13.12	13.12
1962/63	16.81	15.03	..		17.89	15.83	..	..	19.63	15.76	13.43	13.43	20.11	17.86	13.10	..	20.11	16.41	12.43	12.43
1963/64	17.97	16.74	..		18.30	16.79	..	..	20.92	17.70	14.27	14.27	21.88	19.14	13.10	..	21.88	18.99	13.77	13.77
1964/65	19.21	17.99	19.81		20.40	18.89	19.20	19.20	23.24	20.17	15.50	15.50	23.73	21.31	14.82	..	23.73	21.31	14.82	14.82
1965/66	18.84	17.61	19.81		19.90	18.39	..	..	23.24	20.49	14.65	14.65	23.73	21.31	14.82	..	23.73	21.31	14.82	14.82
1966/67	17.63	16.67	18.83		19.44	18.08	18.20	18.20	21.79	19.37	14.49	14.49	22.27	20.17	14.65	..	22.27	20.17	14.82	14.82
1967/68 <sup>1)</sup>	18.97 (14.63)	18.27 (14.06)	21.75 (16.77)		20.61 (15.88)	19.54 (15.07)	21.86 (16.84)	21.86	22.62 (17.43)	20.95 (16.14)	17.49 (13.47)	17.49	22.62 (17.43)	20.95 (16.14)	17.49 (13.47)	..	22.62 (17.43)	20.95 (16.14)	17.49 (13.41)	17.49
1968/69 <sup>1)</sup>	18.89 (14.58)	18.19 (14.01)	21.75 (16.77)		20.68 (15.95)	19.44 (14.99)	22.45 (17.30)	22.45	23.04 (17.76)	20.95 (16.14)	17.93 (13.81)	17.93	23.04 (17.76)	20.95 (16.14)	17.93 (13.81)	..	22.62 (17.43)	20.95 (16.14)	17.93 (13.81)	17.93

1) The prices for felling seasons 1967/68-1968/69 excluding the effect of Finnish devaluation are given in brackets.

Contract prices of conifers for Districts 1 and 2 were obtained from prices on completed sorting from which floating cost was subtracted, i.e. the prices are quoted on a floating channel.

2) Birch pulpwood prices for Districts 1 and 2 free at the mill.

2.2. Contract prices for privately-owned forests in South and North Sweden, as recommended by agreements, 1958/59 - 1968/69

Felling season	Fmk/cu.m. piled measure, 2-m pulpwood incl. bark				
	South Sweden			North Sweden (region 1)	
	spruce	pine	birch	spruce	pine
1958/59	15.53	12.80	..	14.85	12.81
1959/60	17.89	14.42	..	16.47	14.70
1960/61	22.63	18.01	..	19.23	17.45
1961/62	22.67	18.03	13.18	19.10	17.33
1962/63	19.77	16.45	12.71	16.81	15.03
1963/64	21.30	18.55	13.74	17.97	16.74
1964/65	23.25	20.84	14.94	19.21	17.99
1965/66	23.19	20.83	14.79	18.84	17.61
1966/67	21.85	19.80	14.74	17.63	16.67
1967/68	22.37	20.78	17.49	18.97	18.27
1) 1967/68	(17.24)	(16.01)	(13.43)	(14.63)	(14.06)
1968/69	22.51	20.77	17.93	18.89	18.19
1) 1968/69	(17.35)	(16.00)	(13.81)	(14.58)	(14.01)

South Sweden = price districts 2, 3, 4 and 5

South Sweden birch = price districts 3, 4 and 5

1) See footnote for Table 2.1.

2.3. Cost of logging in Sweden, by price districts, 1958/59 - 1968/69

Felling season	Fmk/cu m. piled measure, 2-m pulpwood incl. bark (Fmk/cu.m. piled measure, 2-m pulpwood roughly barked)									
	Region 1		Region 2		Region 3		Region 4		Region 5	
	conifer	birch	conifer	birch	conifer	birch	conifer	birch	conifer	birch
1958/59	10.03	8.26	15.38	12.88	14.21	..	13.98	..	12.81	..
1959/60	9.92	8.16	15.41	12.90	14.11	..	13.36	..	12.70	..
1960/61	10.49	8.63	16.40	13.73	15.26	..	13.93	..	13.25	..
1961/62	11.76	9.67	16.94	14.17	15.80	..	14.74	..	14.35	..
1962/63	12.15	9.99	15.96	13.35	16.00	..	15.21	..	14.91	..
1963/64	12.83	10.55	16.12	13.49	16.48	..	15.49	..	15.41	..
1964/65	11.79	9.83	11.19	9.34	12.44	10.37	12.06	10.05	10.51	8.77
1965/66	11.95	9.96	11.77	9.81	12.40	10.34	12.10	10.09	10.83	9.04
1966/67	12.01	10.01	11.61	9.68	11.49	9.59	11.71	9.76	10.55	8.79
1967/68*	16.05	13.15	15.10	12.75	14.75	12.25	15.20	12.55	13.80	11.60
1) 1967/68	(12.37)	(10.12)	(11.66)	( 9.84)	(11.37)	( 9.44)	(11.72)	( 9.69)	(10.62)	( 8.94)
1968/69*	16.25	13.30	15.25	12.90	14.35	11.85	15.05	12.35	13.85	11.70
1) 1968/69	(12.53)	(10.25)	(11.75)	( 9.94)	(11.06)	( 9.12)	(11.59)	( 9.53)	(10.66)	( 9.00)

The felling costs in 1958/59-1963/64 in price districts 2, 3, 4 and 5 refer to roughly barked pulpwood.

1) See footnote for Table 2.1.

#### 2.4.4. Stumpage prices for privately-owned forests in Sweden, by price districts, 1958/59 - 1968/69

Felling season	District 1		District 2		District 3			District 4			Fmk/cu.m. piled measure, 2-m pulpwood incl. bark		
	spruce	pine	spruce	pine	spruce	pine	birch	spruce	pine	birch	spruce	pine	birch
1958/59	4.82	2.78	6.82	5.06	6.56	4.31	..	8.02	4.51	..	7.79	4.98	..
1959/60	6.55	4.78	8.61	6.55	8.91	5.55	..	10.56	6.77	..	10.01	6.51	..
1960/61	8.74	6.96	10.82	8.05	11.63	6.85	..	13.37	9.15	..	14.39	9.75	..
1961/62	7.34	5.57	10.44	7.65	11.25	6.43	..	12.73	8.50	..	13.51	8.84	..
1962/63	4.66	2.88	9.47	7.12	8.76	5.10	..	9.89	7.06	..	10.16	6.62	..
1963/64	5.14	3.91	10.43	8.61	9.48	6.37	..	11.18	8.51	..	11.26	8.44	..
1964/65	7.42	6.20	9.21	7.70	10.80	7.73	5.13	11.67	9.25	4.77	13.22	10.80	6.05
1965/66	6.89	5.66	8.13	6.62	10.84	8.09	4.31	11.63	9.21	4.73	12.90	10.48	5.78
1966/67	5.62	4.66	7.83	6.47	10.30	7.88	4.90	10.56	8.46	4.89	11.72	9.62	6.03
1967/68 <sup>1)</sup>	2.92 (2.26)	2.22 (1.69)	5.51 (4.22)	4.44 (3.41)	7.87 (6.06)	6.20 (4.77)	5.24 (4.03)	7.42 (5.71)	5.75 (4.42)	4.94 (3.78)	8.82 (6.81)	7.15 (5.52)	5.89 (4.52)
1968/69 <sup>1)</sup>	2.64 (2.05)	1.94 (1.48)	5.43 (4.20)	4.19 (3.24)	8.69 (6.70)	6.60 (5.08)	6.08 (4.69)	7.99 (6.17)	5.90 (4.55)	5.58 (4.28)	8.77 (6.77)	7.10 (5.48)	6.23 (4.81)

2.5. Stumpage prices for privately-owned forests in South and North Sweden, 1958/59 - 1968/69

Fmk/cu.m. piled measure, 2-m pulpwood incl. bark					
Felling season	South Sweden			North Sweden (region 1)	
	spruce	pine	birch	spruce	pine
1958/59	7.52	4.82	..	4.82	2.78
1959/60	9.76	6.41	..	6.55	4.78
1960/61	13.39	9.02	..	8.74	6.96
1961/62	12.68	8.29	..	7.34	5.57
1962/63	9.83	6.52	..	4.66	2.88
1963/64	10.88	8.16	..	5.14	3.91
1964/65	12.14	9.74	5.68	7.42	6.20
1965/66	11.83	9.47	5.36	6.89	5.66
1966/67	10.86	8.81	5.65	5.62	4.66
1967/68 <sup>✱</sup>	8.07	6.47	5.62	2.92	2.22
1) (6.22)	(6.22)	(4.99)	(4.31)	(2.26)	(1.69)
1968/69 <sup>✱</sup>	8.24	6.49	6.10	2.64	1.94
1) (6.36)	(6.36)	(5.01)	(4.70)	(2.05)	(1.48)

South Sweden = price districts 2, 3, 4 and 5

South Sweden birch = price districts 3, 4 and 5

1) See footnote for Table 2.1.

2.6. Stumpage prices for privately-owned forests in the whole of Sweden, 1958/59 - 1968/69

Fmk/cu.m. piled measure, 2-m pulpwood incl. bark		
Felling season	Sweden	
	spruce	pine
1958/59	6.65	4.17
1959/60	8.73	5.89
1960/61	11.90	8.36
1961/62	10.97	7.42
1962/63	8.17	5.35
1963/64	9.04	6.80
1964/65	10.63	8.61
1965/66	10.25	8.25
1966/67	9.18	7.48
1967/68 <sup>✱</sup>	6.42	5.11
1) (4.95)	(4.95)	(3.93)
1968/69 <sup>✱</sup>	6.45	5.03
1) (4.98)	(4.98)	(3.88)

1) See footnote for Table 2.1.

3.1. Contract prices for privately-owned forests in South and North Norway, as recommended by agreements, 1958/59 - 1968/69

Felling season	Fmk/cu.m. piled measure, pulpwood incl. bark				
	South Norway			North Norway	
	spruce	pine	birch	spruce	pine
1958/59	22.06	18.84	..	20.31	16.97
1959/60	22.10	18.96	..	20.21	16.77
1960/61	24.41	20.96	..	22.45	19.08
1961/62	24.53	21.12	16.58	22.58	19.85
1962/63	23.34	20.38	16.58	21.52	19.04
1963/64	24.88	21.45	16.58	22.71	20.03
1964/65	27.60	23.86	19.04	25.03	22.20
1965/66	26.87	23.07	18.82	24.10	21.33
1966/67	26.21	22.42	18.82	24.20	21.75
1967/68	29.28	26.32	23.23	27.92	25.34
1) (22.31)	(20.06)	(17.70)	(21.28)	(19.31)	
1968/69	29.31	25.95	..	27.92	24.88
1) (22.33)	(19.77)	(..)	(21.28)	(18.95)	

1) See footnote for Table 2.1.

3.2. Contract prices for privately-owned forests in the whole of Norway, as recommended by agreements, 1958/59 - 1968/69

Felling season	Fmk/cu.m. piled measure, pulpwood incl. bark	
	Norway	
	spruce	pine
1958/59	21.96	18.83
1959/60	21.92	18.92
1960/61	24.22	20.87
1961/62	24.38	21.05
1962/63	23.15	20.27
1963/64	24.66	21.33
1964/65	27.33	23.72
1965/66	26.54	22.83
1966/67	25.87	22.36
1967/68	29.13	26.26
1) (22.20)	(20.01)	
1968/69	29.16	25.88
1) (22.22)	(19.72)	

1) See footnote for Table 2.1.

3.3. Estimated stumpage prices for privately-owned forests in South and North Norway, 1958/59 - 1968/69

Felling season	Fmk/cu.m. piled measure, pulpwood incl. bark				
	South Norway			North Norway	
	spruce	pine	birch	spruce	pine
1958/59	11.53	8.18	..	7.40	4.07
1959/60	11.75	8.37	..	8.09	4.69
1960/61	13.65	9.99	..	9.20	5.60
1961/62	12.19	8.66	1.98	7.27	4.31
1962/63	10.72	7.58	1.84	6.00	3.62
1963/64	12.19	8.73	1.84	7.23	4.70
1964/65	14.92	11.16	4.24	9.89	7.19
1965/66	13.86	9.99	3.76	9.82	7.10
1966/67	12.96	9.10	3.56	10.21	7.59
1967/68 <sup>✱</sup>	12.61	9.56	4.17	9.31	6.50
1) (9.61)	(9.61)	(7.28)	(3.18)	(7.10)	(4.95)
1968/69 <sup>✱</sup>	12.36	8.85	..	9.50	6.16
1) (9.42)	(9.42)	(6.74)	(..)	(7.24)	(4.70)

1) See footnote for Table 2.1.

3.4. Estimated stumpage prices for privately-owned forests in the whole of Norway, 1958/59 - 1968/69

Felling season	Fmk/cu.m. piled measure, pulpwood incl. bark	
	Norway	
	spruce	pine
1958/59	11.30	8.16
1959/60	11.41	8.30
1960/61	13.23	9.78
1961/62	11.80	8.43
1962/63	10.21	7.24
1963/64	11.68	8.39
1964/65	14.39	10.84
1965/66	13.37	9.60
1966/67	12.50	8.97
1967/68 <sup>✱</sup>	12.26	9.36
1) (9.34)	(9.34)	(7.13)
1968/69 <sup>✱</sup>	12.05	8.68
1) (9.19)	(9.19)	(6.61)

1) See footnote for Table 2.1.

4.1. Stumpage prices for spruce pulpwood in the southern and northern parts  
of Finland, Sweden and Norway, 1958/59 - 1968/69

Felling season	Fmk/cu.m. piled measure, pulpwood incl. bark					
	South			North		
	Finland	Sweden	Norway	Finland	Sweden	Norway
1958/59	7.49	7.52	11.53	2.54	4.82	7.40
1959/60	8.11	9.76	11.75	2.43	6.55	8.09
1960/61	12.00	13.39	13.65	6.48	8.74	9.20
1961/62	13.19	12.68	12.19	8.12	7.34	7.27
1962/63	11.03	9.83	10.72	6.88	4.66	6.00
1963/64	13.94	10.88	12.19	7.60	5.14	7.23
1964/65	15.81	12.14	14.92	9.05	7.42	9.89
1965/66	15.34	11.83	13.86	8.55	6.89	9.82
1966/67	13.10	10.86	12.96	5.96	5.62	10.21
1967/68 <sup>1)</sup>	10.53	8.07	12.61	4.66	2.92	9.31
1968/69 <sup>1)</sup>	-	(6.22)	(9.61)	-	(2.26)	(7.10)
1967/68 <sup>1)</sup>	12.15	8.24	12.36	6.40	2.64	9.50
1968/69 <sup>1)</sup>	-	(6.36)	(9.42)	-	(2.05)	(7.24)

1) Swedish and Norwegian prices for 1967/68 - 1968/69 excluding the effect of Finnish devaluation are given in brackets.

Sources: Tables 1.3., 2.2. and 3.3.

4.2. Stumpage prices for pine pulpwood in the southern and northern parts  
of Finland, Sweden and Norway, 1958/59 - 1968/69

Felling season	Fmk/cu.m. piled measure, pulpwood incl. bark					
	South			North		
	Finland	Sweden	Norway	Finland	Sweden	Norway
1958/59	5.02	4.82	8.18	0.83	2.78	4.07
1959/60	5.26	6.41	8.37	0.69	4.78	4.69
1960/61	6.57	9.02	9.99	1.73	6.96	5.60
1961/62	7.22	8.29	8.66	1.88	5.57	4.31
1962/63	6.75	6.52	7.58	1.96	2.88	3.62
1963/64	10.13	8.16	8.73	3.44	3.91	4.70
1964/65	12.26	9.74	11.16	5.65	6.20	7.19
1965/66	11.70	9.47	9.99	5.35	5.66	7.10
1966/67	9.45	8.81	9.10	2.72	4.66	7.59
1967/68 <sup>1)</sup>	7.05	6.47	9.56	1.32	2.22	6.50
1968/69 <sup>1)</sup>	-	(4.99)	(7.28)	-	(1.69)	(4.95)
1967/68 <sup>1)</sup>	10.00	6.49	8.85	4.40	1.94	6.16
1968/69 <sup>1)</sup>	-	(5.01)	(6.74)	-	(1.48)	(4.70)

1) See footnote for Table 4.1.

Sources: Tables 1.3., 2.5. and 3.3.



4.3. Stumpage prices for birch pulpwood in the southern parts of Finland, Sweden and Norway, 1961/62 - 1968/69

Fmk/cu.m. piled measure, pulpwood incl. bark			
Felling season	South		
	Finland	Sweden	Norway
1961/62	..	..	1.98
1962/63	..	..	1.84
1963/64	..	..	1.84
1964/65	..	5.68	4.24
1965/66	..	5.36	3.76
1966/67	..	5.65	3.56
1967/68 <sup>1)</sup>	2.96	5.62	4.17
1968/69 <sup>1)</sup>	-	(4.31)	(3.18)
	3.70	6.10	
	-	(4.70)	( .. )

1) See footnote for Table 4.1.

Sources: Tables 1.3., 2.5. and 3.3.

4.4. Contract prices of spruce pulpwood for the privately-owned forests in the southern and northern parts of Finland, Sweden and Norway, 1958/59 - 1968/69

Fmk/cu.m. piled measure, pulpwood incl. bark						
Felling season	South			North		
	Finland	Sweden	Norway	Finland	Sweden	Norway
1958/59	13.92	15.53	22.06	12.67	14.85	20.31
1959/60	14.82	17.89	22.10	12.39	16.47	20.21
1960/61	18.43	22.63	24.41	16.74	19.23	22.45
1961/62	20.45	22.67	24.53	17.93	19.10	22.58
1962/63	17.89	19.77	23.34	16.04	16.81	21.52
1963/64	21.95	21.30	24.88	17.22	17.97	22.71
1964/65	23.87	23.25	27.60	19.60	19.21	25.03
1965/66	23.26	23.19	26.87	18.99	18.84	24.10
1966/67	21.66	21.85	26.21	17.31	17.63	24.20
1967/68	20.60	22.37	29.28	17.14	18.97	27.92
1968/69	-	(17.24)	(22.31)	-	(14.63)	(21.28)
	23.40	22.51	29.31	18.25	18.89	27.92
	-	(17.35)	(22.33)	-	(14.58)	(21.28)

4.5. Contract prices of pine pulpwood for the privately-owned forests in the southern and northern parts of Finland, Sweden and Norway, 1958/59 - 1968/69

Felling season	Fmk/cu.m. piled measure, pulpwood incl. bark					
	South			North		
	Finland	Sweden	Norway	Finland	Sweden	Norway
1958/59	11.93	12.80	18.84	10.46	12.81	16.97
1959/60	11.28	14.42	18.96	9.75	14.70	16.77
1960/61	12.47	18.01	20.96	11.07	17.45	19.08
1961/62	13.86	18.03	21.12	11.08	17.33	19.85
1962/63	13.50	16.45	20.38	10.22	15.03	19.04
1963/64	18.04	18.55	21.45	12.90	16.74	20.03
1964/65	20.72	20.84	23.86	16.58	17.99	22.20
1965/66	20.35	20.83	23.07	15.81	17.61	21.33
1966/67	18.54	19.80	22.42	13.86	16.67	21.75
1967/68	17.40	20.78	26.32	14.03	18.27	25.34
1) 1967/68	-	(16.01)	(20.06)	-	(14.06)	(19.31)
1968/69	20.00	20.77	25.95	14.75	18.19	24.88
1) 1968/69	-	(16.00)	(19.77)	-	(14.01)	(18.95)

1) See footnote for Table 4.1.

Sources: Tables 1.8., 2.2. and 3.1.

4.6. Contract prices of birch pulpwood for the privately-owned forests in the southern parts of Finland, Sweden and Norway, 1961/62 - 1968/69

Felling season	Fmk/cu.m. piled measure, pulpwood incl. bark		
	South		
	Finland	Sweden	Norway
1961/62	..	13.18	16.58
1962/63	..	12.71	16.58
1963/64	..	13.74	16.58
1964/65	..	14.94	19.04
1965/66	..	14.79	18.82
1966/67	..	14.74	18.82
1967/68	12.71	17.49	23.23
1) 1967/68	-	(13.43)	(17.70)
1968/69	13.35	17.93	..
1) 1968/69	-	(13.81)	( .. )

1) See footnote for Table 4.1.

Sources: Tables 1.8., 2.2. and 3.1.

5.1. Export prices of certain woodworking products in Finland, Sweden and Norway, 1958-1969

Year	Mechanical pulp			Sulphite pulp			Newsprint		
	Finland Fmk/ton	Sweden Skr/ton	Norway Nkr/ton	Finland Fmk/ton	Sweden Skr/ton	Norway Nkr/ton	Finland Fmk/ton	Sweden Skr/ton	Norway Nkr/ton
1958	206	349	513	351	586	1110	423	730	948
59	185	333	484	316	544	963	411	685	905
60	190	331	478	320	568	971	407	687	889
61	188	333	479	346	596	972	403	691	897
62	186	332	480	323	542	869	400	687	894
63	188	331	470	318	549	882	401	684	870
64	187	328	471	347	589	964	398	679	867
65	202	357	505	359	606	991	398	679	867
66	206	337	494	339	580	944	402	682	868
67	212	340	482	351	574	910	436	678	870
68	270	353	487	413	545	909	514	655	846
69 <sup>1)</sup>	280	390	494	423	561	942	514	659	858

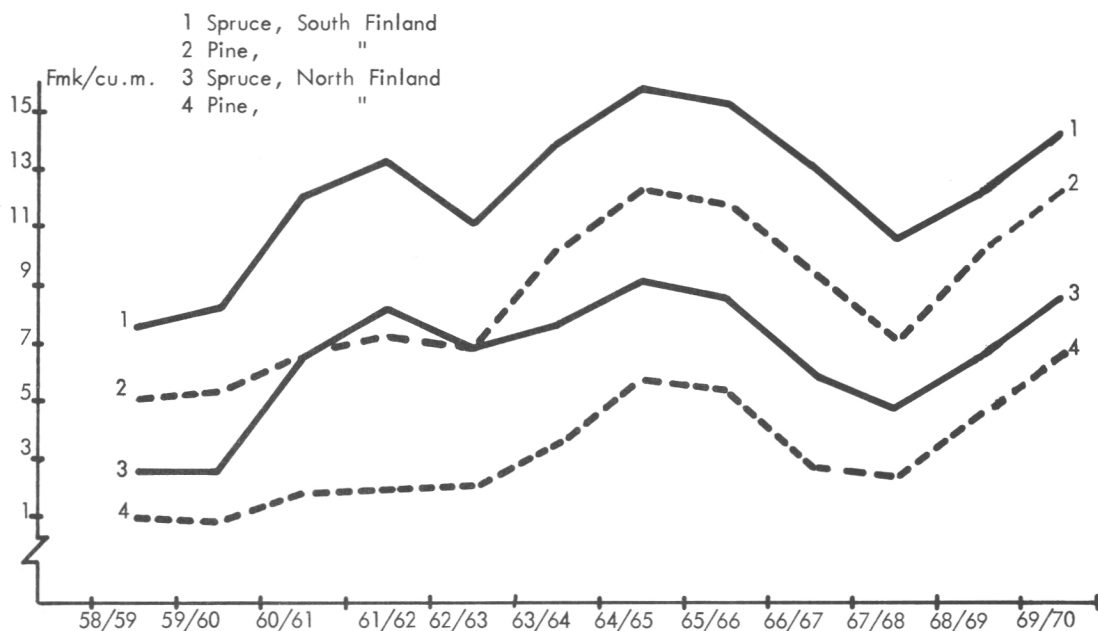
1) Finnish and Swedish export price for January, Norwegian for January-February

5.2. Ratio between export price (./ton) and stumpage price (./cu.m. piled measure) of certain woodworking products in Finland, Sweden and Norway, 1959 - 1969

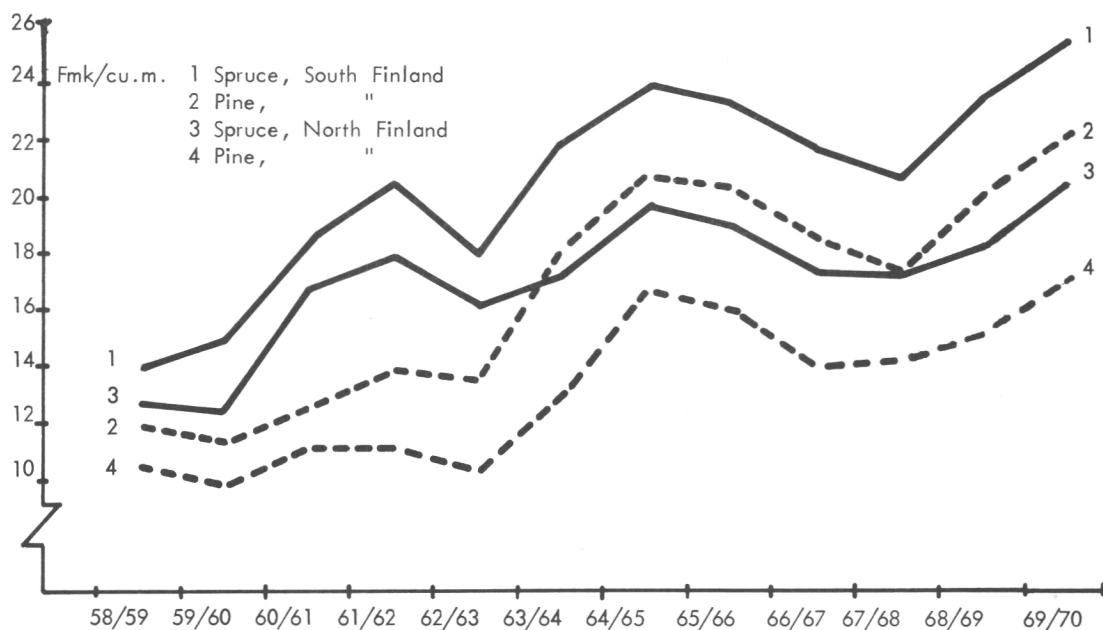
Year	Mechanical pulp			Sulphite pulp			Newsprint		
	Finland	Sweden	Norway	Finland	Sweden	Norway	Finland	Sweden	Norway
59	27.0	31.0	19.2	46.1	50.6	38.2	60.0	63.8	35.9
60	26.0	23.5	18.8	43.8	40.3	38.1	55.8	48.8	34.9
61	17.0	17.4	16.2	31.4	31.1	32.9	36.5	36.1	30.4
62	15.1	18.9	18.2	26.3	30.8	33.0	32.5	39.1	34.0
63	18.5	25.3	20.6	31.3	41.9	38.7	39.5	52.2	38.2
64	14.6	22.6	18.1	27.0	40.6	37.0	31.0	46.8	33.3
65	13.9	21.0	15.7	24.7	35.7	30.8	27.3	40.0	27.1
66	14.9	20.6	16.5	24.5	35.4	31.6	29.1	41.6	29.1
67	18.2	23.1	17.3	30.1	39.1	32.6	37.4	46.2	31.2
68	28.3	44.6	23.4	43.3	68.8	43.6	53.8	82.7	40.6
69 <sup>1)</sup>	25.3	49.1	24.1	38.3	70.5	45.9	46.5	82.9	41.8

1) Finnish and Swedish export price for January, Norwegian for January-February

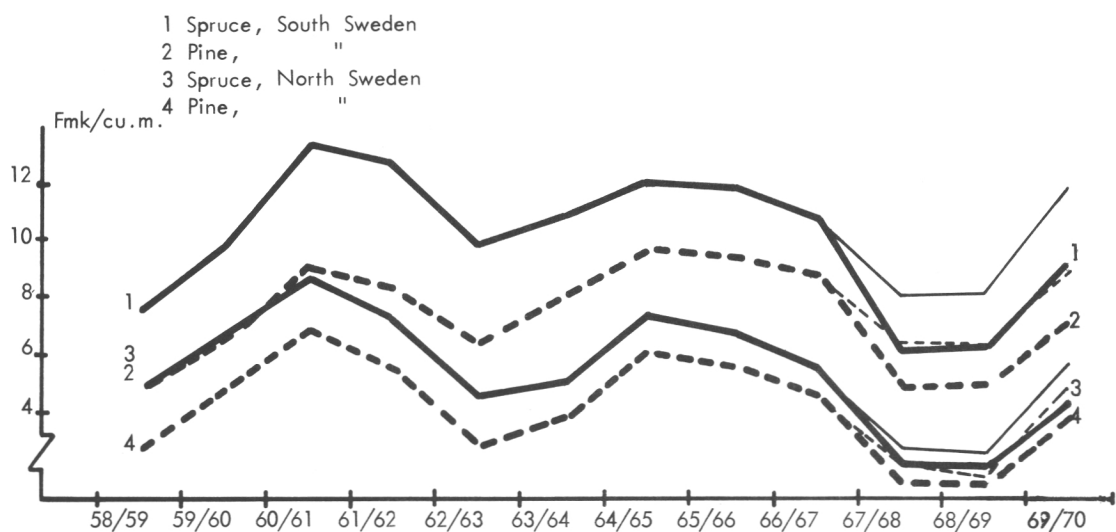
N.B. The annual export price per ton was divided by the mean stumpage price per cu.m. piled measure for the whole country during the felling season which ended in the year concerned.



1. Stumpage prices of spruce and pine pulpwood in South and North Finland, 1958/59 - 1968/69 - 1969/70  
Source: Table 1.3.



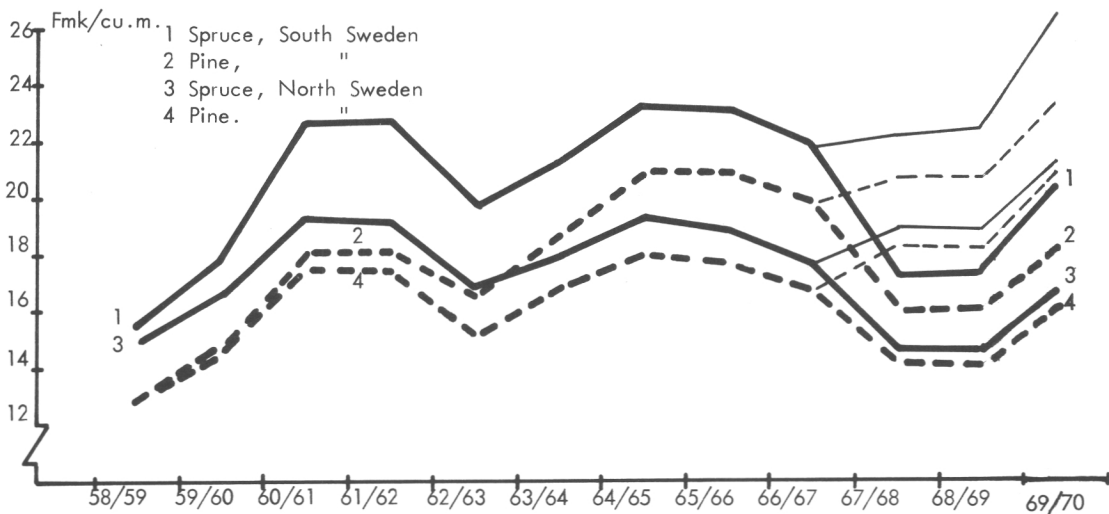
2. Contract prices of spruce and pine pulpwood in South and North Finland, 1958/59 - 1968/69 - 1969/70  
Source: Table 1.8.



3. Stumpage prices of spruce and pine pulpwood in South and North Sweden, 1958/59 - 1968/69 - 1969/70

Source: Table 2.5.

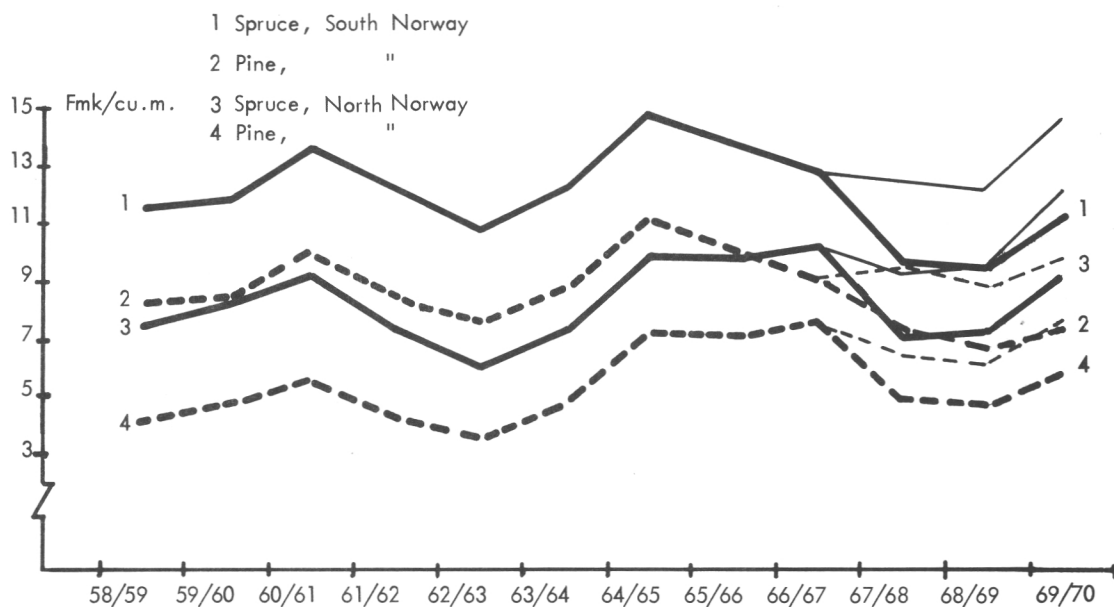
N.B. Thin lines, drawn for the seasons 1967/68 - 1969/70 show post-Finnish devaluation (1967) prices in Marks. Heavy lines for the same years were calculated on exchange rates before devaluation.



4. Contract prices of spruce and pine pulpwood in South and North Sweden, 1958/59 - 1968/69 - 1969/70

Source: Table 2.2.

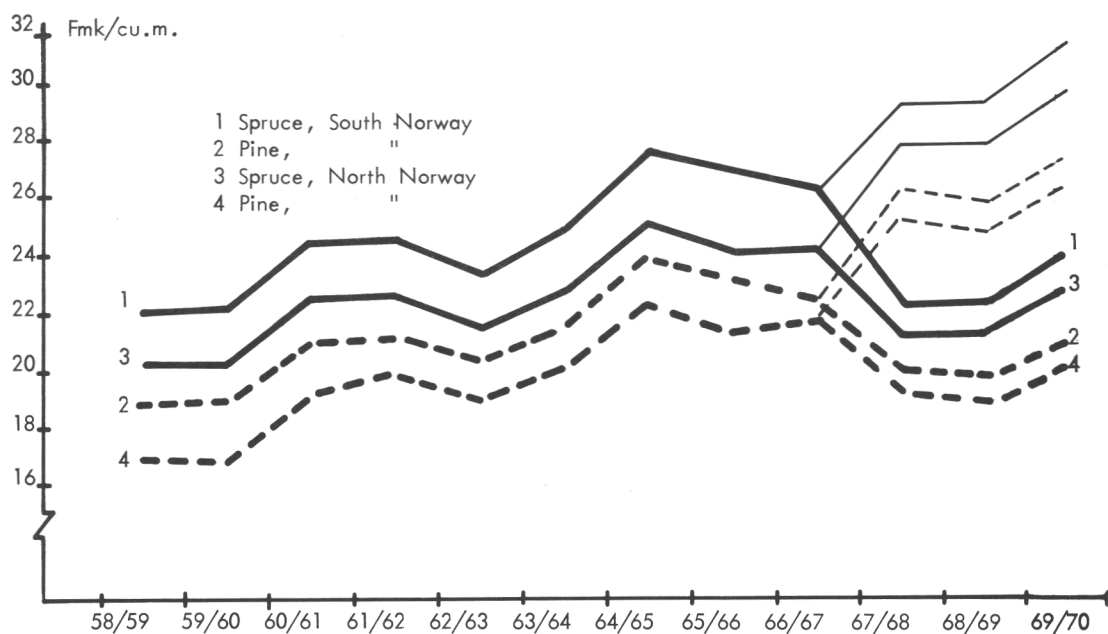
N.B. See note under figure 3.



5. Stumpage prices of spruce and pine pulpwood in South and North Norway, 1958/59 - 1968/69 - 1969/70

Source: Table 3.3.

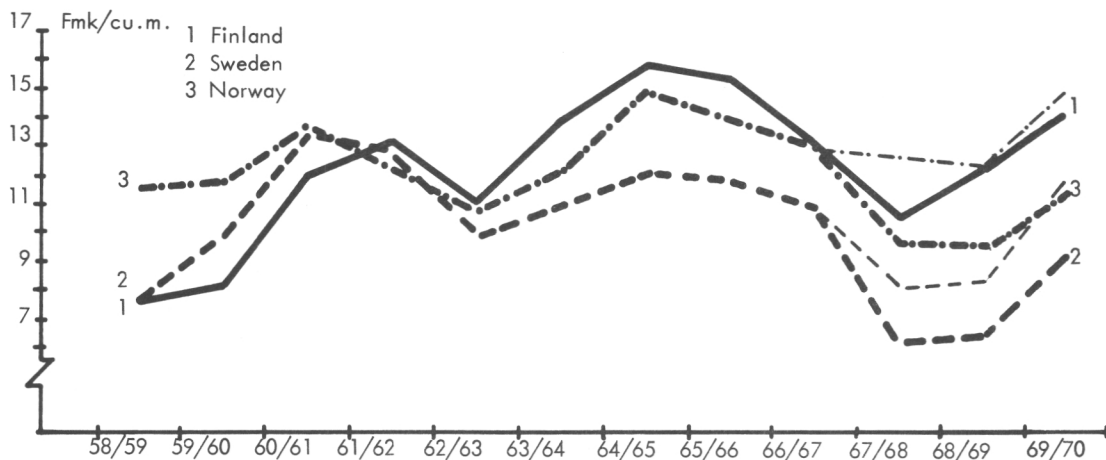
N.B. See note under figure 3.



6. Contract prices of spruce and pine pulpwood in South and North Norway, 1958/59 - 1968/69 - 1969/70

Source: Table 3.1.

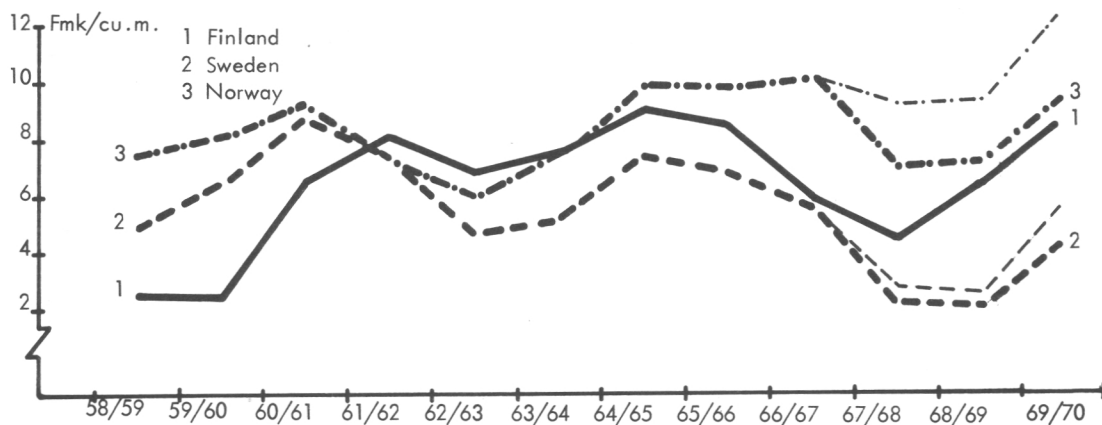
N.B. See note under figure 3.



7. Stumpage prices of spruce pulpwood in South Finland, South Sweden and South Norway, 1958/59 - 1968/69 - 1969/70

Source: Table 4.1.

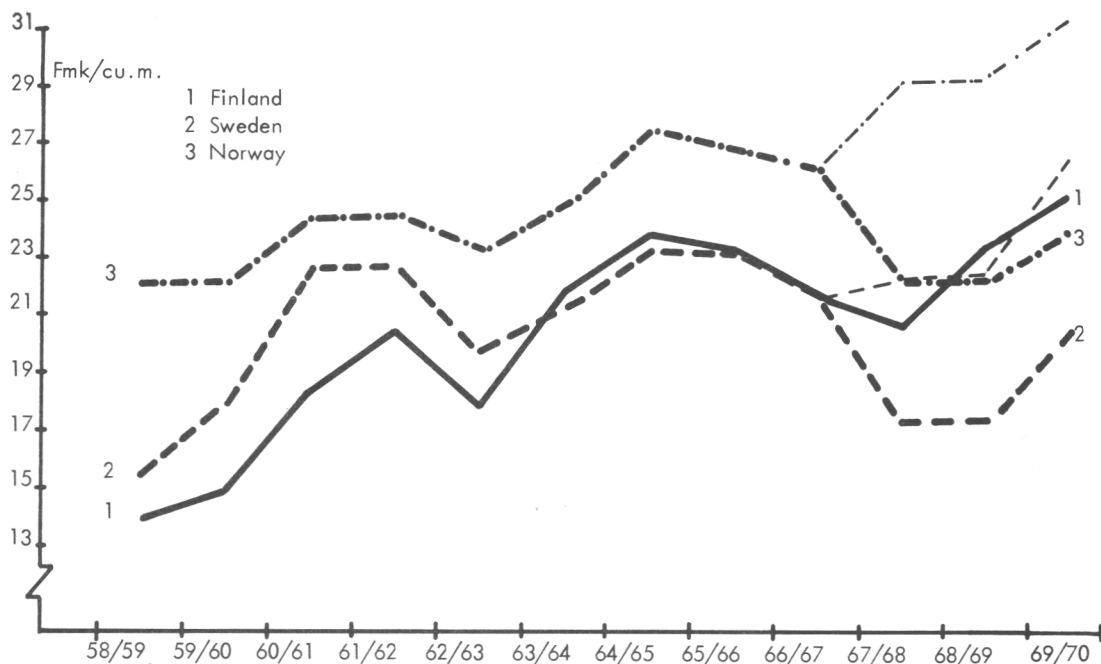
N.B. See note under figure 3.



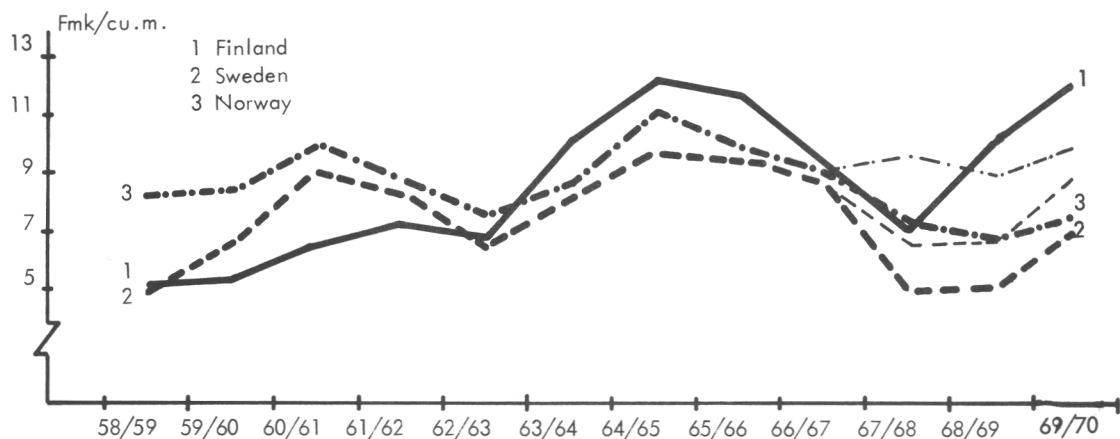
8. Stumpage prices of spruce pulpwood in North Finland, North Sweden and North Norway, 1958/59 - 1968/69 - 1969/70

Source: Table 4.1.

N.B. See note under figure 3.



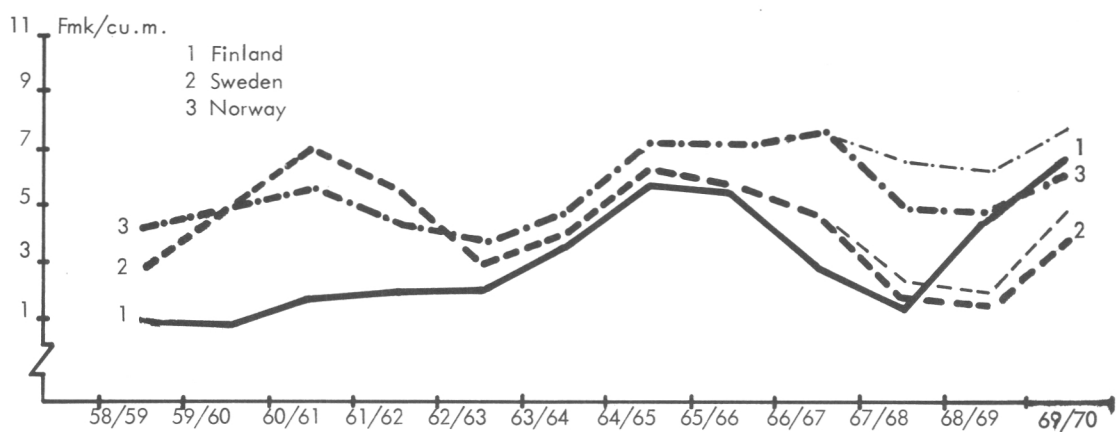




11. Stumpage prices of pine pulpwood in South Finland, South Sweden and South Norway, 1958/59 - 1968/69 - 1969/70

Source: Table 4.2.

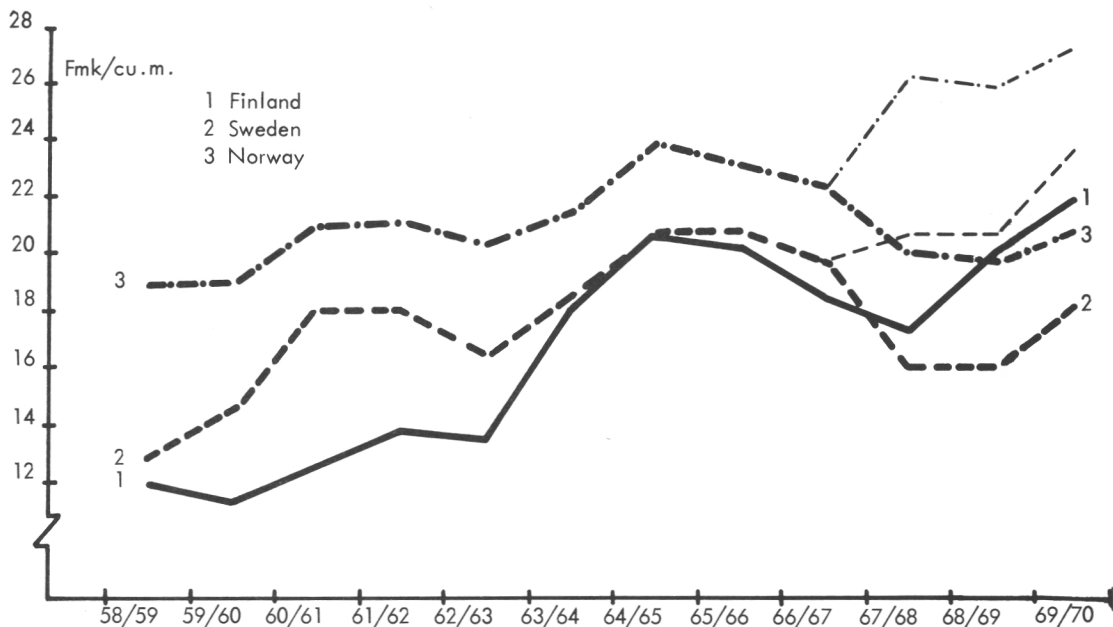
N.B. See note under figure 3.



12. Stumpage prices of pine pulpwood in North Finland, North Sweden and North Norway, 1958/59 - 1968/69 - 1969/70

Source: Table 4.2.

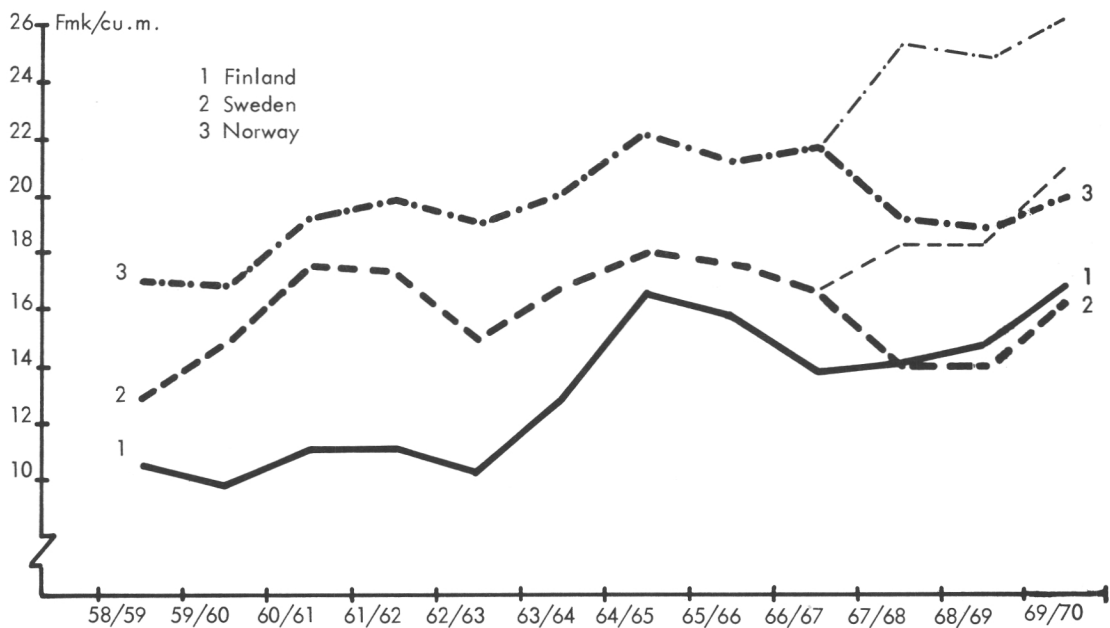
N.B. See note under figure 3.



13. Contract prices of pine pulpwood in South Finland, South Sweden and South Norway, 1958/59 - 1968/69 - 1969/70

Source: Table 4.5.

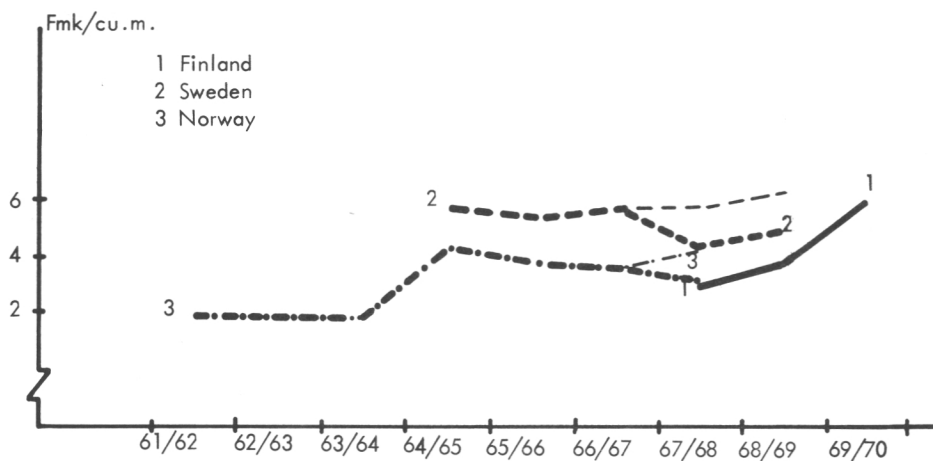
N.B. See note under figure 3.



14. Contract prices of pine pulpwood in North Finland, North Sweden and North Norway, 1958/59 - 1968/69 - 1969/70

Source: Table 4.5.

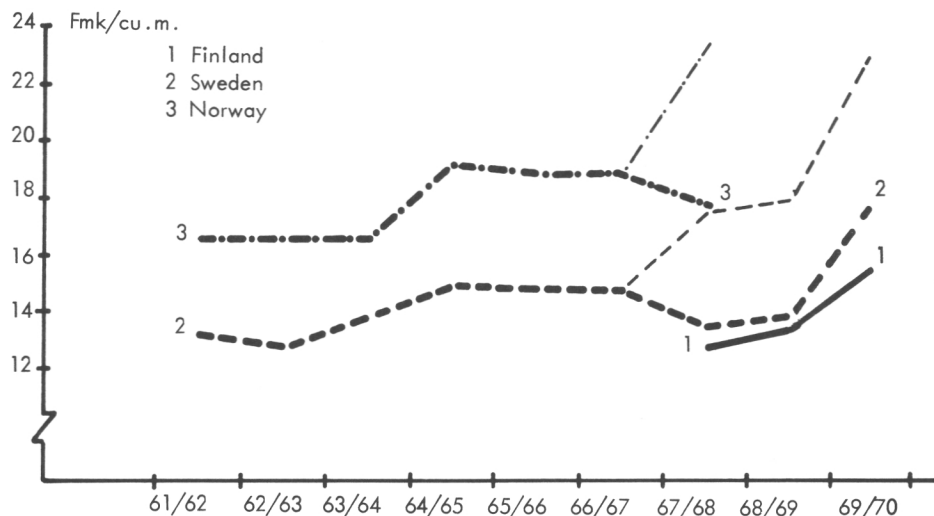
N.B. See note under figure 3.



15. Stumpage prices of birch pulpwood in South Finland, South Sweden and South Norway, 1961/62 - 1968/69 - 1969/70

Source: Table 4.3.

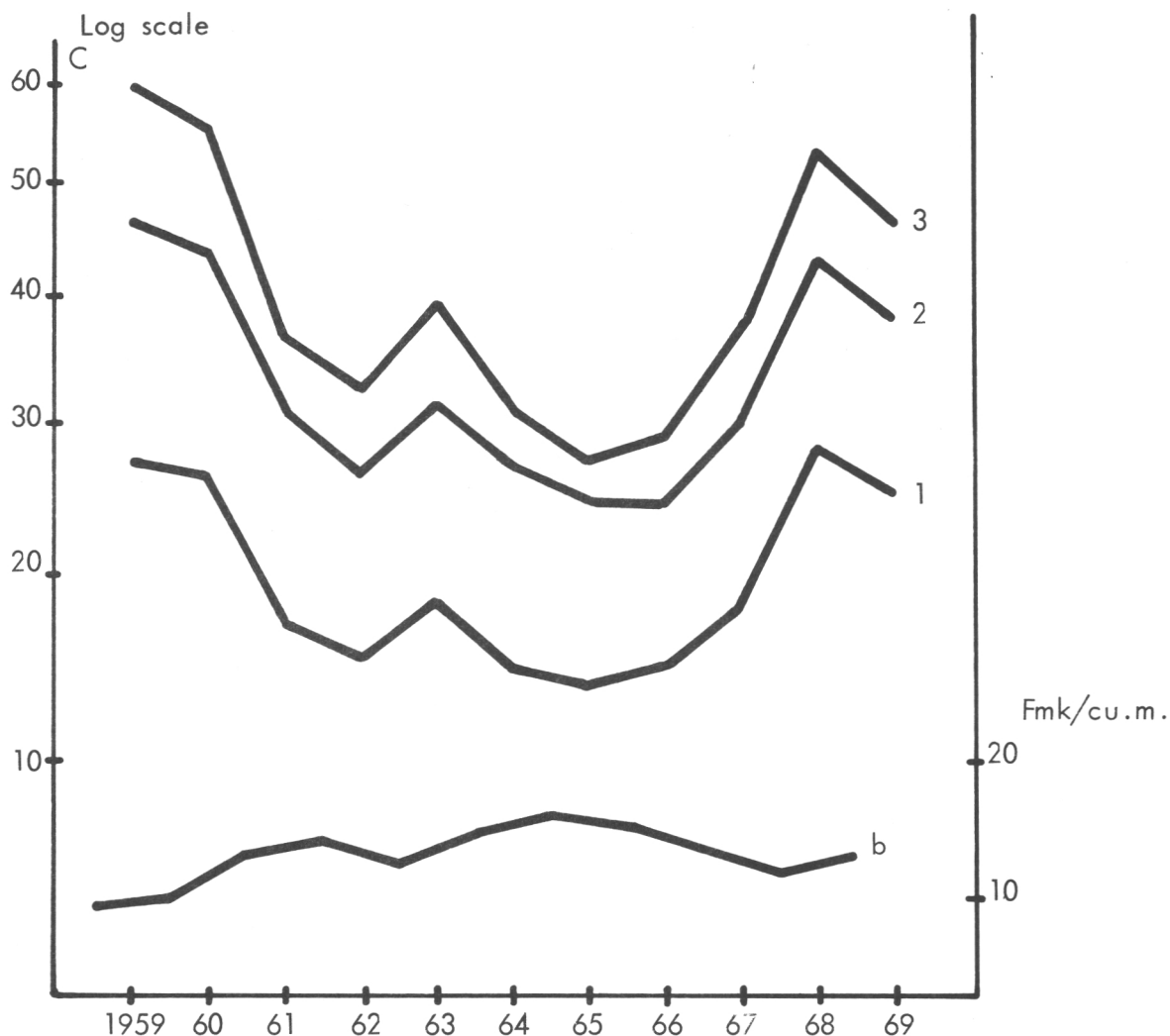
N.B. See note under figure 3.



16. Contract prices of birch pulpwood in South Finland, South Sweden and South Norway 1961/62 - 1968/69 - 1969/70

Source: Table 4.6.

N.B. See note under figure 3.



17. Export price/stumpage price ratio for certain woodworking products in Finland, 1959 - 1969.

$$\frac{A}{b} = C$$

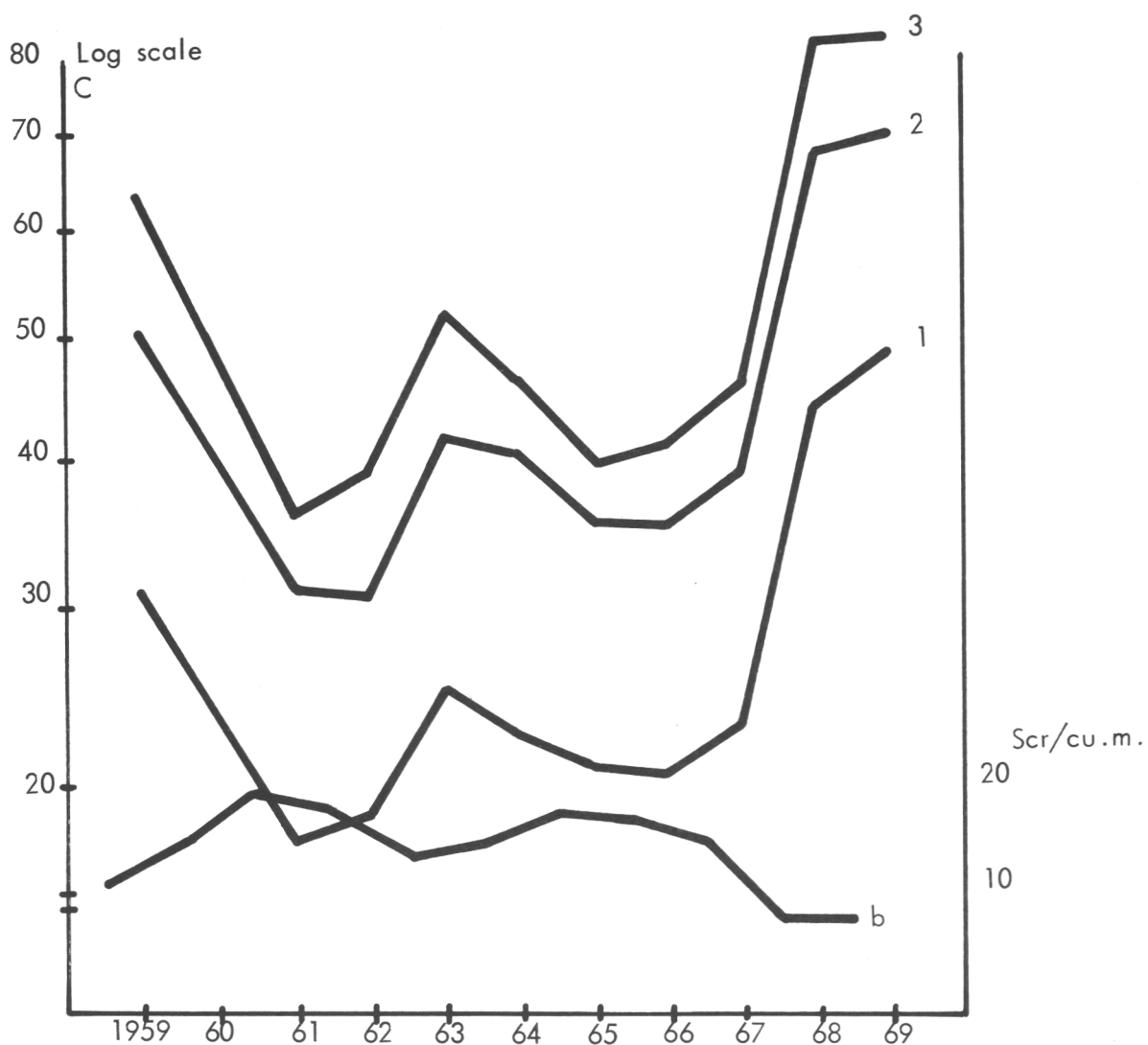
A = Export price Fmk/ton

b = Stumpage price Fmk/cu.m. piled measure

1 = Mechanical pulp (4701101/103)

2 = Sulphite pulp (4701501/505/509)

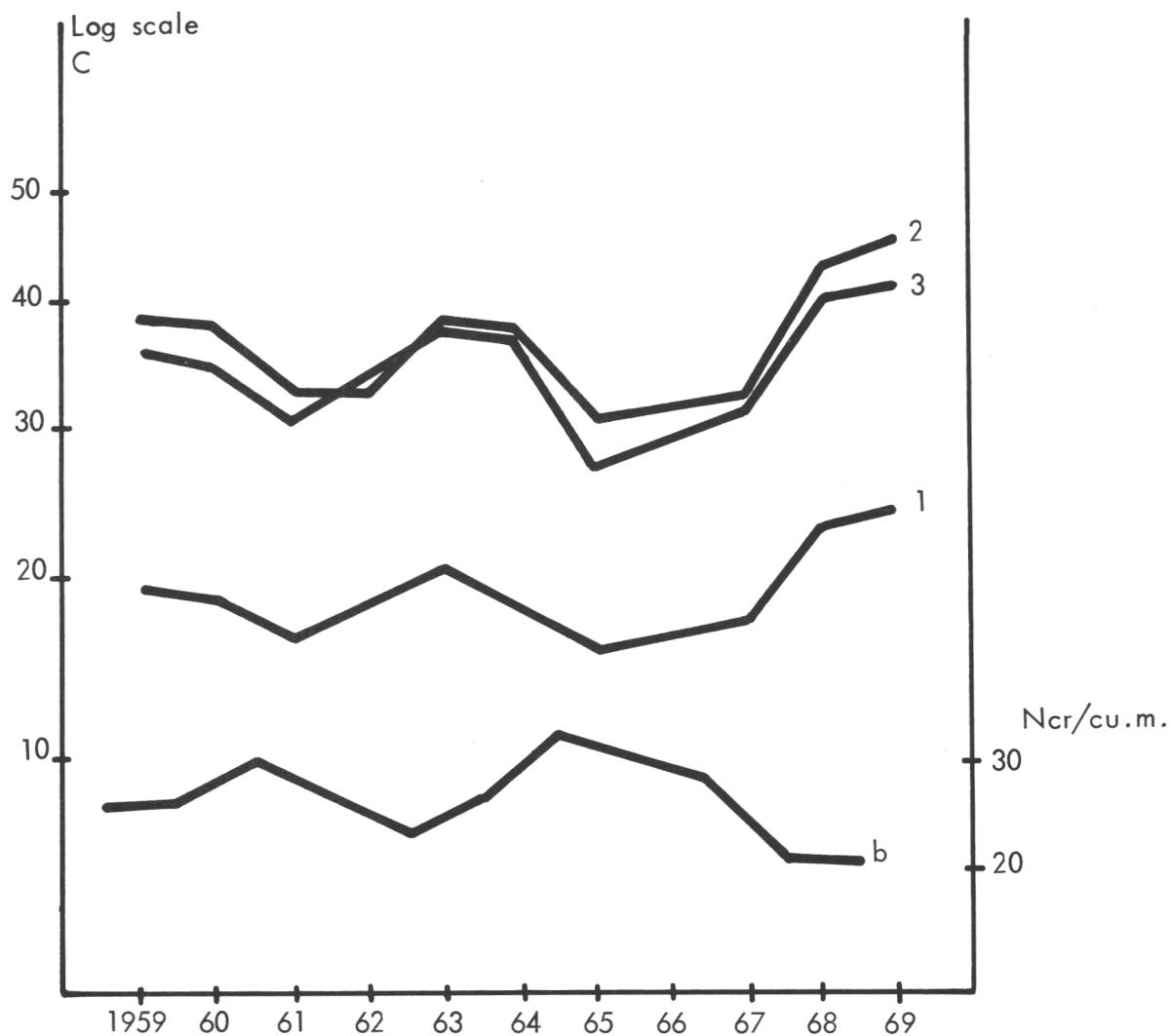
3 = Newsprint (4801110)



18. Export price/stumpage price ratio for certain woodworking products in Sweden, 1959 - 1969.

$$\frac{A}{b} = C$$

- |   |   |                 |                         |
|---|---|-----------------|-------------------------|
| A | = | Export price    | Scr/ton                 |
| b | = | Stumpage price  | Scr/cu.m. piled measure |
| 1 | = | Mechanical pulp | (4701101)               |
| 2 | = | Sulphite pulp   | (4701500)               |
| 3 | = | Newsprint       | (4801111)               |



19. Export price/stumpage price ratio for certain woodworking products in Norway, 1959 - 1969.

$$\frac{A}{b} = C$$

A = Export price      Ncr/ton

b = Stumpage price      Ncr/cu.m. piled measure

1 = Mechanical pulp (4701104)

2 = Sulphite pulp (4701692)

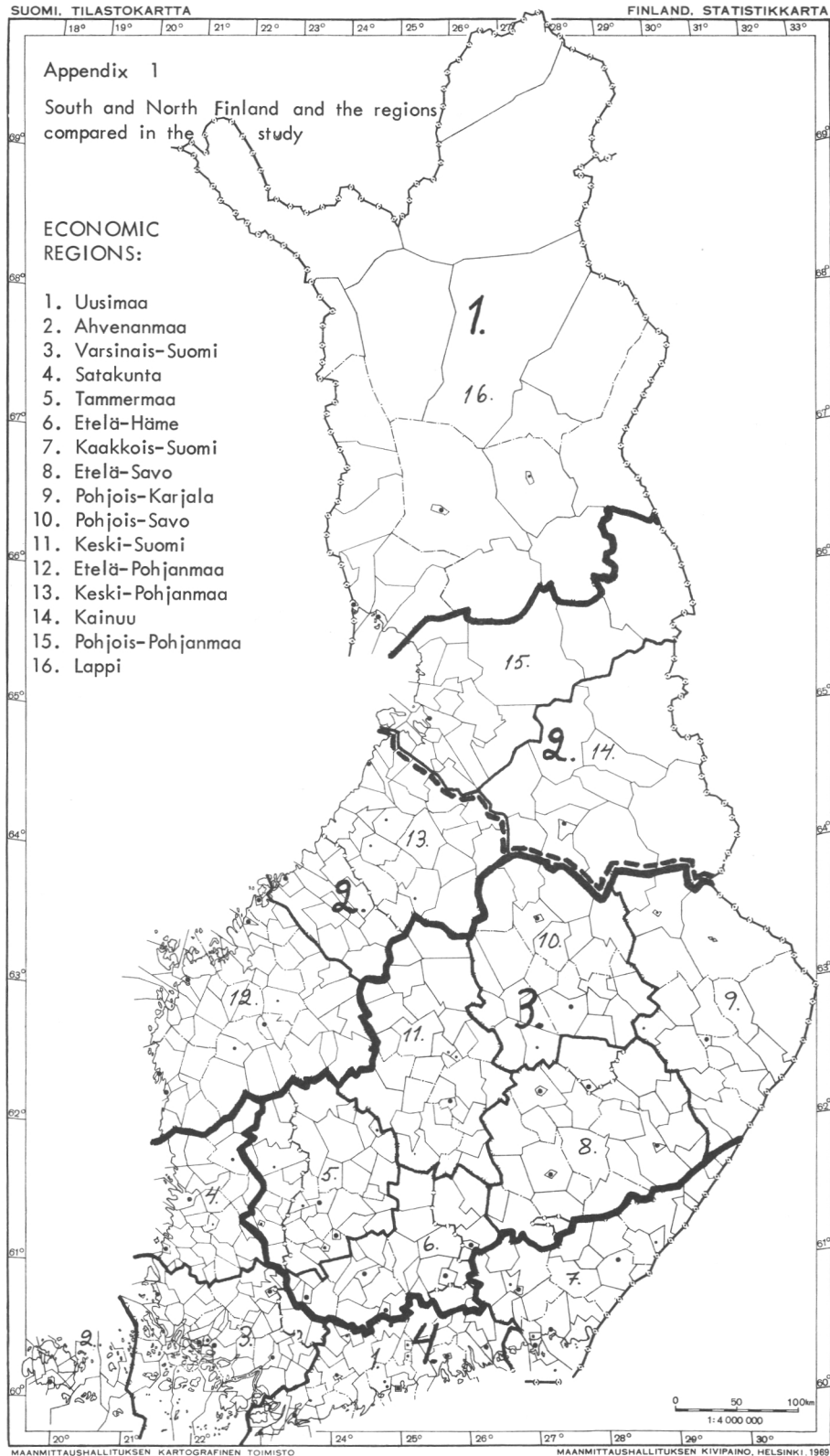
3 = Newsprint (4801111)

## Appendix 1

South and North Finland and the regions  
compared in the study

ECONOMIC  
REGIONS:

1. Uusimaa
2. Ahvenanmaa
3. Varsinais-Suomi
4. Satakunta
5. Tammermaa
6. Etelä-Häme
7. Kaakkois-Suomi
8. Etelä-Savo
9. Pohjois-Karjala
10. Pohjois-Savo
11. Keski-Suomi
12. Etelä-Pohjanmaa
13. Keski-Pohjanmaa
14. Kainuu
15. Pohjois-Pohjanmaa
16. Lappi



Appendix 2

Southern and northern parts of Norway, Sweden and Finland and the price districts in Sweden.





Appendix 3

Estimated contract and stumpage prices of pulpwood for the privately-owned forests in Finland, Sweden and Norway, 1969/70.

Region	Fmk/cu.m. piled measure, pulpwood incl. bark					
	Contract prices			Stumpage prices		
	spruce	pine	birch	spruce	pine	birch
<u>Finland:</u>						
Region 1	19.8	16.1	..	7.8	5.6	..
" 2	23.2	19.7	14.5	11.7	9.8	4.9
" 3	25.1	21.6	15.4	13.9	11.8	5.9
" 4	26.5	23.1	15.5	15.3	13.3	6.0
South Finland	25.4	22.0	15.4	14.2	12.2	5.9
North Finland	20.3	16.8	..	8.6	6.6	..
<u>Sweden:</u>						
Price district 1 (=North Sweden) 2)	21.7 (16.8)	21.0 (16.2)	22.6 <sup>1)</sup> (17.5) <sup>1)</sup>	5.5 (4.2)	4.8 (3.7)	.. (..)
" 2 2)	25.0 (19.3)	22.5 (17.4)	26.6 <sup>1)</sup> (20.5) <sup>1)</sup>	9.9 (7.6)	7.4 (5.7)	.. (..)
" 3 2)	27.2 (21.0)	23.9 (18.4)	23.6 (18.2)	12.9 (9.9)	9.5 (7.3)	.. (..)
" 4 2)	27.2 (21.0)	24.3 (18.7)	23.6 (18.2)	12.2 (9.4)	9.2 (7.1)	.. (..)
" 5	..	..	..	..	..	..
South Sweden (=price districts 2,3 and 4) 2)	26.6 (20.5)	23.7 (18.2)	22.9 (17.6)	11.8 (9.1)	8.8 (6.8)	.. (..)
<u>Norway:</u>						
South Norway 2)	31.5 (24.0)	27.3 (20.8)	.. (..)	14.9 (11.3)	9.9 (7.5)	.. (..)
North Norway 2)	29.8 (22.7)	26.3 (20.0)	.. (..)	12.3 (9.4)	7.7 (5.9)	.. (..)
The whole of Norway 2)	31.3 (23.9)	27.2 (20.8)	.. (..)	14.6 (11.1)	9.7 (7.4)	.. (..)

1) The prices free at the mill.

2) The Swedish and Norwegian prices excluding the effect of Finnish devaluation are given in brackets.

- No 45 Pentti Koivisto: Etelä- ja Pohjois-Karjalan, Itä-, Etelä- ja Pohjois-Savon sekä Keski-Suomen koivuvuorat.  
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Forest Statistics of Finland 1950—67.
- No 48 Tarmo Peltomäki ja Heikki Veijalainen: Kiinteistöjen käyttämän lämpöenergian ominaiskulutus.  
Specific consumption of thermal energy utilized by real estates.
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Forest balance of Finland in 1953—66.
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On the trimming allowance and trimming.
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On cubing coniferous saw logs on the basis of measurements taken on the bark.
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Skogsforskningsinstitutets beslut beträffande omvandlingskoefficienterna och kuberings-tabellerna, som används vid virkesmätning.
- No 58 Paavo Tiihonen: Puutavaralajitaulukot 2. Maan eteläpuoliskon mänty, kuusi ja koivu.
- No 59 Paavo Tiihonen: Puutavaralajitaulukot 3. Männen ja kuusen uudet paperipuutaulukot.
- No 60 Paavo Tiihonen: Puutavaralajitaulukot 4. Maan pohjoispuoliskon mänty ja kuusi.
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