FORESTRY AS AN EMPLOYER IN FINLAND

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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 affected 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 1890'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.
21. The size of population

Reliable information concerning population in Finland has been collected since 1751. The ability to utilize the forests is largely dependent 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).

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 \( \frac{1}{2} \) 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 4. The proportion of urban and rural population in Finland.

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.

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

Cutting figures for the years 1860—1950 in the time series (Figure 5) are from KUNNAS (1975) and for the years from 1955 from HUHTUNEN (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.

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.](image)

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 the 20th century to the end of the 1920's. The growth in the forest industry is connected closely to the urbanization of the country and the increased demand for wood products. The period was marked by a shift from producing small amounts of wood to producing large amounts of wood for the market.

The figure shows the relative employment effect of forestry in the rural areas, 1860–1975.

![Figure 10. The relative employment effect of forestry in the rural areas, 1860–1975.](image)

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 substantially 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 policy—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 consumption 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 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 19% 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. This 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 marking and felling 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 increasing mechanization 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 legislative 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 the 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. 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 agreement on the other 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 accelerated 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 living standards. Forestry therefore offers little help in supporting the remaining areas of scarcely populated areas with scattered and isolated settlements.

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SOCIAL PROMOTION OF FOREST WORKERS — THE ROLE OF LABOUR ORGANIZATIONS

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The demand for forest products in Europe seems to exceed the total supply in the future although the market fluctuations occasionally affect diminishing the timber demand. New forest industries in the areas of fast growing trees will have their own influence through the world. Alongside the amount of forest production, the demand for labour input depends on the development of the structure of production and of the productivity of work. In this respect mechanization of harvesting will have its long-lasting influence inspite of that the most advantageous degree of mechanization varies a great deal in different countries of the world.

Despite of the growth in forestry production, the number of forestry workers has decreased considerably in many countries owing to various factors. On the other hand the share of professional forest workers has increased providing more permanent working conditions.

The permanence of work fundamentally affects the life of a forest worker. It has influence on the income level, on the social position of the forest worker and on the standard of living. The occupation of a forest worker will be increased mainly within the increasing mechanization of forest work. It requires additional amount of vocational training. Simultaneously improved occupation for skilled labour and the rise in the standard of living among forest workers will lead to increased social appreciation.

In order to influence their benefits forest workers have organized themselves into trade unions. They activate their members in to helping the unions to attain their aims. Trade unions try to influence the policies of forestry and forest labour. In this respect they are in contact with political parties concerned.

The questions of labour policy occupy a central position in the mutual relations of the labour market organizations. Concerning questions of wages, research activity, working conditions, rationalization, improvement of housing facilities and other living conditions, much promotion has been achieved within a keen mutual cooperation.

Forest worker unions have to keep in touch with the offices and authorities regulating and controlling matters within forest work. Consequently they have to deal with several offices and authorities which requires a sufficient executive capacity of the union.

Especially in some East-European countries attention is being paid to the motivation of forest workers. Appreciation of the workers with the best working records is shown in the form of public praise, renumeration, and special holiday arrangements. In some western countries e.g. logging skill competitions collect large amounts of spectators.