

Determinants of Disability Pension Incidence

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Abstract

The study looked at the incidence of disability pensions among Finnish manual workers aged 40–59 in the years 1972–1985. The material consisted of individual level files combining census data with data on pensions and causes of death. Background factors influencing the incidence of pensions were investigated by comparing the tendency to seek and retire on a pension with changes in mortality, the employment situation and the replacement rate of social insurance benefits. The variation in the incidence of disability pensions could partly be attributed to an improvement in the population's health status, mainly the decreasing severity of circulatory diseases, and partly to employment and social security trends. Changes in the levels of pension and sickness benefits had a major impact on the incidence of pensions. The effects of economic recession were seen to vary with the worker's status in the labor market.

Keywords: disability pension, sickness benefit, unemployment, Finland

Introduction

Background

Finnish pension policy has in the last decade been characterized by the introduction of various early retirement options. Public attention has mainly focused on the relative newcomers of the retirement provision field, the pensions incorporating a flexible retirement age, which were introduced in the second half of the 1980s. Relatively little notice has been taken of the traditional early retirement vehicle, the disability pension. Traditional disability pensions are the most consistent and important feature of the early retirement field. While eligibility requirements for other early retirement pensions have varied, the legislation concerning disability pensions has remained largely unchanged since the early 1970s.

Towards the end of the 1960s, the number of disability pensions began to rise rapidly in Finland, as it did in most other Western countries. The incidence of disability was at its peak in 1972–1974. In the second half of the 1970s, the number of pension applications and new pensions declined drastically as the application denial rate grew. This period of lower disability pension incidence and demand coincided with a recess-

sionary period in the late 1970s. At the beginning of the 1980s, the incidence of pensions once again gradually started to grow, while the denial rate decreased. During the 1980s, other early retirement pensions have gained importance and have in the 55–64 age groups partly replaced actual disability pensions.

The variation in the take-up rate for disability pensions has been explained by, for example, changes in morbidity (Chirikos 1986; Crimmins and Pramaggiore 1988), the social security provision level (Chirikos 1986; Hedström 1987), the industrial structure, the unemployment rate (Berglind 1978; Piachaud 1986) and the working life itself (Gould, Takala and Lundqvist 1992). All these factors are directly or indirectly related to the socioeconomic structure of the population. It should therefore be possible to analyze health and social background factors related to the incidence of pensions by examining retirement trends in various socioeconomic groups. However, studies which make it possible to compare pension incidence in different socioeconomic groups and in different periods have not been available.

Aim of the study

This article aims to identify which background factors related to the health status of the population and social and economic development have influenced changes in disability pension incidence within the period 1972–1985. The analysis focuses on blue-collar employees, especially those in manufacturing, in other words the group whose risk of disability is according to previous studies extremely high (Hytti 1988). Pension demand and the actual transition to pensioner status are analyzed with reference to changes in the health status, employment and social security level.

The article is based on a study that analyzed changes in the incidence of disability pensions in various demographic and socioeconomic population groups in order to determine which background factors influenced these changes. The target group consisted of occupationally active persons between 40 and 59 years of age.¹

The disability pension system and its evolution

Disability pension can be awarded to persons aged between 16 and 64 who cannot perform their customary work or some other comparable work which with regard to age, occupational skills and other factors can be regarded as suitable and guaranteeing a reasonable income. Persons who are blind, lack mobility or due to an illness depend on outside help are without exception considered to be disabled.

The official definition of disability presupposes a clear causative relationship between a health impairment and incapacity for work. Age and job skills are taken into account in evaluating the individual's capacity to adjust to work. "Other factors" are social factors related to the individual's functional capacity and ability to adjust to changes, such as housing circumstances, intensity of ties with a particular geographic location, family circumstances and employment outlook.

Disability pension can generally not be awarded until the sickness allowance (income maintenance during short-term illness) has been paid for approximately one year, not necessarily continuously.

¹ Hytti H. Työkyvyttömyyseläkkeelle siirtymisen yhteiskunnalliset taustatekijät. (Social and societal determinants of disability pension incidence). Helsinki: Publications of the Social Insurance Institution, Finland, M: 87, 1993. 219 pp. (English Summary.)

The disability pension system is part of the Finnish welfare state. Both its evolution and its operating principles reflect the societal processes that have given shape to the Finnish model of the Welfare State. In Finland, the process of industrialization, urbanization and widespread employment outside the home began late, as shown by the initial stages of the nation's general pension programs. National old-age and invalidity insurance was in Finland written into law much later than in most countries of western Europe. The first National Pensions Act was enacted in 1937, with first invalidity pensions paid under it in 1942. A subsequent reform of the Act in 1956 brought about universal coverage.

In the 1960s, Finland entered a period of rapid economic growth and profound societal change. A series of social reforms was introduced, in the course of which particularly the disability programs targeted to the employed population were greatly improved. Occupational pension legislation became effective from 1962. National health insurance and a related scheme providing cash sickness benefits were implemented in 1964. In 1970, separate earnings-related pension schemes were introduced for farmers and other self-employed persons.

In the 1980s, the focus of pension policy shifted to elderly workers. The elderly long-term unemployed benefited from a reduction of the age needed to retire on an unemployment pension first from 60 to 58 in 1978 and further to 55 in 1980. In 1986 were introduced two pensions incorporating a flexible retirement age, the individual early retirement pension and the early old age pension. At the same time, the first steps were taken to raise the age limit for unemployment pension gradually back to 60.

The main legislative changes within the study period which had an effect on the level of pensions were the across-the-board raising of the employment pensions in 1976 and the national pension reform of 1980-85. Due to the gradual expansion of the employment pension system, the level of compensation of new pensions has slowly increased independent of legislative changes. The level of compensation of the sickness allowance declined significantly in the late 1970s as the maximum allowance rate and the income limit required to obtain the maximum allowance remained constant. In 1982, the allowance system was completely overhauled and the level of compensation in most cases more than doubled over the previous year. The unemployment compensation system was reformed in 1985. Prior to that, the real value of unemployment benefits had declined.

Data

The study is concerned with disability pensions awarded under the National Pensions Act, which are available to the entire population of working age. Those with a work history are additionally insured under the employment pension system. The data on the disability pensions provided under the National Pensions Act are sufficient to trace disability pension trends in the population at large, even if there are, in practice, a number of cases in which the beneficiary draws disability pension from the employment pension program alone.

The material consists of three files, each with individual-level information covering a five-year period. The census data were cross-matched with the following five years' cause of death and pension data. (Statistics Finland permission no. TK-53-1045-90). The population studied consisted of persons who had been occupationally active at the time of the census in 1970, 1975 and 1980 and had for at least one day over the subsequent five-year period been in the 40-59 age range. An individual follow-up time was calculated for each person, during which he or she was considered to have been exposed to a risk of disability. The follow-up time consisted of the time during which

a person was alive, belonged to the age group studied and did not receive a disability or some other early retirement pension.

Determinants of disability pension incidence among workers

Disability is a complex problem with both individual and societal implications, and explanations of its incidence can range from specific descriptions of the prevalence of a particular medical condition to analyses of macroeconomic factors and their impact (Yelin 1986). One study can therefore hardly capture all the factors associated with changes in the incidence of disability², but must necessarily be limited to the most significant partial explanations. This article only looks at background factors related to changes in the incidence of disability pension among workers, especially those employed in the industrial sectors. Societal changes are investigated as possible explanations for variation in incidence. On the basis of previous studies, the development of the population's health status, unemployment and macroeconomic trends and changes in the level and structure of social security were assumed to have had an effect on the incidence of disability pensions.

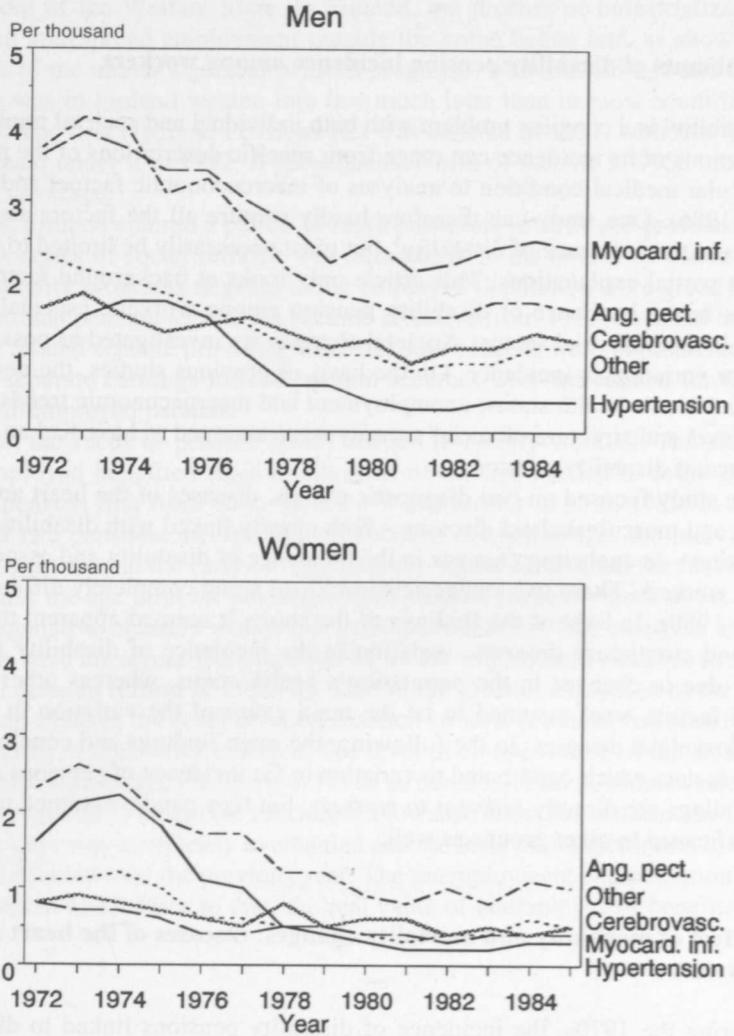
The study focused on two diagnostic groups, diseases of the heart and circulatory system and musculoskeletal diseases – both closely linked with disability in the aging population – in analyzing changes in the incidence of disability and associated factors among workers. These two categories developed along completely different lines during the 1980s. In light of the findings of the study, it seemed apparent that as regards heart and circulatory diseases, variation in the incidence of disability pensions was mainly due to changes in the population's health status, whereas other social background factors were assumed to be the main cause of the variation in the group of musculoskeletal diseases. In the following, the main findings and conclusions regarding the factors which contributed to variation in the incidence of pensions are presented. The findings are directly relevant to workers, but they can be assumed to have general significance to other groups as well.

The effect of morbidity and mortality changes: diseases of the heart and circulatory system

During the 1970s, the incidence of disability pensions linked to diseases of the heart and circulatory system declined more than in any other diagnostic group, and did not grow significantly during the first half of the 1980s. Among workers, the incidence of disability linked to heart and circulatory diseases was studied separately for hypertension, angina pectoris, post-myocardial infarction status, and cerebrovascular diseases (Figure 1). The incidence of pensions awarded on account of hypertension had decreased more than in any other diagnostic group. Among male workers, the incidence had over the study period declined to a little more than one fifth and among female workers to approximately one tenth of its early-1970s level. The incidence of pensions granted on account of angina pectoris had come down nearly 60% among both men and women, while the incidence due to post-myocardial infarction compli-

²The incidence of disability pensions is determined by dividing the number of new pensions within a given period by the number of follow-up years. The demand for a pension is defined as the number of persons applying for a disability pension within a given period in proportion to the number of follow-up years.

Figure 1. Diseases of the circulatory system: age-adjusted incidence of disability pension (%) by diagnostic category, 1972-85.



cations was down nearly 40%. The incidence of pensions caused by cerebrovascular diseases had among men declined by one fourth and among women by nearly 50% from its level at the beginning of the study.

The incidence of disability pensions due to heart and circulatory diseases developed in the same way as mortality from these diseases. Thus, the decreased incidence seemed to be primarily caused by a lessening of the severity of the diseases and possibly by a lower incidence of the diseases and attacks associated with them. However, the drop in the incidence was larger than what might be expected merely by studying the morbidity and mortality data. The material also made it possible to look into the possibility that the decreased incidence of pensions might be accounted for by a tendency to postpone retirement despite the presence of an illness. It was discovered that there had in the course of the study period been no consistent changes in the risk of

death during the two years following retirement, which indicates that throughout the study period, the individuals studied retired at the same level of impairment. On the other hand, mortality among those employed in work had fallen nearly as much as the incidence of pensions caused by heart and circulatory diseases. This indicated that the decrease in the incidence of pensions was mainly due to an improved overall health status of economically active individuals.

The findings point to the conclusion that the improved prognosis of heart and circulatory diseases is the main reason for the decline in the incidence of disability due to them. With lower mortality, the overall life expectancy has risen and along with it, also the quality of life seems to have improved. The key factors contributing to the drop in mortality are changes in dietary habits, reduction of smoking among men, more intensive and effective drug treatment – especially for hypertension – and by-pass operations (Pyörälä 1989).

The effect of economic factors: diseases of musculoskeletal system and connective tissue

The economic background factors contributing to the incidence of disability were among workers studied from the point of view, first, of the labor market situation and, second, of the level and structure of social security. These factors were assumed to be especially significant for the incidence due to musculoskeletal diseases. These diseases are from the point of view of the assessment of morbidity and the definition of disability a difficult and ambiguous issue. It is often difficult to substantiate medically the links between perceived pain and physiological deterioration (Sievers et al. 1989). The high prevalence of musculoskeletal diseases and their diagnostic ambiguity make them particularly responsive to changes in the socioeconomic background factors contributing to the incidence of disability pensions (Melkas 1980). Another reason for including musculoskeletal diseases in the study was that by analyzing them, it was possible to avoid seeing a false connection between disability and unemployment due to ecological correlations: no regional variation has been found in the functional capacity of musculoskeletal organs (Aromaa et al. 1989, 177), whereas the high mortality from heart and circulatory diseases as well as long-term unemployment are both characteristic of certain regions in Eastern and Northern Finland.

The effect of the labor market situation

Disability studies have usually discovered a linkage between the incidence or prevalence of disability pensions and unemployment trends in the sense that rising unemployment increases the number of people seeking a disability pension (cf. Berglind 1978, Sirén 1979, Piachaud 1986). However, Finnish statistics at least do not unequivocally support this view, as during the late-1970s recession, pension demand and incidence declined even as the unemployment rate rose. On the other hand, disability and unemployment have been found to coincide, the unemployed having poorer health than persons in work. The long-term unemployed have often been found to suffer from impaired work capacity (Lahelma and Mannila 1981; Vähätalo 1982).

The study set out to investigate the connection of disability caused by musculoskeletal diseases and the general job market situation with pension demand and incidence. It was assumed that changes in the availability of employment opportunities would be reflected more clearly in pension demand than in the incidence of pensions. Among workers employed in industrial sectors, the relationship between the demand for and incidence of pensions was examined from two angles. First, the relationship of pension demand and incidence with the local unemployment rate was studied during four different economic periods. Second, various industries were studied with attention to

the correlation between, first, pension demand and incidence and second, the employment trends in that particular sector of industry. Among men, the analysis encompassed agriculture and forestry, construction and manufacturing, and among women, manufacturing alone.

Figures 2a and 2b show the relationship between, on the one hand, pension demand due to a musculoskeletal disease and the incidence of pensions, and on the other, the local unemployment rate in four different periods (1973–74, 1977–78, 1980–81, and 1984–85). In interpreting these figures, we must take into account that the distribution of the population at risk among municipalities grouped according to the prevailing unemployment rate varied noticeably from one period studied to another. In 1973–74, only a small segment of the workers in construction and manufacturing were living in municipalities with an unemployment rate above 3%. Consequently, the relationship in 1973–74 between unemployment rate and pension demand is only studied for agricultural and forestry workers.

Pension demand due to a musculoskeletal ailment and the incidence of pensions were found to be dependent on the regional unemployment rate: in all four periods, the higher the unemployment rate was, the more people applied for and obtained a disability pension. It seems, therefore, that unemployment makes people generally more inclined to seek a disability pension. Indeed, in line with the official definition of disability, job market realities have to a certain extent been taken into account in determining applications for disability pension. The consistent but variably close link between pension demand and incidence and the regional unemployment rate means that while regional unemployment had a distinct effect on both pension demand and incidence, other coincident factors influenced the level of the incidence of and demand for pensions. The exceptions to the linear relationship between the incidence of and demand for pensions and the unemployment rate were, in the recessionary period 1977–78, male workers in manufacturing, and, in the years 1980–81 and 1984–85 – both characterized by structural unemployment – male construction workers. In the recessionary late 1970s, male industrial workers living in municipalities with low or medium unemployment had a much higher level of pension demand and incidence than what the general disability trends of the time indicated. In construction, pension demand and incidence were in the early 1980s – a time of high structural unemployment – exceptionally low in municipalities with a high unemployment rate.

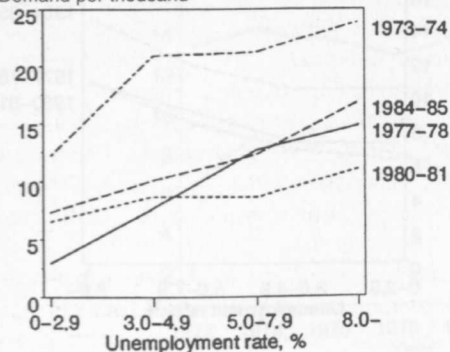
Figure 3 is an analysis by branch of industry of the demand for pensions and the incidence of pensions among male workers in 1972–1985. It supports the assumption that the recession of the late 1970s and the ensuing drop in the demand for labor affected the demand for pensions among workers in various industries in different ways: in agriculture, forestry and construction, pension demand declined as a result of the recession (except for the early part of the recession), while in the manufacturing industry labor cuts increased the demand for pensions. Figures 4 and 5 analyze the correlation of the number of employed workers with pension demand and incidence due to musculoskeletal diseases in 1972–1985 for three sectors of industry. The changes in the number of employed workers are compared to the base year 1974 = 100.

The number of industrial workers in Finland declined in the recessionary years 1975–78. Over the same period, pension demand grew or remained at the relatively high early-1970s level. Also the incidence of pensions remained at a high level in comparison with trends of other socioeconomic groups. Among both male and female industrial workers, the peak in pension demand was reached in 1978, i.e., the year in which unemployment reached its highest and the number of industrial workers its lowest point. The clearest link between the decline in the labor force and the demand for pensions was seen in the metal and engineering industries, the paper industry, and the textile, clothing, leather and shoe industries.

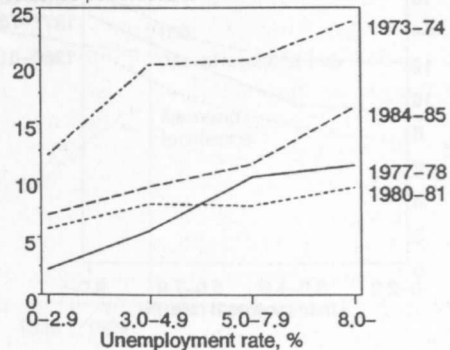
Figure 2a. Age-adjusted disability pension demand and incidence due to musculoskeletal disease among male workers in various industries, analyzed by period and local unemployment rate.

Agriculture and forestry

Demand per thousand

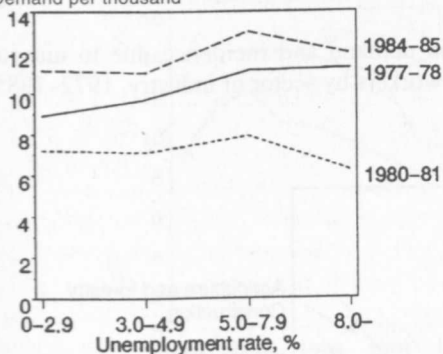


Incidence per thousand

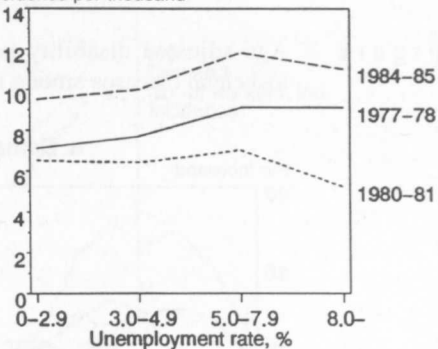


Construction

Demand per thousand

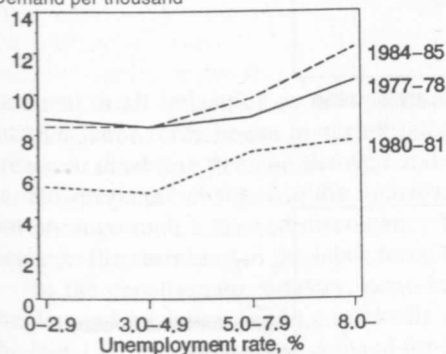


Incidence per thousand

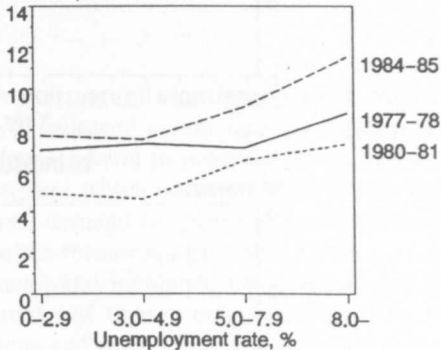


Industry

Demand per thousand



Incidence per thousand



During the late-1970s recession, both pension demand and incidence linked to musculoskeletal diseases were at a high level among industrial workers. At the same time, the disparity between the demand for pensions and their incidence grew, i.e., more applications were being turned down. Around 1980, the size of the industrial labor force rose within two years back to the 1974 level, and pension demand and incidence

Figure 2 b. Age-adjusted disability pension demand and incidence among female industrial workers, analyzed by period and local unemployment rate.

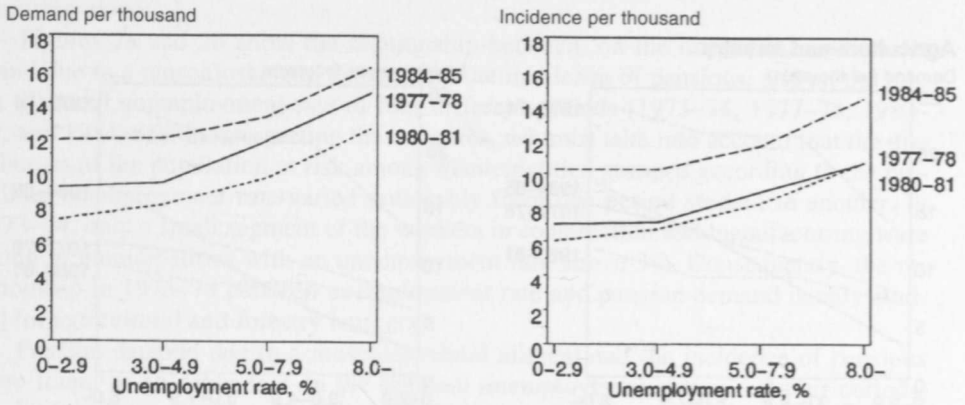


Figure 3. Age-adjusted disability pension demand and incidence due to musculoskeletal diseases among male workers by sector of industry, 1972-1985.

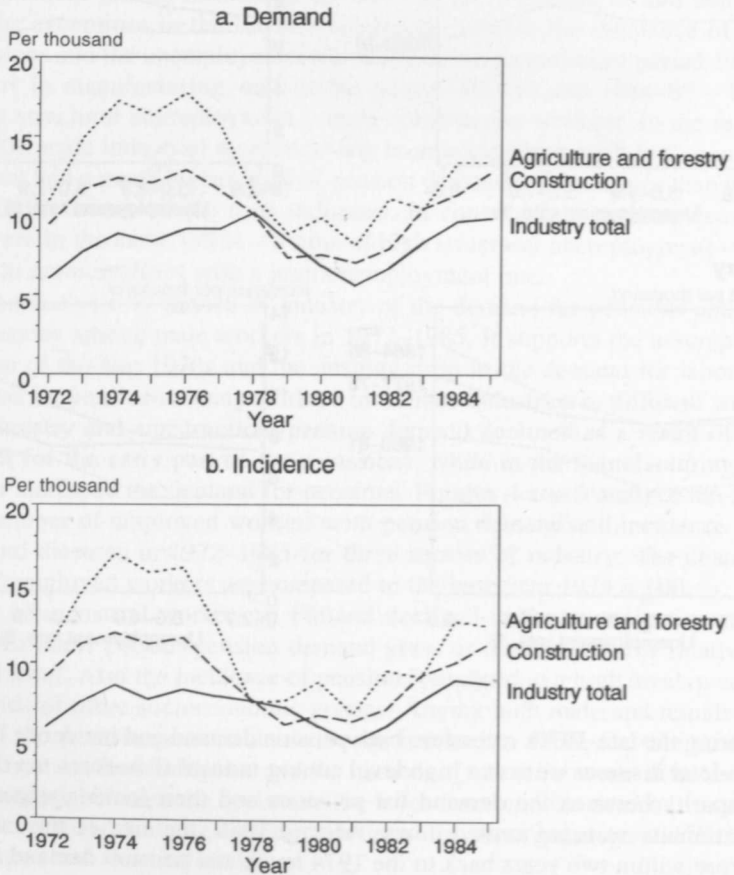
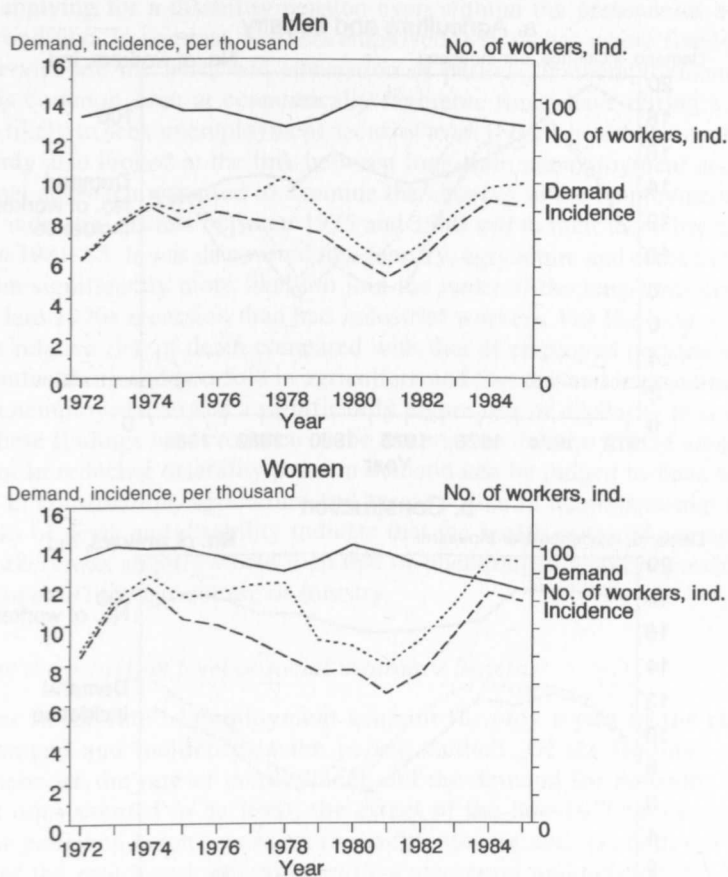


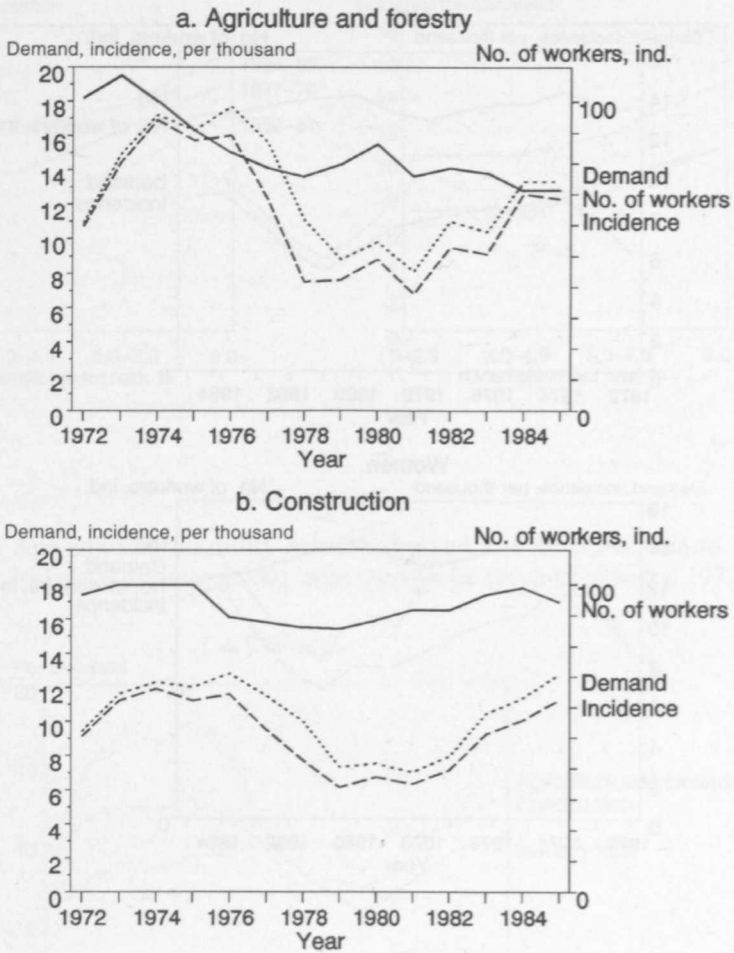
Figure 4. Number of industrial workers (all age groups) and age-adjusted pension demand and incidence due to musculoskeletal diseases among industrial workers, 1972–1985.



declined in all industries as the application denial rate fell. Further, in 1981, the industrial labor force began to shrink once more, followed a year later by a sharp increase in disability pension demand and incidence related to musculoskeletal diseases. However, the changes in the industrial structure which occurred in the 1980s did not produce such a marked discrepancy between demand for pensions and their incidence as the shrinking of the labor force due to the recession of the late 1970s.

In the construction industry, pension demand and incidence were also linked to the demand for labor, but in a markedly different way than in manufacturing. During the late-1970s recession, the demand for pensions and pension incidence declined rapidly – except at the beginning of the recession – indicating that although the demand for labor remained low, this did not generate a push towards more disability pensions. In the early 1980s, the development in the construction industry differed from that in manufacturing in that pension demand due to musculoskeletal diseases grew along with an increase in the number of job opportunities. Among male agricultural and forestry workers, pension demand and incidence were at their highest in 1974–76, which period saw a rapid decline in the demand for labor. As the recession continued, pension

Figure 5. Number of workers (all age groups) and age-adjusted pension demand and incidence due to musculoskeletal diseases among male workers in agriculture, forestry and construction, 1972–1985.



demand and incidence decreased more sharply than in any other branch of industry and remained low despite a moderate improvement in employment at the turn of the decade. After that, the demand for labor and the demand for pensions developed in opposite directions as they did in the manufacturing industry.

Analyses based on the regional unemployment rate and labor force changes in a given industry showed that the link between disability and unemployment has manifested itself in different ways: in the manufacturing industry cuts in labor have driven more people to seek a disability pension and to retire, whereas in construction, especially as unemployment remained high and became structural, the boundary between disability and unemployment shifted and workers with impaired functional capacity increasingly became unemployed as opposed to disabled. Male agricultural and forestry workers held in this respect an intermediate position: a clear link did exist between the decline in the labor force and disability pension demand and incidence, but the fact that the demand for labor also in this sector of industry remained low for an extended period of time seems to have made the distinction between unemployment and disability less clear.

The findings specific to a given branch of industry can more broadly be interpreted to signify that workers who had a long contract of service and whose skills were geared to the needs of a single enterprise were particularly inclined to secure their livelihood by applying for a disability pension even without the presence of a seriously disabling condition. In contrast, workers employed in branches where fixed-term contracts of service are the norm and alternation of periods of unemployment and employment is common even at economically favorable times have during a recession been more likely to seek unemployment security even if their health is impaired.

The study also looked at the link between long-term unemployment and disability. The panel approach was used to examine the changes in the employment status of workers in industrial sectors between 1975 and 1980 and in their mortality and risk of disability in 1981–85. It was discovered that forestry, agriculture and construction workers had been significantly more likely to join the ranks of the long-term unemployed during the late-1970s recession than had industrial workers. For the long-term unemployed, the relative risk of death compared with that of employed persons was three-fold in manufacturing and two-fold in agriculture and forestry and in construction. The long-term unemployed also had a significantly higher risk of disability than employed persons. These findings lend credence to the assumption that the role of long-term unemployment in reducing disability pension demand can be judged to have been more significant in construction, agriculture and forestry than in manufacturing. However, data on risks of death and disability indicate that the health status of unemployed industrial workers was slightly worse than that of unemployed workers previously employed in construction, agriculture or forestry.

The effect of the provision level of social insurance benefits

Changes in the rate of employment account for only a part of the changes in pension demand and incidence in the period studied. Of the findings related to the links between the rate of employment and the demand for pensions, the most significant ones seemed to be, first, the effect of the late-1970s recession on the demand for pensions among workers in manufacturing and, second, the cumulating effect of the protracted recession and the structural unemployment which followed on the demand for pensions among forestry and construction workers. In analyzing the social background factors related to the incidence of disability pensions it is necessary to bear in mind that despite various features unique to particular branches of industry the overall incidence trends at the turn of the decade showed a consistent pattern in practically all population groups studied and that the increase in incidence occurred at the same time, i.e., in 1982. Background factors common to all socioeconomic groups and branches can be found among changes in the level of provision and structure of social security.

Improvements in social security are probably the main reason for the peak in the incidence of disability pensions reached in the first half of the 1970s. The rising level of pension security, and particularly the expansion of employment pension programs, can be assumed to have played a central role in causing the incidence of disability pensions to reach its record high in the early 1970s. Pensions are not a viable alternative to employment until pension security has reached a level which compares favorably with the cost of living and the wage level (Sirén 1979). The 1970 introduction of pension legislation for self-employed persons may have provided a further gateway to retirement even for those categorized as employees, as the distinction between small farmers and employees was negligible in the early 1970s.

The changes in the demand for and incidence of disability pensions towards the end of the 1970s cannot be explained by factors related to the level of pension provi-

sion, as pension demand and incidence declined even as the level of provision rose due to the expansion of the employment-related programs. Some of this was caused by factors linked to the level of provision and structure of other social security programs, the sickness allowance in particular. Changes in its provision level seem to have influenced the demand for and incidence of disability pensions.

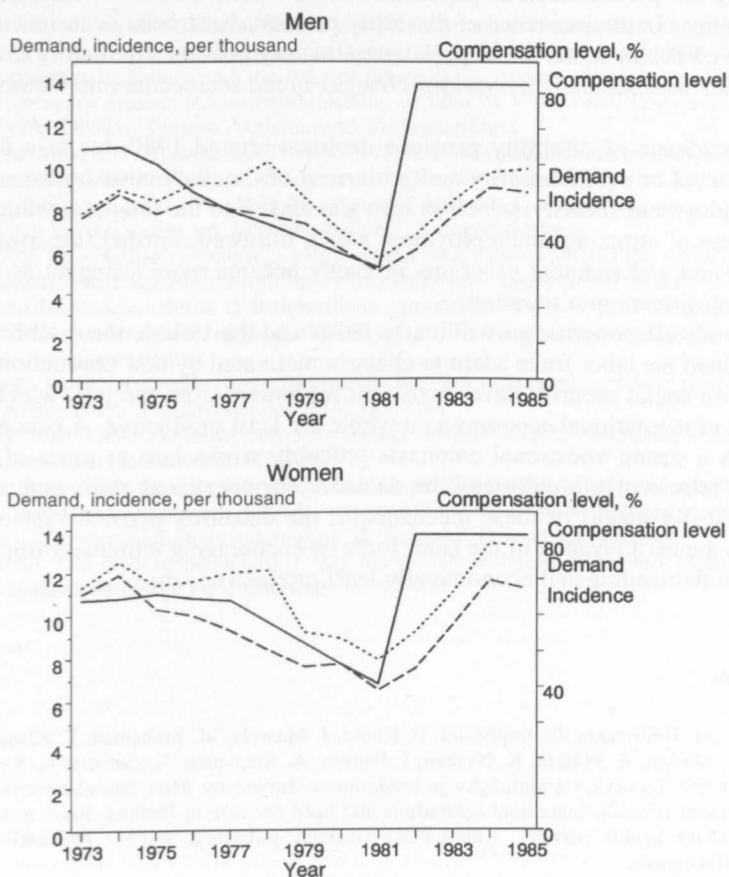
The sickness allowance is a major source of livelihood during the pre-retirement sick leave (after paid sick leave ends). According to a study conducted in the mid-1970s, the groups with highest morbidity rates were under-using sick leave because the financial compensation was inadequate (Nyman and Raitasalo 1978). Towards the end of the 1970s, income security for long sick leaves further deteriorated as the maximum amount of the allowance and the required income limit were frozen. For male industrial workers, for instance, the average level of compensation after taxes fell from 65% in 1974 to 31% in 1981. For female workers in manufacturing, it dropped from 65% to 41%. The 1982 allowance reform raised the net compensation level to approximately 83%. (Calculated on the basis of the average income tax rate of a person on sick leave for a whole year. The charts apply to unmarried individuals and to those with lower earnings than their spouse's. For those with higher earnings than their spouse's compensation was somewhat higher.) The correlation over time between the level of compensation of the sickness allowance and the demand for and incidence of pensions linked to musculoskeletal disorders among workers in manufacturing is shown in Figure 6.

The downward trend in the incidence of disability pensions seen towards the end of the 1970s in nearly all population groups and the subsequent upturn in 1982 support the assumption that the changes in the sickness allowance replacement rate had a major influence on the incidence of disability pensions. The declining compensation level in the late 1970s acted as a disincentive for sick leave and thereby reduced disability pension incidence and demand. The reform of the allowance system in 1982 caused disability pension incidence to rise once more. The most dramatic increase was seen among industrial workers, but the same trend was evident also in other branches and in most other socioeconomic groups (cf. Figure 6).

In the previous section, reference was made to the blurring of the distinction between disability and unemployment insurance during the late-1970s recession. This development was probably partly due to a shift in the relative unemployment and health security benefit compensation levels with the effect that at the turn of the 1970s the earnings-related unemployment allowance was generally larger than the sickness allowance. Thus, unemployed persons with health problems were not immediately concerned about securing benefits from the short-term disability programs.

Labor market realities and the level and structure of social security apparently had a combined effect on the distribution between disability and unemployment security. Persons working in sectors of industry where fixed-term contracts were the norm and whose labor market position was unstable had, as the recession continued, an above-average chance of being forced into a "career of unemployment". As unemployment spells lengthened, a large number of workers with health problems fell into the category of the "long-term unemployed," whose needs were not necessarily appropriately catered for by the social security system. Workers in manufacturing with open-ended employment contracts, on the other hand, had an above-average likelihood to end up applying for disability pension during the recession. This can be interpreted to indicate that when a permanent contract of service ends in dismissal, the choice between disability and unemployment benefits is made against the background of the entire past career and future employment prospects. Seeking a pension is in this situation the best option, because it is difficult for elderly workers who have been laid off to find a job with undiminished pay. Thus, even if they manage to find employment, their future

Figure 6. Changes in the compensation level of the sickness allowance and age-adjusted pension demand and incidence due to musculoskeletal diseases among industrial workers, 1972–1985.



pension is in danger of being reduced (cf. Standing 1986; Sirén 1989; Eläkekomitea 1990).

The early-1980s improvements in social security met the latent retirement needs of workers in particular quite well. This is seen in the fact that during the period when the numbers of industrial workers were again being reduced, no such discrepancy between pension demand and incidence as had arisen in the recessionary late 1970s emerged. The controlled growth in the number of disability pensions in the early 1980s was, it seems likely, aided by the increased utilization of unemployment pensions as a means for pensioning off aging workers. In the 55–59 age group, the largest share of workers retiring on an unemployment pension were found in the wood processing, metal, textile, clothing, leather and shoe industries. For large employers, unemployment pensions availed themselves as a low-cost, non-disruptive way of reducing the number of workers.

Conclusions

As a general conclusion, it can be said that the Finnish disability pension system has, during the period studied, stayed true to its *raison d'être* as defined in medical terms. Changes in the incidence of disability pensions have been occasioned firstly by the improved health status of the population, mainly positive circulatory disease morbidity trends, and secondly by various changes in the socioeconomic factors linked to disability.

The incidence of disability pensions declined around 1980 due to a drop in the provision level of social security and a blurring of the distinction between disability and unemployment security, which in turn was linked to the long recessionary period and the time of structural unemployment which followed. Further, the award criteria in the pension and sickness programs probably became more stringent as a result of the worsening economic situation.

In periods of economic growth (early 1970s and the 1980s), the disability pension system helped the labor force adapt to changes motivated by new production demands. Advances in social security have facilitated retirement from the jobs which from the viewpoint of the national economy as a whole are least productive. A concept of disability with a strong vocational emphasis probably works best at times of economic growth as jobs evolve rapidly and the demands for vocational skills and training are emphasized. By means of these mechanisms, the disability pension system has contributed to the revitalization of the labor force by encouraging retirement from the physically most demanding and economically least productive jobs.

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