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FORESTRY AS AN EMPLOYER IN FINLAND

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SELOSTE:

METSÄTALOUDEN TYÖLLISTÄVYYS SUOMESSA

This article describes the significance of forestry as a source of employment in the rural areas of Finland. The historical perspective of the presentation dates from the 1860's. This period includes all the relevant stages in the development of the theme in question, the preindustrial age up to the 1890's, the period of the creation of the forest industries to the end of 1920's, the period of the forest industries' expansion to the end of 1950's and the period of mechanization from the beginning of 1960's. The long perspective is possible because of the existence of time-series data.

1. INTRODUCTION

In Finland the significance of forestry is, relatively, the greatest in the world. Approximately 70 % of its land-area is under forests. Forest resources are also the most important natural resources in Finland. The importance of forests to the Finnish economy is shown by the export figures. Nearly one half of all exports remains based on forestry and forest industry products.

Forestry is also a major employer, but the role of forestry in the Finnish economy has not always been the same. The development of the economy and of society as a whole is reflected in forestry as technological and social changes, as well as the degree of utilization of the forests. These changes have effected forestry as a source of employment in the rural areas.

To restrict the analysis to the present time would not have given a satisfactory view of forestry as a source of employment. The historical perspective is critical to this theme. Not only does the historical perspective place things in chronological order, but it presents the mechanisms of change as a logical and understandable chain of events. The result is a description of the significance of forestry as a source of employment in the rural areas classified by clear cut periods.

The existence of the relevant statistical material referring to the study depicts the great importance of forestry in Finland. The necessary material concerning the time from the 1860's exists. The time span is long enough to clearly reveal the tendencies which have to be understood in order to explain the present situation in Finnish forestry.

2. STATISTICAL MATERIAL

21. The size of population

Reliable information concerning population in Finland has been collected since 1751. The ability to utilize the forests is largely dependant on the size of the population. Figure 1 presents the development of the population in Finland since 1860 (Statistical yearbook of Finland 1976).

The size of the urban population and its relationship to the rural population is significant to forestry as an employer in the rural areas. The relationship explains the ratio between commercial wood and wood consumed on the farm. Figure 2 shows the growth of urban population in Finland (Statistical yearbook of Finland 1976).

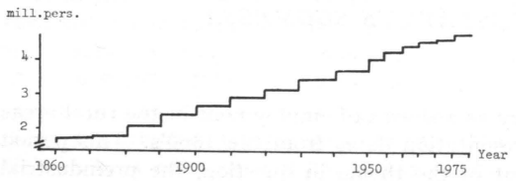

Figure 1. The Population of Finland 1860—1975.

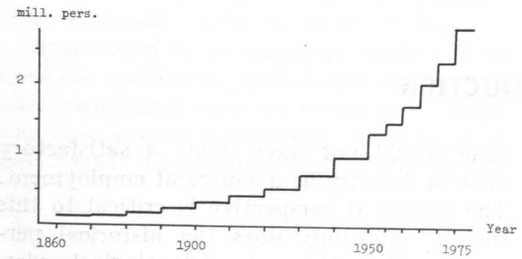

Figure 2. Urban population growth in Finland, 1860—1975.

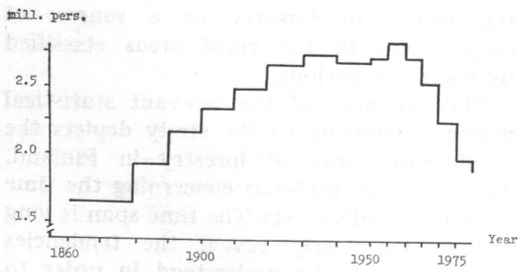

Figure 3. The rural population in Finland 1860—1975.

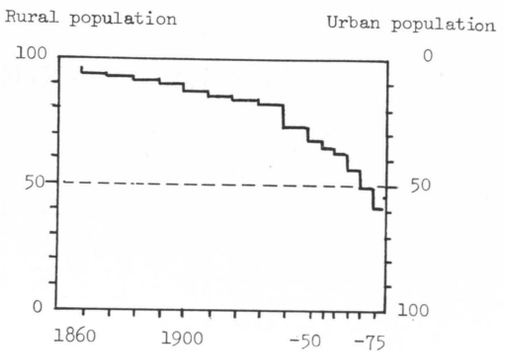

Figure 4. The proportion of urban and rural population in Finland.

Figures 1 and 2 show that the population growth in Finland is relatively linear, whereas the growth of urban population is nearly exponential.

The most interesting part of the population in relation to the present study is the rural population (Figure 3). The development of rural population differs markedly from that of the whole population and the urban population. Three stages are identifiable: a period of growth from the 1870's to the 1930's, a period of stagnation from 1930's to the end of the 1950's, and a period of decline thereafter.

The relationship between the urban and rural population can be called the urbanization rate, or conversely the ruralization rate (Figure 4). The rural population was $^3/_4$ of the whole population until the 1940's whilst the share of the urban population did not exceed 50 % of the whole population until the 1970's.

22. The utilization of forests

Although the quantity of cuttings does not in itself represent the whole of forest production, it does give an over view of the development of the whole work performance in forestry. Other forestry activities have been shown to be directly dependent on the quantity of cuttings.

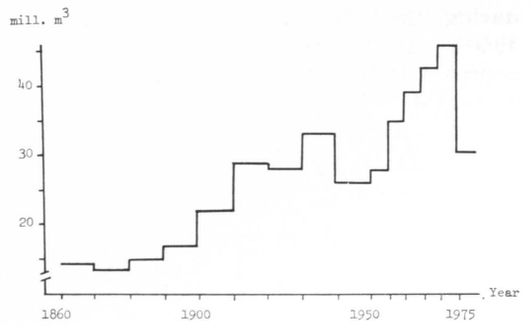

Figure 5. The development of cuttings in Finland 1860—1975. Mill. m³, solid volume without bark.

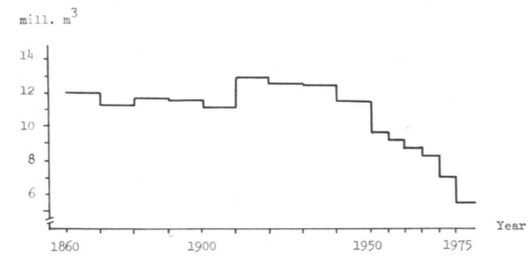

Figure 6. Cuttings for home use in Finland, 1860—1975. Mill. m³ solid volume without bark.

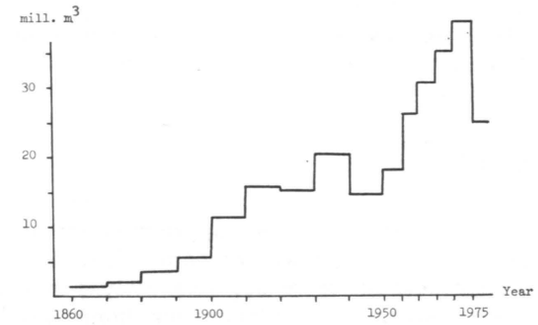

Figure 7. Industrial roundwood in Finland 1860—1975. Mill. m³ solid volume without bark.

Cutting figures for the years 1860—1950 in the time series (Figure 5) are from KUNNAS (1973) and for the years from 1955 from HUTTUNEN (1977).

Cuttings for home use refers to that part of the gross cuttings which is utilized domestically by the rural population. Because these cuttings are, and particularly were earlier, carried out by more or less self-supporting households, the work involved in these cuttings contributed to the functional development of the rural community.

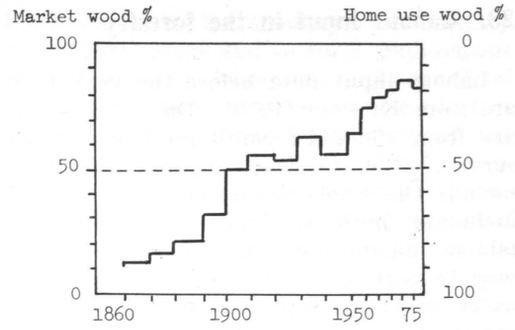

Figure 8. The ratio of market to home use wood in Finland.

This can be seen in the time-series of cuttings for home use (Figure 6). Cuttings for home use remained at a high level as long as the rural community was expansive, i.e. until the 1930's, after which time a slow decrease has taken place as the growth of population in the rural areas stagnated. Finally, cuttings decreased rapidly as the desolation of rural areas began in the 1960's.

As cuttings for home use are endogenous to a rural community, so commercial cuttings are exogenous and are dependent upon the development of the whole of society. Particularly, the development of commercial cuttings are related to the urbanization of society. The rural areas deliver the raw materials necessary for building and maintaining towns — but especially in the case of Finland, to provide the raw materials for industrialization. The growth of forest industries in satisfying Finland's export markets for wood and wood-based products has had the greatest influence on the development of the quantity of industrial roundwood (Figure 7).

The ratio of commercial to home use wood has changed in the same manner as the ratio of urban to rural population. The significance of the commercial cuttings as a factor effecting the functional development of the rural areas is clearly revealed in Figure 8.

23. Labour input in the forestry

Labour input data before the year 1960 are from KUNNAS (1973). Data since then are from Finland's continual labour force survey. The time-series presented here include the whole labour input in forestry including both self-employed and hired labour. Labour input developed in a similar way to cuttings until the 1950's, but radically declined thereafter (Figure 9). The reason for the decline is the rise in productivity in forest work which started at that time.

The labour input time-series not only describes the relative employment effect forestry has in rural areas. It is relevant to the whole male labour input structure in the rural areas. The forestry labour input time series must therefore be regarded as fundamental to the whole rural labour problem.

The gross male labour input in the rural areas is estimated from HEIKINHEIMO (1956) and HEIKINHEIMO and RISTIMÄKI (1965), figure 10. The figure presents the relative employment effect of forestry in the rural areas.

The figure shows that the relative employment effect of forestry was an almost constant 8 % in the 19th century, growing during the 20th century until the late 1950's. At that time it was at its peak of approximately 20 %. Thereafter it has decreased to approximately 6 % today.

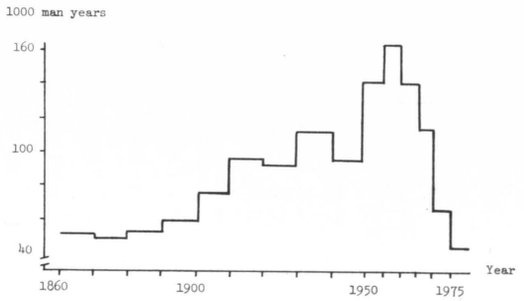

Figure 9. Labour input in Finnish forestry, 1860—1975.

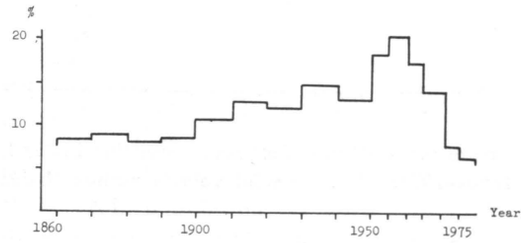

Figure 10. The relative employment effect of forestry in the rural areas, 1860—1975.

3. RESULTS

31. Preindustrial era

The preindustrial era in Finnish forestry is the time until the end of the 19th century. The significance of forestry as a source of employment was restricted by the limits of self-sufficient utilization of the forests. This period can also be named the period of classical growth, as growth was in direct proportion to the growth of the population.

In the preindustrial period both rural and urban population were growing and the relationship between them stayed relatively constant. The proportion of urban population was approximately 10 %. Society was a stationary agrarian one.

The quantity of cuttings in the preindustrial era developed approximately in relation to the growth of population. The yearly cuttings were approximately 1/3 of the present. The cuttings for home use stayed at a constant level and the commercial cuttings slowly increased. The share of commercial cuttings increased from 10 % to 30 % of the gross cuttings.

In the preindustrial period the quantity of labour input measured in man years remained at levels commensurate with the growth of population. It increased from 50 000 man years in the 1860's to the 60 000 man years in the 1890's. The relative employment effect of forestry remained constant (Figure 10).

During the preindustrial period, forestry did not have an independent employment effect in the rural areas. It's employment effect was limited to the labour input required to produce timber for a stationary and approximately self-sufficient agrarian society. The delivery of wood raw materials needed by towns was not of great importance as an employer in the wide rural areas, because of the small urban population.

32. The period of the creation of the forest industries

The period of the creation of the forest industry was the period from the beginning of 20th century to the end of the 1920's. Forest industries had existed much earlier (from the 17th century), but only in this century did developments have an effect on the conditions of the rural areas. The main cause of the change was the chemical wood working industry and its orientation towards exports. This period was an expansive one regarding employment in rural areas.

Urban growth began in this period because of the process of industrialization. The urban proportion of the total population increased from 10 % to 20 % during this time. The rural population also grew, because the rural areas derived benefits from the creation of industries utilizing timber.

The total cuttings during this period increased to an entirely new level. Because of the growth of rural population, the cuttings for home-use also increased. However, the commercial cuttings, which during this period accounted for approximately half of the total cuttings increased most markedly.

The labour input of forestry developed in relation to the cuttings. Significant development in productivity in forest work had not taken place at that time, KUNNAS (1973). Cuttings, and the labour input needed to produce them, approximately doubled during this expansive period. This affected the relative employment situation the rural areas, which increased from 8 % in the preindustrial period to 12 % in the period of the creation of the forest industries.

During the period of the creation of the forest industries the significance of forestry in the rural areas and to rural employment was continually increasing and beneficial to the rural community as a whole. In this period the self-sufficient life style of the rural areas was broken. This followed from the rising stumpage prices and the increasing money flows from wood sales and hired forest labour, which developed at the expense of self-employment. During this period a small farmer-forest labourer class was formed which has become typical of the Finnish countryside. This class successfully smoothed the opposing seasonal fluctuations in the employment of agriculture and forestry — a feature of the northern climate of Finland. In this period, forestry can be said to have a progressive effect on employment and on the livelihood of the rural areas.

33. The period of forest industry expansion

The period from the 1930's to the end of the 1950's can be called the period of forest industry and forestry expansion. Many tendencies beginning in the earlier period, developed, strengthened and reached their culmination during this period. And so it was with forestry's relative employment effect. On the other hand, the period could also be called the period of support for the rural areas, if one considers the total development of the rural areas.

As the earlier period was expansive to the rural areas, this period can be characterized as mainly stationary.

The period of forest industry expansion was at the same time a period of general industrialization throughout the whole society. Thus the urban population substancially increased whilst the rural population remained more or less constant. Thereby its share of the total population decreased from 80 % to 60 %. That the rural areas maintained their population and infrastructure was the result of a conscious population — and colonization — policy. The aim of the policy was, in particular, to guarantee the supply of labour for expanding forestry. The policy was still operating during the 1950's.

The expanding forest industries needed more raw material, and this is revealed by the development of cuttings. The share of cuttings for home-use diminished strongly because of industrialization and because of the disappearance of the rural life style based on self-sufficiency. The share of commercial cuttings increased from 50 % in the earlier period to approximately 70 % in this period. Yearly cuttings increased to 40 mill. m³.

Due to the population- and social-structural policy exercised in the rural areas there was a continual and plentiful supply of forest workers. Consequently, forestry wages remained much below industrial wages. There was, therefore, no need to develop forestry labour productivity. Until the end of the 1950's productivity remained at the same level as in the 19th century, KUNNAS (1973).

Because productivity remained constant the labour input had to be increased in proportion to work performance. The yearly labour input in forestry also increased in this period from 100 000 man years to 150 000 man years, which meant a proportionally equal increase in the relative employment effect in forestry.

In this period the significance of forestry as a source of employment was greater than ever before. The forestry share of the whole male labour input in the rural areas increased from 12 % in the earlier period to a maximum 20 % in this period. The dependence of the rural population and especially of the small farmer-forest labourer on forestry for a livelihood increased during this period. Limitations to the expansion of agriculture were also being reached at this time because production targets were being fulfilled.

The increased demand for forestry labour caused the population and the infrastructure of the rural areas to remain constant at the expense of both productivity and the level of earnings. The traditional agriculturally oriented social policy aimed at obstructing the reduction of the agrarian population and was regarded as the only possibility to safeguard employment.

34. The period of mechanization

The period since the beginning of 1960's can be called the period of mechanization. The most significant feature of this period is a fast and accelerating change in the occupational structure.

The period can be roughly divided into a period of light mechanization in the 1960's, and a period of heavy mechanization in the 1970's. Besides mechanization of forestry, some operations, such as barking were transferred from the forests to the mills.

The growth of population in Finland slowed during this period partly as a result of strong emigration and partly as a result of a falling birth rate — a product of social change. The rapid change of the occupational structure exceeded the possibilities of urban areas to receive the population moving from rural areas. The surplus resulted in emigration. In spite of emigration the urban population growth accelerated. The rural population after three decades of stability rapidly decreased. The share of rural population diminished in 15 years from 60 % of the total population to 40 %.

Total cuttings increased further during the period since 1960 (excluding the latter part of 1970's). The capacity of the forest industries increased to the limit of forest production possibilities, thereby creating a wood supply problem.

The share of cuttings for home use diminished further because of the rapid decrease of the rural population, so that the share of commercial cutting rose from 70 % to 85 % of total cuttings.

The inferiority of the living and working conditions of the forest labour force attracted attention long before the 1960's. At the beginning of the 1960's however, the whole problem became a burning social issue. The forest labourers' social conditions at that time were described as a national shame. The situation led to both legislation and organizational measures to improve the life and work conditions of the forest labour force.

The most important of these measures was the 1962 Law Concerning Forest Wages, URMAS (1975), according to which forest work wages had to be quickly made comparable with the wages of male labourers in the wood working industries. Consequently, the price of forestry labour began to increase rapidly. The employer no longer found it profitable to maintain previous levels of labour per production unit.

The Law Concerning Forest Wages gave the stimulus for improvements in productivity in forestry. Mechanization of forest work was exercised intensively thereafter.

Although the work performance in the forest has continued to grow, the amount of labour input needed has decreased rapidly during the 1960's, and the same trend has continued during the 1970's. At the beginning of the 1970's the yearly labour input in forestry was no more than 1/4 of that of the end of the 1950's.

The relative employment effect of forestry diminished from 20 % in 1955 to approx. 6 % in 1975. This was so great a change that it affected the infrastructure of the rural areas in Finland. Hundreds of thousands of small farmer-forest labourers became aware of the fact that a half of their incomes, in the form of forest work wages had been lost. The mechanization of agriculture side by side with the revolution in forestry increased the summed effect of both. At the same time noticeable improvements occurred in the traffic and communication channels in the rural areas. This affected or created greater mobility and better possibilities to receive information. The result was a massive escape from the rural areas and an emigration wave, which changed the occupational structure of Finland perhaps faster than in any country before.

The rural desolation process became a cumulative one, feeding itself even though the initial reason had at least partially disappeared. The population crisis in the rural areas created a situation which threatened the continued supply of a forest labour force. The employment situation had become the opposite of that of 10 years previously. The world wide economic depression which followed shortly after, and which has had a great effect on the Finnish forest industry temporarily saved forestry from its worst labour shortage. A return to a »normal» economic situation will lead to an immediate shortage of forest labour.

During the period of mechanization forestry has had a decreasing significance as a source of employment in rural areas and has had a depressing effect on the conditions of rural areas as a whole. Forestry will never regain its significance as a source of employment in rural areas in an industrialized and technological society. Forest work has been occupationalized by mechanization. It has become a skilled and independent occupation, instead of a sideline, an additional source of employment and earnings to the small farmer. A permanent full-time forest labourer force has developed, which is supplied via training organizations. They increasingly live in towns or villages because of the better services and communications. Forestry therefore offers little help in supporting the remaining areas of scarcely populated areas with scattered and isolated settlements.

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SELOSTE:

METSÄTALOUDEN TYÖLLISTÄVYYS SUOMESSA

Artikkelissa kuvataan metsätalouden merkitystä maaseudun työllisyyden lähteenä Suomessa. Historialliseksi perspektiiviksi on valittu aika 1860-luvulta lähtien, koska tähän ajanjaksoon mahtuvat kaikki kuvattavan asian kehityksen logiikan kannalta relevantit vaiheet. Pitkän aikaperspektiivin käytön mahdollistaa sitä kuvaavan aikasarja-aineiston olemassaolo.

Esiteollisella kaudella. 1890-luvulle asti, metsätaloudella ei ollut sanottavasti muuta työllisyysvaikutusta kuin mitä aiheutui pääosin omavaraisten agraariyhteisöjen omaan käyttöönsä hankkiman puun korjuusta. Metsätalouden työllisyys kasvoi ainoastaan väestön lisäyksen suhteessa, joten sen suhteellinen työllistävyys pysyi muuttumattomana.

Metsäteollisuuden syntymisen kaudella, 1900-luvun alusta 1920-luvun loppuun, metsätaloudella oli jatkuvasti kasvava vaikutus maaseudun työllisyyteen ja kehittävä vaikutus maaseudun oloihin yleensä. Syntyvä metsäteollisuus toi uusia rahavirtoja maaseudulle puunmyyntitulojen ja metsätyöpalkkojen muodossa ja irrotti sen perinteisestä omavaraistaloudesta. Maaseudulle syntyi metsätöistä puoliksi toimeentulonsa saava pienviljelijä-metsätyömiesluokka.

Metsäteollisuuden laajentumisen kaudella, 1930-luvun alusta 1950-luvun loppuun, metsätalouden merkitys maaseudun työllisyydelle edelleen jatkuvasti lisääntyi. Metsäteollisuuden ja metsätalouden kehityksestä tuli maaseudun väestöä ja rakennetta ylläpitävä staattinen tekijä. Tämä johtui metsäseutujen asuttuna pitämiseen tähtäävän agraarihenkisen asutustoiminnan ja laajenevalle metsäteollisuudelle edullisen metsätyövoiman saannin turvaavan politiikan yhdistymisestä. Metsätalouden merkitys maaseudun työllisyyden ylläpitäjänä oli suurin tällä kaudella ja kulminoitui 1950-luvulla. Harjoitetuilla poliitikalla turvattiin metsätyövoiman saanti niin hyvin, että metsätaloudessa ei ollut pakottavaa syytä tuottavuuden parantamiseen. Se pysyikin miltei muuttumattomana 1800-luvulta aina 1950-luvulle asti.

Koneellistamisen kaudella, 1960-luvun vaihteesta alkaen, muuttui metsätalouden merkitys maaseudun työllistäjänä jatkuvasti ja kiihtyvästi väheneväksi. Maaseudun väestöön ja rakenteeseen tällä oli voimakkaasti supistava vaikutus. Koneellistamiskehitys sai vauhtia 60-luvun vaihteen sosiaalisista muutoksista, joista yksi tärkeimmistä oli metsäpalkkalainsäädäntö, joka pakotti metsätyöpalkat metsäteollisuuden palkkojen tasolle.

Metsätyön koneellistamisen ja muiden samanaikaisten teknologisten ja sosiaalisten muutosten seurauksena syntyi vyörynomainen maaltamuuttoaalto, joka autioitti maaseutua siinä määrin, että 1970-luvun alussa näytti syntyvän vaikeuksia metsätyövoiman saannissa. Tapahtuneet muutokset metsätyön tekniikassa ja ammatin luonteessa 1960- ja 1970-luvuilla ovat johtaneet siihen, ettei metsätalous enää pysty toimimaan entisenlaisena maaseudun väestön ja rakenteen ylläpitäjänä.