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ECONOMIC POVERTY IN FINLAND 1971 - 2004

Abstract

We have examined trends in the economic poverty in Finland using two data sources, the IDS (Income Distribution Survey) and the CES (Consumption Expenditure Survey). We have drawn on the recent literature on poverty analysis to analyse a range of poverty measures, using dominance conditions to rank the distributions of living standards. We find that poverty rate is the U-shaped curve over the period 1971 - 2004. As regards trends in poverty over time, the long-run perspective available from the CES indicates that from the early 1970s to the beginning of 1990s, the relative poverty rate has declined. The latter part of the 1990s and the early years of 2000s were clearly different. We find that relative poverty rose over the period 1995 - 2004 for a very broad class of poverty measures and a wide range of poverty lines. Poverty rate, measuring poverty line 60 per cent from median income, was about 7 per cent (328 thousand persons) in 1990 and 11 per cent (557 thousand persons) in 2004. At the same time poverty has become more severe. We also found that since the mid 1990s the poverty rate among children has grown much faster than the poverty rate in the whole population. Whilst the total numbers in poverty during the 1987 - 2004 on these various definitions have risen markedly, the composition of the poor has also changed significantly. There is little doubt that unemployed households are the most vulnerable group of the population. Another vulnerable group has been families with youngest children less than 7 years.

Key words: poverty, poverty measures, ordinal poverty comparisons

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1 Introduction

In this paper we analyse trends in income and consumption-based poverty indicators, which are all derived from the Income Distribution Surveys (IDS) and the Consumption Expenditure Surveys (CES) published by the Statistics Finland. These measures classify individuals being in poverty if they live in households whose income or consumption falls below some poverty line expressed as a fraction of median income or consumption (40 per cent, 50 per cent and 60 per cent). These indicators are known as relative poverty indicators because whether someone is classed as being poor depends not just on their income and consumption but also on income and consumption expenditure of the median individual.

However, there are well-known weaknesses to measuring poverty in this way. It is generally agreed that poverty is multidimensional. We slightly mitigate this limitation in our paper that we also measure poverty defined simultaneously in terms of income and consumption. Secondly, none of the measure of poverty used is explicitly based on an assessment of needs, or what level of income and consumption would be enough to achieve some standard of living. This criticism simply says that poverty is also an absolute notion.

Even accepting to some extent the above limitations, our poverty measures do not provide only information about the number of poor but also on distance that separates those with incomes or consumption expenditures below poverty lines from the poverty thresholds. In other words the measures provide information on how poor the poor are. We believe that the seriousness of poverty is a very important issue and it may require different policies from those trying simply to bring people from just below the poverty line across it.

A characterization of poverty requires answers to questions such as: Who are the poor? How to identify the poor in terms of socio-economic and demographic variables as employment status, occupation, education, age and stage of life cycle? How has the composition of the poor changed over the period 1971 - 2004?

Section 2 provides a brief summary on poverty measures. We begin in section 3 by describing the data used. We then examine in this section the trends in relative poverty amongst the population as a whole. Section 4 focuses on subgroups of the population, examining poverty in different demographic and socio-economic groups and different regions in Finland. Section 5 concludes.

2 Measuring poverty

But though poverty itself is a rather sophisticated and multi-faceted phenomenon, the economics of poverty essentially boils down to two fundamental questions when measuring poverty. First, we have to choose the yardstick by which poverty should be measured. Second, how the degree of poverty relative to a particular poverty line is measured and how this is aggregated across those who are deemed to be poor. A difference between the literature for developing and developed countries is that absolute considerations have dominated the former, while relative poverty has been more important in the latter. Some people, for example, Townsend (1985), commenting on Sen (1983), has taken the view that poverty is entirely relative.

A widely used method of defining poverty is to relate incomes or expenditures to some proportion of prevailing national average. National average can be defined as median or mean, the proportion used can vary, say from 40 to 60 per cent, but the general principle is that poverty is to be defined wholly by distance from national average income or expenditure. Statistics of this kind are now widely used in comparative studies in the EU context (see e.g. Danziger and Jäntti, 2000). The choice between the median and the mean is in part a matter of their relative statistical properties. It is also a question of the level of poverty line.

There is now a large literature on poverty measures stimulated by the article of Sen (1976). One of the main contribution of this article was to call into question the widespread use of headcount measure. The main objection to the headcount is that it gives no indication of the severity of poverty. Households may be close to the poverty line or far below. For this reason, the theoretical literature has developed alternatives to the head count. Atkinson (1998) provides, however, an interesting defence for the head-count. If a minimum income is a basic right, then the head-count measures the number deprived of that right. It is an either/or condition.

What are then other candidates? The first is the poverty gap, which is the sum (integral) of the shortfall from the poverty line. The poverty gap in turn may be criticized for evaluating equally all transfers to household below the poverty line irrespective of the seriousness of their poverty. This measure is insensitive to transfers between two households on the same side of the poverty line. Therefore, more sophisticated measures have been developed so that the transfer from a household close to the poverty line to a household far below the line has the effect of reducing mea-

sured poverty. For example there is a class of measures proposed by Foster et al. (1984). For useful surveys on poverty measures see e.g. Foster (1984), Atkinson (1987), Ravallion (1994) and Zheng (1999). We shall focus on a few representative measures and those we used in our empirical analysis.

In the discrete case, let there be n income receiving units and let the income unit i be denoted by y_i .¹ The incomes (or expenditures) are arranged in ascending order and poverty line is z . In the continuous case, let the density and cumulative density of y be given respectively by $f(y)$ and $F(y)$; and let y lie between y_{min} and y_{max} .

The most commonly used measure of poverty is the so-called head count ratio, the fraction of income-receiving units which are below the poverty line. Denoting this by H , it follows that in the discrete case and continuous case, respectively,

$$H = \frac{1}{n} \sum_{i=1}^n 1(y_i \leq z), \quad (1)$$

where $1(\cdot)$ is an indicator function that is 1 if its argument is true and 0 otherwise. For example, if 10 per cent of the population are deemed to be poor, then $H = 0.10$. While identifying the number of the poor, it ignores how poor the poor are, and therefore has the absurd property that it remains unchanged when a previously poor unit becomes even poorer. For example, if we take one Euro from the poorest unit and give it to the richest unit, the head count ratio would remain unchanged. This is one reason why the head count measure used as a measure of poverty has been under severe attack (see e.g. Sen, 1976, 1979; Watts, 1968). For certain sorts of poverty comparisons, such as assessing overall progress in reducing poverty, head count ratio may be quite satisfactory. Atkinson (1987, 1998) was among the few scholars who saw that the attack on the head count is not fully justified. He argued that “minimum income may be seen as a basic right, in which case the head count may be quite acceptable as a measure of the number deprived of that right”.

To overcome drawbacks of the head count measure, the income gap ratio is suggested as a supplement. Denoting this by $I = 1 - m^z/z$, where m^z denotes the mean consumption of the poor. This gives the average of the poverty gaps ($z - y$) as a fraction of the poverty line. To take account of the numbers of the poor in the sense that if the poor units were exactly duplication, I would remain unchanged, it

¹ In this study we utilised sample data. In this case $1/n$ is replaced by $w_i/\sum_{i=1}^n w_i$. w_i include the sampling weight and the number of members in household.

is suggested that the product of HI would be more satisfactory.

$$HI = \frac{1}{n} \sum_{i=1}^n [1 - y_i/z] 1(y_i \leq z). \quad (2)$$

Thus HI is sensitive to both the numbers of the poor and to how poor they are. HI has an interesting interpretation, which makes it very attractive in policy applications. Namely HI measures the actual amount of income necessary to bring every household below the poverty line up to the poverty line. The drawback of the HI measure is that it is insensitive to redistribution of income within the poor household. If one Euro of income was taken from the poorest unit and given to a unit which is richer but still well below the poverty line the HI measure would remain unchanged. Sen (1976) has proposed a better measure of the severity of poverty, given by

$$S = H \left(1 - (1 - G_p) \frac{\mu_p}{z} \right), \quad (3)$$

where μ_p is the mean of y among the poor, and G_p is the Gini coefficient of inequality among the poor. If there is no inequality amongst the poor then $S = HI$. The S -measure in turn is not additive. In other words S is not equal to the population weighted sum of poverty counts in the various sub-groups of society.² A measure of the severity of poverty which is decomposable is the Foster et al. (1984) (hereafter FGT). The FGT class of measure can be written as

$$P_a = \frac{1}{n} \sum_{i=1}^n [1 - y_i/z]^a 1(y_i \leq z). \quad (4)$$

The parameter $a \geq 0$ measures how sensitive the index is to transfers between the poor units. For $a > 1$, transfer from low to high incomes will increase poverty. When $a = 2$, this measure can be expressed as

$$P_a = H \left(I^2 + (1 - I)^2 C_p^2 \right) 1(y_i \leq z), \quad (5)$$

where C_p is the coefficient of variation among the poor. This class of measure has proven very useful for policy analyses. It already contains indices (H) and (HI) as special cases

²In Appendix Figure A1 we present empirical figures for different ingredients of Sen-measure.

$$P(a = 0) = P_0 = H \quad (6)$$

$$P(a = 1) = P_1 = HI. \quad (7)$$

It is clearly the decomposability of P_a which has led to its widespread application in practice.³ Divide the population into m subgroups, mutually exclusive and exhaustive, with group j having a fraction x_j of the population, $\sum_{j=1}^m x_j = 1$. Denote the poverty index in subgroup j by $P_{j,a}$, i.e.

$$P_a = \sum_{j=1}^m x_j P_{j,a}, \quad (8)$$

thus, overall poverty can be written as a weighted sum of subgroup poverty indices.

Although major advances have been made in the search for better cardinal measures of poverty, there is still widespread concern over arbitrariness in the choice of the poverty measure and the poverty line. Fortunately, for many applications, all that we need is the ordinal ranking of distribution. As Sen (1979) noted that “one may be forced to use more than one criterion because of non-uniformity of accepted standard and look at the partial ordering generated by the criteria taken together” (p. 280). An important strand of research in poverty analysis (Atkinson, 1987; Foster and Shorrocks, 1988) drawing on and developing results from the theory of stochastic dominance has shown when one can make reasonable ordinal poverty comparisons.

If ordinal comparisons suffice, we need not confine ourselves to a particular poverty line and poverty measure. If the class of poverty measures satisfies certain conditions, we can apply the first-order dominance test. Then it can be shown that poverty will unambiguously increase (decrease) between two dates, say 1990 and 2004 in Finland, if the cumulative distribution for the latter date lies nowhere below (above) that for the former date, up to z_{max} . Comparing distributions of 1990 and 2004 if $F(2004, z)$ is everywhere above $F(1990, z)$ up to z_{max} , then the head count index must also be higher for 2004, no matter what the poverty line. When the first-order dominance is inconclusive, we can further restrict the range of admissible poverty measures (excluding H) then we can use a second order dominance

³ E.g. in analysing the targeting of poverty alleviation programs see Kanbur (1987), Besley and Kanbur (1988) and Kanbur et al. (1994).

condition. In other words we restrict attention to measures which reflect the depth of poverty such as HI and P_2 . When a second-order dominance, in turn, is inconclusive we can exclude H and HI then a third order dominance condition can be tested.

3 The data and results

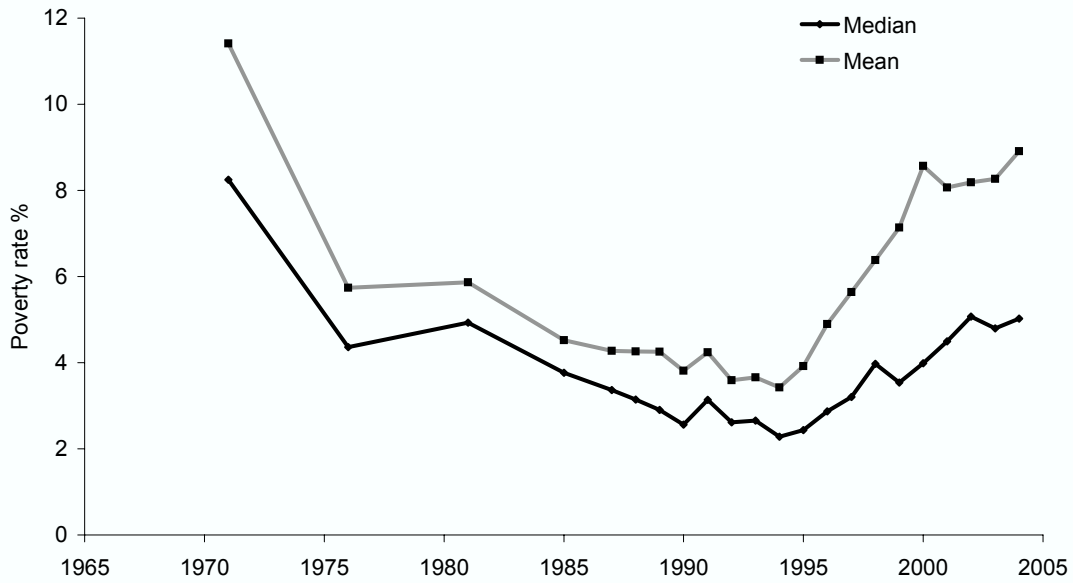
We use the Income Distribution Surveys (IDS) and the Consumption Expenditure Survey (CES)⁴ published by the Statistics Finland. The IDS is a sample survey of around 9000 - 11000 households drawn from the private households in Finland. The IDS contains information on incomes, taxes and benefits together with various socio-economic characteristics of the Finnish households. Most of the information contained in the IDS has been collected from various administrative registers. Auxiliary information is collected through interviews. Indirect taxes, such as VAT and specific commodity taxes and the provision of public services are not included on our data. This may have important consequences, because indirect taxes and public services tend to be regressive (see e.g. Sullström and Riihelä, 1996; Suoniemi, 1993). All types of income and consumption used in this study are calculated on annual basis. Households also differ in size and composition, and so a simple comparison of aggregate household consumption could be quite misleading about the well-being of individual members of a given household. The OECD equivalence scale is used in order to make comparable households with different size and composition. The OECD scale is calculated as follows. The first adult in each household has a weight of 1 and each additional adult a weight of 0.7. Each child under 18 years old gets a weight of 0.5. We also make comparisons with the so called modified OECD-scale, shortly MOECD. In this scale the first adult in each household has a weight of 1 and each additional adult a weight of 0.5. For the children, aged 0 - 13, the weight is 0.3. Members aged over 13 are adults. The EU standard for poverty is determined by 60 per cents from median income (see Atkinson, 2000).

Figure 1 shows the trends in the relative poverty between 1971 and 2004 when a poverty line is set equal to 50 per cent of either median or mean income of the year concerned. The picture reveals that relative poverty declined until the mid 1990s. It rose, thereafter, sharply during the latter part of the 1990s. The relative income poverty rate defined in terms of having low income relative to a contemporaneous standard, a poverty line set at 50 per cent of median (mean) income, was in 1971 8.3 per cent (11.4), in 1995 2.4 per cent (3.9) and in 2004 5.0 per cent (8.9).

Figures 2 shows that over the period from 1971 to 2001 there were actually more people living below the spending based poverty lines than below income based ones.

⁴ See Suoniemi and Sullström (1995) for a detailed exposition of this data set.

Figure 1 *Percentage of the population below 50 per cent of mean and median disposable income, 1971 - 2004*



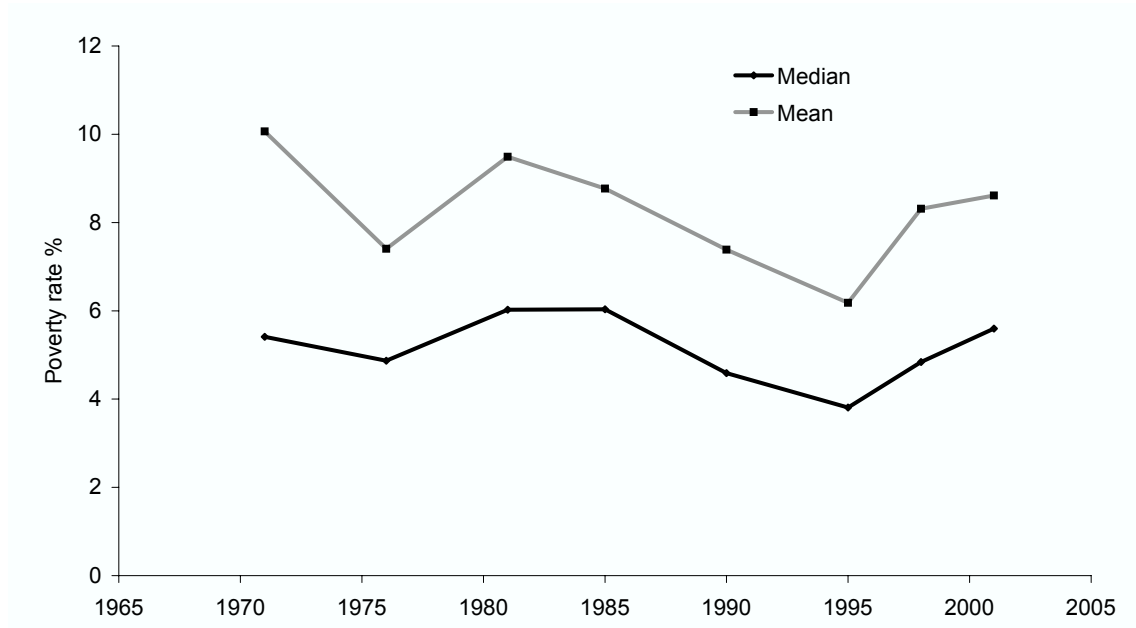
Figures 1 and 2 also show clearly the seemingly perverse effect that the recession had on purely relative poverty measures. In the recession of the early 1990s, the poverty head count actually fell, whether it is income or consumption that is used in assessment. This shows that the middle and high incomes must have been worse hit by the recession than the low incomes. Similarly, in the latter part of the 1990s, a period of rapid economic growth, large gains for those at the top along with smaller gain for other can result in a very rapid rise in head count poverty.

Correspondingly Figure 2 shows the trends in the relative poverty of consumption.⁵ We can see that in this case relative poverty declined from year 1985 to the mid 1990s. However, the trends of income and consumption poverty are in the direction with the same tendency in the latter part of 1990s.

Figure 3 shows poverty rates when these rates are based on both income and spending. Person is poor if his consumption and income are below the 60 per cent

⁵ The length of the bookkeeping period in consumption (in CES) was a month in 1971 and 1976 and after that two weeks. Income variables in the samples were always the length of one year.

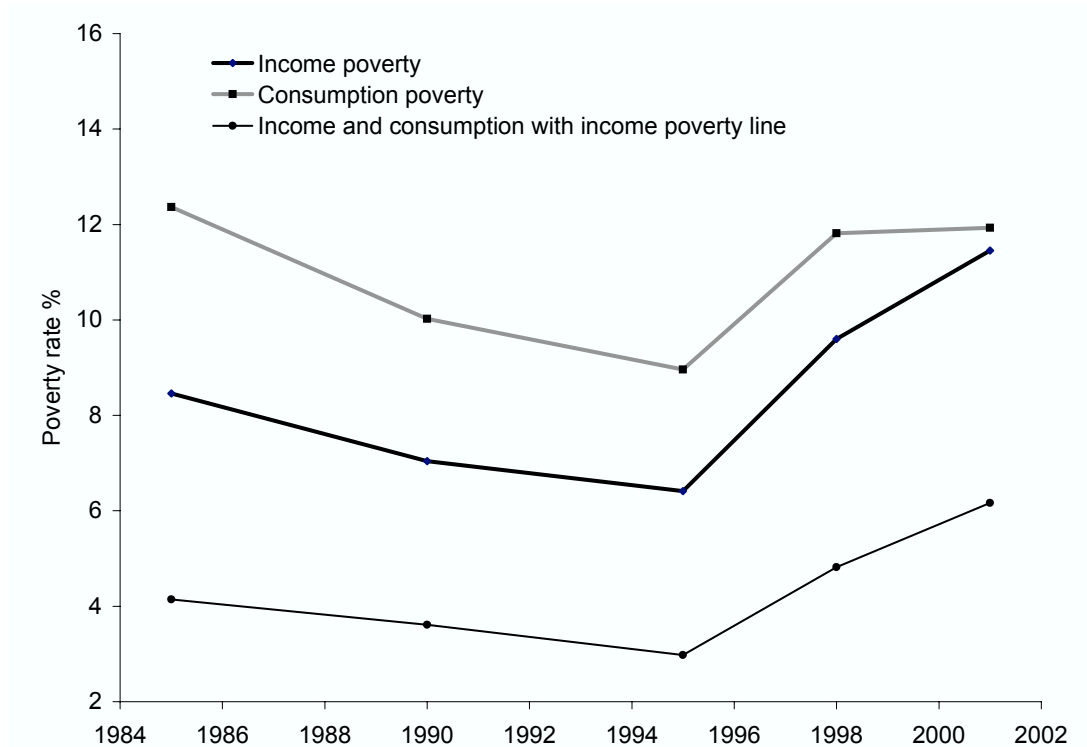
Figure 2 *Percentage of the population below 50 per cent of mean and median consumption, 1971 - 2001*



of median income. Now poverty rates are lower than based on either spending or income. We find that also in this case poverty rate is the U-shaped curve over the period 1985 - 2001.

In Figure 4 we show the proportion of the population below 40 per cent, 50 per cent and 60 per cent of median and mean disposable income in each year during 1987 - 2004. What is striking about Figure 4 is that whether the poverty line is set at 40 per cent, 50 per cent or 60 per cent of national average income, the numbers below the line have risen dramatically since the mid 1990s. Using the 50 per cent threshold, the proportions have risen from 3.9 per cent in 1995 to 8.9 per cent of the population in 2004. These charts do, however, demonstrate that the choice of poverty line can still have important implications to the precise description of trends as well as levels. The change in equivalence scales affects not only the level of poverty, but also the composition of poverty. The level-effect of adopting the modified OECD scale (MOECD) is shown in Figure 5. (see also Tables A1 - A2 in Appendix). Figure 5 displays poverty rates among children. We find the U-shaped pattern of rate of

Figure 3 *Percentage of the population below 60 per cent of median income, median consumption or both*

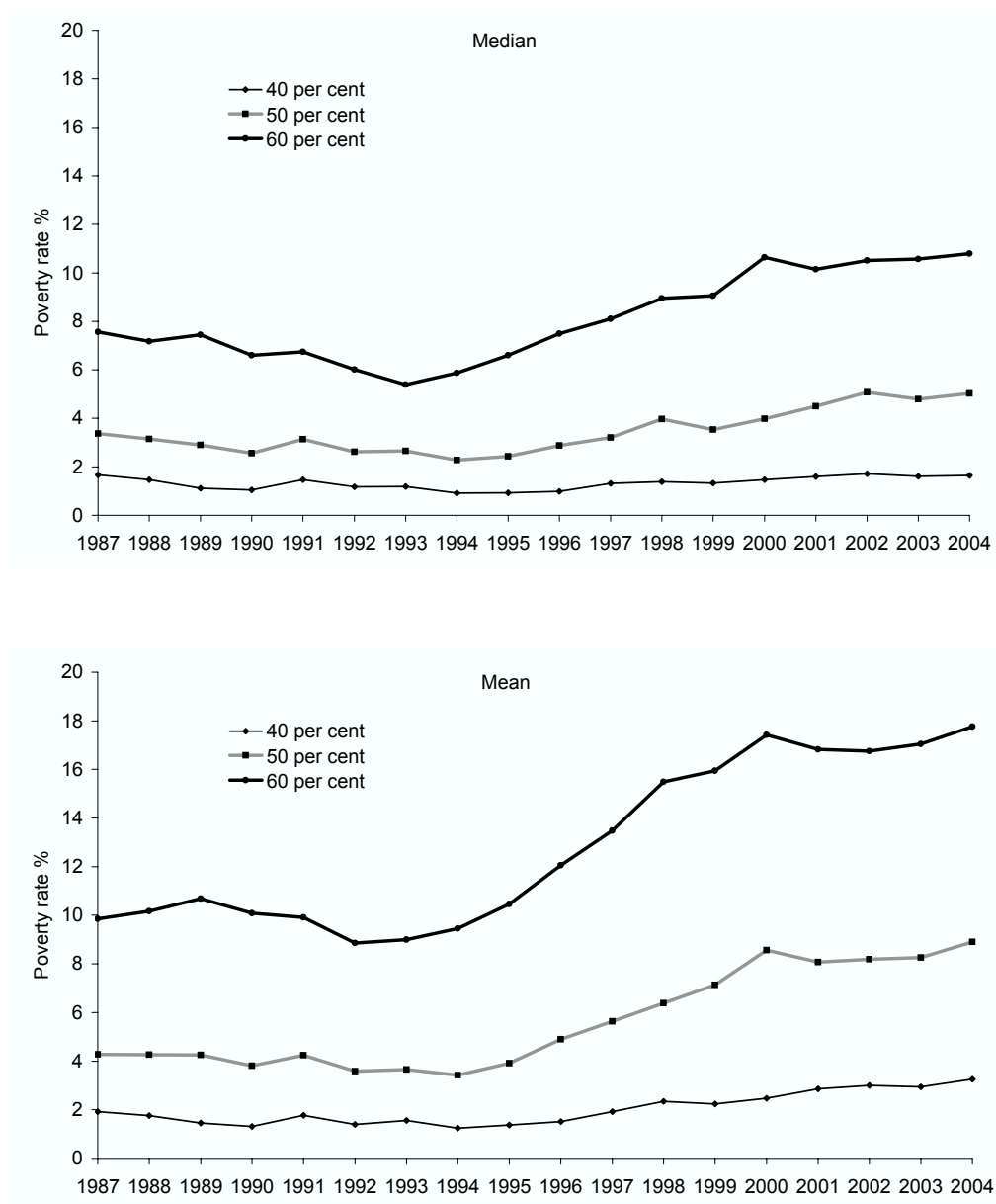


child poverty. The rate of child poverty based on household income has also risen since the mid 1990's with all three poverty lines and different equivalence scales.

One problem with the poverty measure based on a proportion of the mean is that the mean may be skewed upwards by some very high incomes at the very top of the distribution. This may be a reason why the poverty measures based on a proportion of the mean deviates from those based on the proportion of the median income during the latter part of the period considered. It is also reasonable to argue that what is happening at the top of distribution should not affect the measurement of poverty. A poverty measure less sensitive to such effects is one based on a proportion of the median, the point in the middle of the distribution.

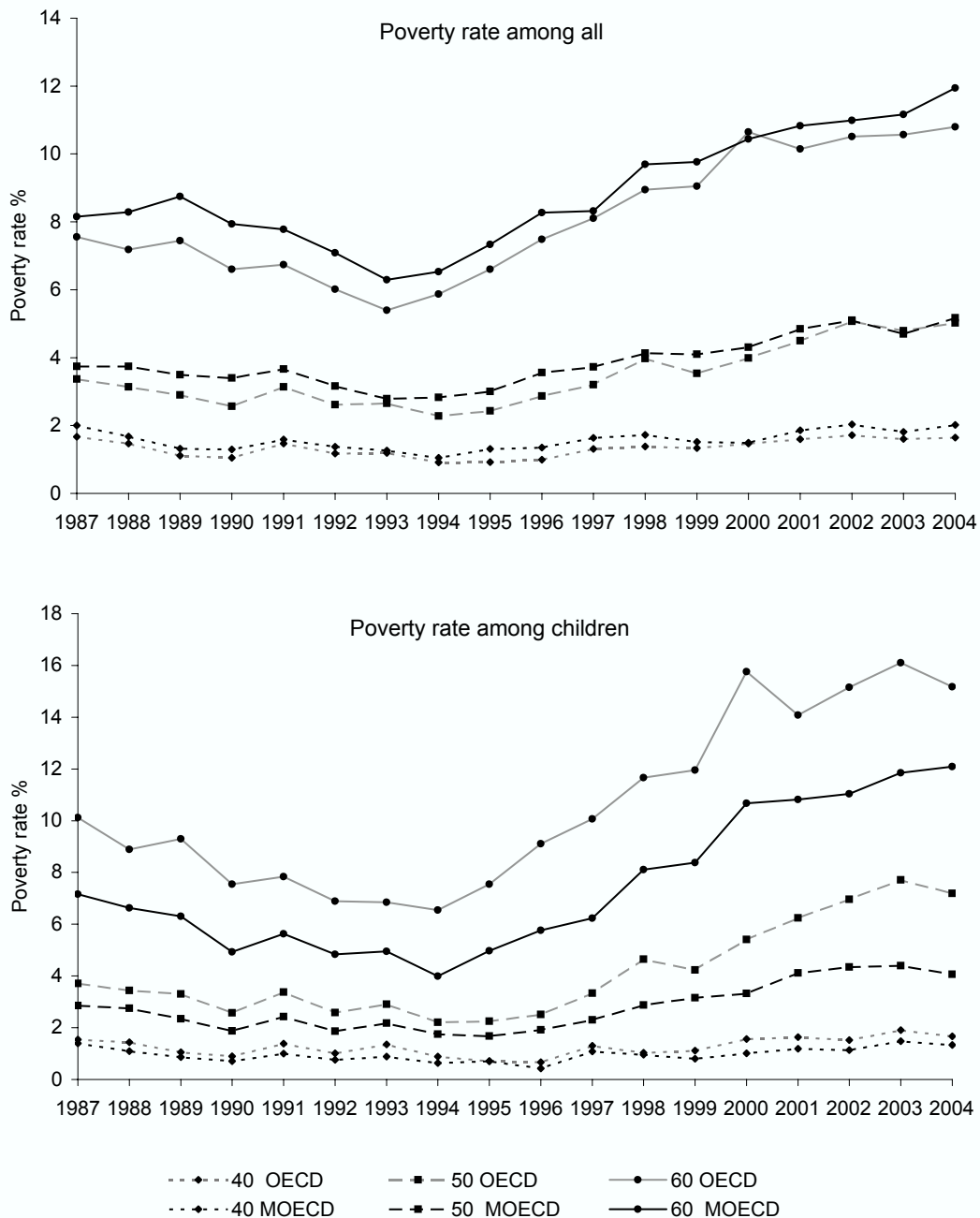
Table 1 gives our estimates of income poverty in Finland for various poverty measures and for different poverty lines (40 per cent, 50 per cent and 60 per cent of median income). All three measures and three poverty lines indicate a significant increase in income poverty between 1990 and 2004. We find that the headcount

Figure 4 *Percentage of the population below 40, 50 and 60 per cent of median and mean disposable income, 1987 - 2004*



index of poverty increased from 2.6 per cent to 5.0 per cent by 2004 poverty line being 50 per cent of median and from 6.6 to 10.8 per cent poverty line being 60 per

Figure 5 Poverty rates by OECD- and MOECD-scales modified incomes as a proportion of median disposable income



cent of median. Thus the rise in headcount index indicates that there were more poor people in 2004 than there had been in the beginning of 1990s. The poverty gap

Table 1 Aggregate poverty measures (poverty line %) in 1990, 1995, 2001 and 2004, per cent of median income (IDS) and consumption (CES)

Index	1990			1995 ¹			2001			2004		
	40%	50%	60%	40%	50%	60%	40%	50%	60%	40%	50%	60%
Income												
H	1.05	2.56	6.60	0.92	2.44	6.61	1.60	4.50	10.15	1.65	5.02	10.79
HI	0.27	0.54	1.19	0.22	0.48	1.09	0.42	0.90	1.95	0.39	0.94	2.08
P2	0.13	0.23	0.41	0.10	0.19	0.36	0.19	0.35	0.67	0.16	0.33	0.68
Consumption												
H	1.37	4.59	10.02	1.09	3.81	8.96	1.76	5.60	11.93			
HI	0.23	0.74	1.80	0.16	0.60	1.54	0.31	0.94	2.22			
P2	0.06	0.20	0.52	0.05	0.16	0.42	0.09	0.27	0.66			

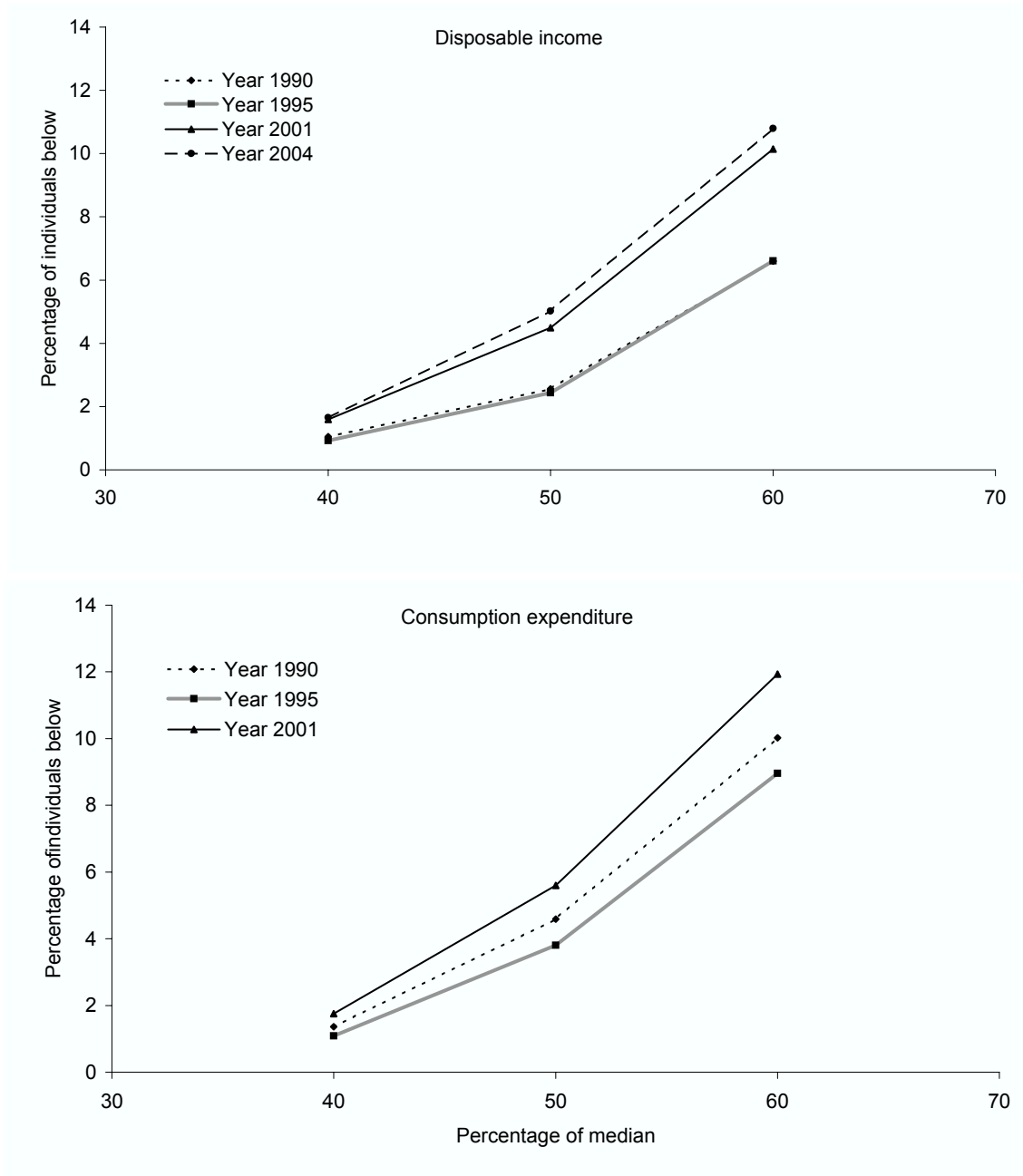
¹ In the CES-data the year 1995 is the weighted years 1994, 1995 and 1996.

Source: Income Distribution Surveys in 1987 - 2004, Consumption Expenditure Surveys in 1966 - 2001, Statistics Finland.

measure in turn indicates that the aggregate income shortfall of the poor increased 66.7 per cent (poverty line being 50 per cent of median). What is striking about table 1 is that whether the poverty line is set at 40, 50 or 60 per cent of national median income, not only the number below the line have risen dramatically since the mid-1990s. In addition, the aggregate poverty gap grew by proportionately slightly less than the head count index (66.7 per cent versus 77.2 per cent poverty line being 50 per cent of median). Finally, the 52.2 per cent (63.4 per cent) rise in P_2 (poverty line being 50 per cent (60 per cent) of median) suggests that poverty among the poor were became more severe.

Are our quantitative results on the change in poverty over this period robust to the choice of an indicator of the standard of living? An alternative yardstick is to use expenditure as the measure of standard of living. Spending as a measure of standard of living may better capture the longer-term aspects of households' well-being. From Table 1 we see that the number of households with spending below 40, 50 and 60 per cent of the median expenditure in 1990, 1995 and 2001 was more than the number whose disposable incomes were below 40, 50 and 60 per cent of the median. In other words over the whole of the 1990s, there were actually more people living below the spending consumption-based poverty lines than below income-based ones. The rise in consumption based P_2 measure during the latter part of the 1990s tells that poverty among the poor, measuring consumption expenditures, has also become

Figure 6 *First-order dominance (FOD) from median (OECD-scale)*



more severe. Both the income and consumption expenditure measures showed a similar rate of growth over the 1990s and the early years of the 2000s.

Are the quantitative results robust to the choice of poverty line and measure? The application of the dominance test is illustrated in Figure 6 where the range of possible poverty lines is taken from 40 to 60 per cent of the median. The curve for 2004 is everywhere above that for 1990. Thus we can agree on the direction of the change – economic (income and consumption expenditure) poverty has increased – even if we do not agree where in that range the poverty line is located. In other words the first-order dominance conditions holds, and so one can conclude that all well-behaved poverty measures and all possible poverty lines will show an unambiguous increase in aggregate poverty between two dates.

4 Who are the poor?

It may also be of interest to explore the socio-economic status composition of those in the poorest group. For this purpose we can use the decomposable property of P_a . In other words we can decompose aggregate poverty into its constituent parts. First, we consider the population split into 9 socio-economic subgroups in Table 2 and 3 and Figure 7. Using the head count measure, H , we look at those with below 40, 50 and 60 per cent of median income and consumption in years 1990, 1995, 2001 and 2004⁶. The changes between these dates are the most interesting in terms of composition. Using consumption based measure the two most over-represented subgroups among poor in 1990 were pensioners and workers. Over the period since 1990, the biggest change was the major deterioration in the position of unemployed households. The contribution of unemployed to income and consumption poverty rose markedly from 1990 to 2004.

The incidence of poverty is also on a rather different set of people under the consumption measure (see Table 2). Using spending as the living standard measure leads to many more pensioners and workers being classified as poor. Amongst pensioners this is because pensioners' spending tends to be low compared with the average. On the other hand, there are a considerable number of low-income non-pensioner households whose spending is relatively high. Pensioner relative poverty has fallen with all poverty line since 1995 when measured using household spending but has risen when measured using income, again with all poverty lines (see Table 2 and 3 and Figure 7). Table 3 does appear to indicate that entrepreneurs and students are two groups most at risk of poverty, measured in terms of income. Using income as the living standard may lead misleading conclusions with those groups. Particularly, this is problematic with students because the IDS and CES data sets don't provide information on the extent of income and other support students received from their parents.

⁶For consumption we have data until the year 2001. Next CES-data for the year 2006 is under preparation.

Table 2 Poverty contributions by socio-economic status for income and consumption, head count measure H , (Poverty line,%)

Population group ²	1990			1995 ¹			2001			2004		
	40%	50%	60%	40%	50%	60%	40%	50%	60%	40%	50%	60%
Income												
Farmers	16.9	16.5	11.8	8.7	7.2	7.3	6.1	6.0	5.7	4.9	8.1	5.5
Entrepreneurs	24.2	16.5	11.8	22.3	18.9	13.5	24.1	18.1	11.4	14.5	9.7	7.6
White collars	0.0	1.5	2.6	0.0	0.0	1.1	2.3	0.9	2.2	0.0	1.8	1.8
Blue collars	3.6	3.6	6.3	4.2	6.4	5.6	1.5	5.6	8.6	1.6	4.0	7.6
Workers	7.4	13.2	20.4	3.0	3.9	9.0	0.7	7.8	14.1	5.0	9.3	14.4
Students	24.1	18.0	10.4	19.8	21.0	13.4	34.5	24.2	17.0	31.8	21.2	15.8
Pensioners	11.5	17.7	27.9	3.0	5.1	11.6	4.9	6.8	12.5	2.7	6.4	14.9
Unemployed	5.8	4.3	3.5	31.7	32.9	30.5	13.0	23.7	22.5	22.9	27.5	24.5
Others	6.4	8.6	5.3	7.5	4.8	8.0	13.1	7.0	6.0	16.6	12.0	7.9
Totals	100	100	100	100	100	100	100	100	100	100	100	100
Consumption												
Farmers	7.0	6.0	9.1	15.2	8.7	7.6	1.5	2.8	4.6			
Entrepreneurs	0.7	2.0	3.4	2.8	2.1	3.0	5.4	3.6	3.7			
White collars	0.2	0.5	2.3	0.0	1.3	3.4	2.2	2.0	2.7			
Blue collars	3.9	5.8	8.3	6.8	3.6	7.5	1.2	6.7	7.8			
Workers	17.9	25.0	25.0	8.6	16.7	16.9	19.3	22.5	24.9			
Students	2.1	1.5	2.3	3.5	2.2	3.4	6.5	4.2	4.7			
Pensioners	61.2	53.2	44.7	43.4	40.3	36.8	34.6	35.5	35.3			
Unemployed	3.9	1.8	1.3	17.9	23.1	19.2	23.7	18.0	12.7			
Others	3.2	4.3	3.5	1.8	2.1	2.4	5.5	4.7	3.7			
Totals	100	100	100	100	100	100	100	100	100			

¹ In the CES-data the year 1995 is the weighted years 1994, 1995 and 1996.

² We call shortly Employers and own account workers in agriculture as Farmers, Other entrepreneurs and own-account workers as Entrepreneurs, Upper-level salaried employees as White collars and Lower-level salaried employees as Blue collars.

Source: Income Distribution Surveys, Consumption Expenditure Surveys, Statistics Finland.

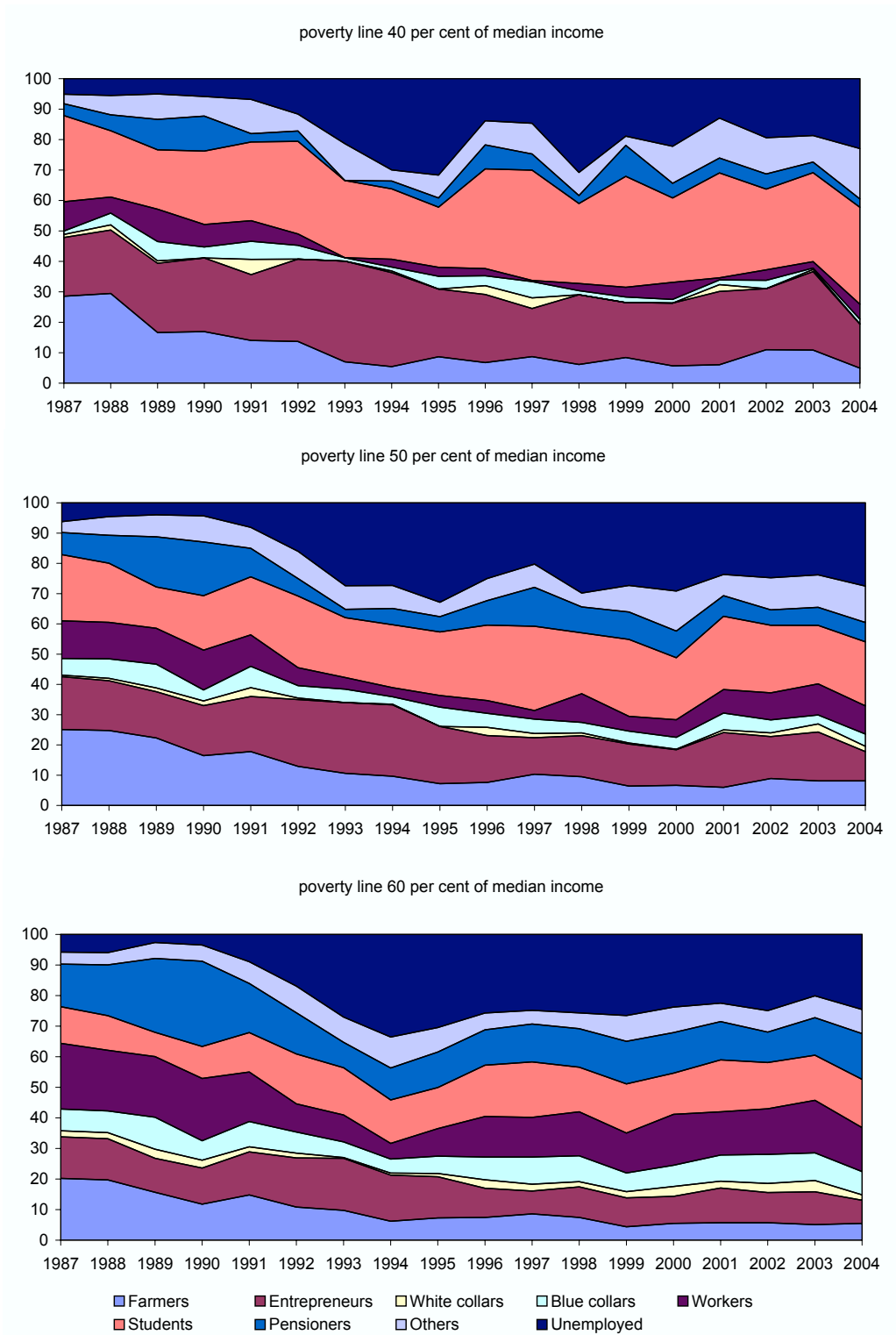
The breakdown by socio-economic group is only one of numerous possible way of decomposing the population to reveal its constituent parts and their contribution to the overall picture of poverty. If we divide the population into 10-year age-groups, divided according to the age of the head of the households, we can see very little variations in the level of contribution to aggregate poverty over the period 1987 - 2000 (see Table 4). We find that from 1990 to 2000 an increase in the contribution to aggregate poverty is remarkable only among those households with the head in the age group 45 - 54. The high rate of unemployment among this age group is the main reason for this trend. Interestingly there is a quite remarkable rise in poverty rate with poverty line 50 per cent of the median income amongst the three youngest

Table 3 Poverty profile by the socio-economic status of the household head

Population group	Year	Population share by household type (%)	OECD-scale (50%) of median				Modified scale (60%) of median			
			H	S_k	HI	P_2	H	S_k	HI	P_2
Employers and own-account worker in agriculture	1987	8.0	10.6	25.1	2.5	1.0	18.6	18.2	4.3	1.7
	1990	5.7	7.4	16.5	1.8	0.8	12.5	9.0	2.9	1.3
	1993	4.8	5.9	10.6	1.0	0.4	9.5	7.2	1.8	0.6
	1997	4.1	8.1	10.3	1.6	0.6	12.0	5.9	2.6	1.0
	2000	3.3	8.0	6.6	1.1	0.4	12.9	4.1	2.3	0.7
	2004	3.1	13.0	8.1	1.9	0.5	16.4	4.3	2.9	0.9
Other entrepreneurs and own-account workers	1987	6.9	8.6	17.5	2.8	1.4	12.9	10.8	3.9	2.0
	1990	7.4	5.7	16.5	1.8	0.9	9.1	8.5	2.6	1.2
	1993	6.6	9.4	23.4	3.2	1.9	13.0	13.6	4.4	2.4
	1997	7.0	5.5	12.1	1.6	0.8	8.1	6.9	2.3	1.1
	2000	6.8	7.0	11.8	2.2	1.1	11.4	7.4	3.3	1.6
	2004	7.2	6.7	9.7	1.8	0.8	11.3	6.8	2.8	1.3
Upper-level salaried employees	1987	15.0	0.1	0.5	0.0	0.0	0.3	0.6	0.1	0.0
	1990	16.2	0.2	1.5	0.0	0.0	1.0	2.0	0.1	0.0
	1993	15.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.0
	1997	15.5	0.3	1.4	0.1	0.0	0.6	1.2	0.1	0.0
	2000	17.9	0.0	0.2	0.0	0.0	0.2	0.4	0.0	0.0
	2004	19.5	0.5	1.8	0.0	0.0	0.7	1.2	0.1	0.0
Lower-level salaried employees	1987	19.3	1.0	5.5	0.1	0.0	2.8	6.6	0.4	0.1
	1990	19.4	0.5	3.6	0.1	0.0	2.0	5.0	0.3	0.1
	1993	19.9	0.6	4.4	0.1	0.0	1.3	4.1	0.2	0.1
	1997	19.1	0.8	4.7	0.2	0.1	3.2	7.3	0.4	0.1
	2000	18.7	0.8	3.9	0.1	0.0	2.9	5.2	0.4	0.1
	2004	18.8	1.1	4.0	0.1	0.0	3.5	5.5	0.4	0.1
Workers	1987	31.2	1.3	12.5	0.3	0.1	3.9	15.1	0.6	0.2
	1990	30.1	1.1	13.2	0.1	0.0	3.1	11.6	0.4	0.1
	1993	22.3	0.5	3.8	0.0	0.0	1.6	5.6	0.2	0.0
	1997	23.7	0.4	2.9	0.0	0.0	2.7	7.8	0.3	0.1
	2000	24.3	0.9	5.8	0.1	0.0	5.5	12.8	0.5	0.1
	2004	22.4	2.1	9.3	0.3	0.1	5.4	10.1	0.7	0.2
Students	1987	1.4	52.4	21.9	14.6	5.6	72.8	12.5	28.4	13.8
	1990	1.2	37.3	18.0	8.7	3.5	63.9	9.9	20.3	8.9
	1993	1.9	27.4	19.8	8.4	3.9	50.6	15.4	15.8	7.7
	1997	2.6	34.5	27.8	8.0	3.2	63.7	19.8	18.0	7.6
	2000	2.3	35.0	20.5	7.9	3.0	62.6	14.0	17.4	7.0
	2004	2.4	43.6	21.2	10.8	4.4	76.8	15.7	23.2	10.0
Pensioners	1987	15.9	1.5	7.3	0.3	0.2	14.1	27.6	1.9	0.5
	1990	18.4	2.5	17.7	0.4	0.1	20.1	46.5	2.9	0.7
	1993	19.8	0.4	2.8	0.0	0.0	6.7	21.0	0.5	0.1
	1997	21.0	2.0	12.9	0.2	0.1	7.7	19.5	1.1	0.3
	2000	20.3	1.8	8.8	0.2	0.1	11.8	23.0	1.5	0.4
	2004	20.6	1.6	6.4	0.2	0.1	14.7	25.3	1.8	0.4
Unemployed	1987	0.9	23.3	6.2	3.9	0.9	38.7	4.3	10.8	4.1
	1990	0.6	17.7	4.3	4.3	1.6	40.2	3.2	10.2	3.8
	1993	8.0	9.1	27.4	1.5	0.5	20.0	25.5	3.9	1.3
	1997	5.9	11.0	20.3	1.9	0.6	38.9	27.5	6.3	1.8
	2000	5.0	23.2	29.1	3.6	1.1	52.3	25.1	9.9	2.9
	2004	4.5	30.5	27.5	5.0	1.5	63.8	24.2	13.2	4.0
Others	1987	1.4	8.6	3.6	1.6	0.4	25.0	4.3	4.9	1.7
	1990	0.9	25.5	8.6	4.6	2.1	39.6	4.3	9.2	4.0
	1993	1.8	11.6	7.8	3.8	1.8	25.8	7.3	6.7	3.1
	1997	1.2	21.0	7.7	4.7	1.7	30.1	4.2	8.4	3.4
	2000	1.3	42.2	13.3	8.4	3.5	66.1	7.9	13.0	5.4
	2004	1.5	41.7	12.0	9.0	3.1	56.9	6.9	14.4	5.4

H = Headcount ratio, S_k = Subgroup contribution to aggregate poverty, HI = Average normalized poverty gap, P_2 = Average squared normalized poverty gap.

Figure 7 *Subgroup poverty share by the socio-economic status of the household head (OECD-scale)*



age groups (less than 25, 25 - 34 and 35 - 44) between 2000 and 2004 (see Table 4). It is not clear to us what may explain this rise. At least to some extent the long term unemployment is one factor.

Similar analysis dividing the population according to family types will be presented in Table 5. Perhaps surprisingly we see relatively little variation in the contribution to aggregate poverty of different family types from 1990 to 2000. But again the relative poverty has risen markedly between mid 1990s and 2004 amongst the group couple with children, youngest 7 years old.

Table 6 shows that poverty rates vary markedly by regions. It is highest in Eastern Finland and lowest in Southern Finland and Åland.

Table 7 shows poverty profile by education. We see that when the head of household has basic education, upper secondary and lowest level of tertiary education the poverty risk is much higher than in the groups with higher education. Table 7 reveals an interesting detail. Namely over the period 1987 there does not exist poverty amongst post graduate group, but in 2004 it is 1.2.

Figure 8 compares poverty rates among children and in the population as a whole. They show that since the mid 1990s the poverty rate among children has risen much faster than the poverty rate in the whole population.

Table 4 Poverty profile by the age of the household head

Population group	Year	Population share by household type (%)	OECD-scale (50%) of median				Modified scale (60%) of median			
			H	S_k	HI	P_2	H	S_k	HI	P_2
Under 25 years	1987	5.7	14.9	25.4	3.7	1.3	25.5	17.9	7.7	3.5
	1990	5.3	10.9	22.4	2.6	1.0	21.2	14.1	6.1	2.6
	1993	4.7	14.8	26.2	4.4	2.1	29.7	22.2	8.8	4.2
	1997	4.9	20.0	30.5	4.8	1.7	42.9	25.1	11.4	4.5
	2000	5.1	18.5	23.8	4.5	1.9	38.4	18.9	9.8	4.1
	2004	5.0	27.0	26.9	6.5	2.5	47.5	19.9	13.4	5.6
25 - 34 years	1987	23.0	3.3	22.4	0.9	0.4	6.0	16.8	1.5	0.7
	1990	22.6	2.5	22.2	0.4	0.1	5.2	14.8	0.9	0.3
	1993	21.0	3.1	24.3	0.6	0.3	5.5	18.2	1.2	0.4
	1997	19.0	4.0	23.6	0.7	0.3	9.0	20.5	1.6	0.5
	2000	17.6	4.8	21.4	0.7	0.2	11.3	19.1	1.6	0.4
	2004	16.4	6.7	21.9	1.3	0.5	12.7	17.4	2.5	0.9
35 - 44 years	1987	30.6	2.7	24.9	0.6	0.3	5.6	20.9	1.1	0.4
	1993	29.5	2.2	24.2	0.4	0.2	4.8	22.6	0.8	0.3
	1997	27.5	2.1	17.6	0.4	0.1	5.5	18.2	0.9	0.3
	2000	26.9	3.8	25.5	0.6	0.2	8.5	21.9	1.4	0.4
	2004	25.8	5.4	27.7	0.8	0.2	9.2	19.8	1.6	0.4
45 - 54 years	1987	17.6	2.7	14.0	0.7	0.3	5.8	12.5	1.3	0.6
	1990	16.9	1.8	11.9	0.4	0.2	4.4	9.4	0.9	0.3
	1993	20.7	2.3	18.0	0.6	0.3	4.0	13.1	1.1	0.5
	1997	23.6	1.9	14.1	0.5	0.3	5.8	16.4	1.1	0.4
	2000	23.9	3.0	17.9	0.5	0.2	7.1	16.2	1.3	0.4
	2004	22.4	2.8	12.4	0.5	0.2	8.4	15.6	1.4	0.4
55 - 64 years	1987	11.6	2.5	8.6	0.6	0.2	7.4	10.5	1.5	0.5
	1990	10.8	2.8	11.6	0.7	0.3	9.9	13.5	1.9	0.6
	1993	10.8	1.4	5.6	0.4	0.2	5.5	9.3	0.9	0.4
	1997	10.9	1.4	4.9	0.2	0.1	5.6	7.4	0.9	0.3
	2000	12.0	1.7	5.2	0.5	0.2	7.5	8.6	1.3	0.4
	2004	15.3	2.3	7.1	0.5	0.2	7.7	9.8	1.5	0.5
65 - 74 years	1987	7.0	1.5	3.1	0.2	0.1	12.1	10.4	1.6	0.4
	1990	7.5	1.6	4.8	0.3	0.1	15.6	14.7	1.9	0.5
	1993	8.1	0.6	1.7	0.0	0.0	4.8	6.1	0.4	0.1
	1997	8.3	1.5	3.9	0.1	0.0	5.1	5.1	0.7	0.2
	2000	8.2	0.7	1.4	0.2	0.1	7.6	6.0	0.9	0.2
	2004	8.4	0.6	0.9	0.1	0.0	9.5	6.7	1.0	0.2
Over 74 years	1987	4.4	1.2	1.6	0.2	0.1	20.0	10.9	2.3	0.5
	1990	4.9	2.2	4.2	0.3	0.1	28.1	17.5	3.9	0.9
	1993	5.3	0.0	0.0	0.0	0.0	10.0	8.5	0.8	0.1
	1997	5.9	3.0	5.4	0.3	0.3	10.4	7.3	1.5	0.5
	2000	6.1	3.1	4.8	0.4	0.1	15.7	9.2	2.3	0.6
	2004	6.8	2.3	3.1	0.2	0.0	18.9	10.7	2.4	0.5

H = Headcount ratio, S_k = Subgroup contribution to aggregate poverty,
 HI = Average normalized poverty gap, P_2 = Average squared normalized poverty gap.

Figure 8 *Poverty rates for all and among children (OECD-scale and modified OECD-scale)*

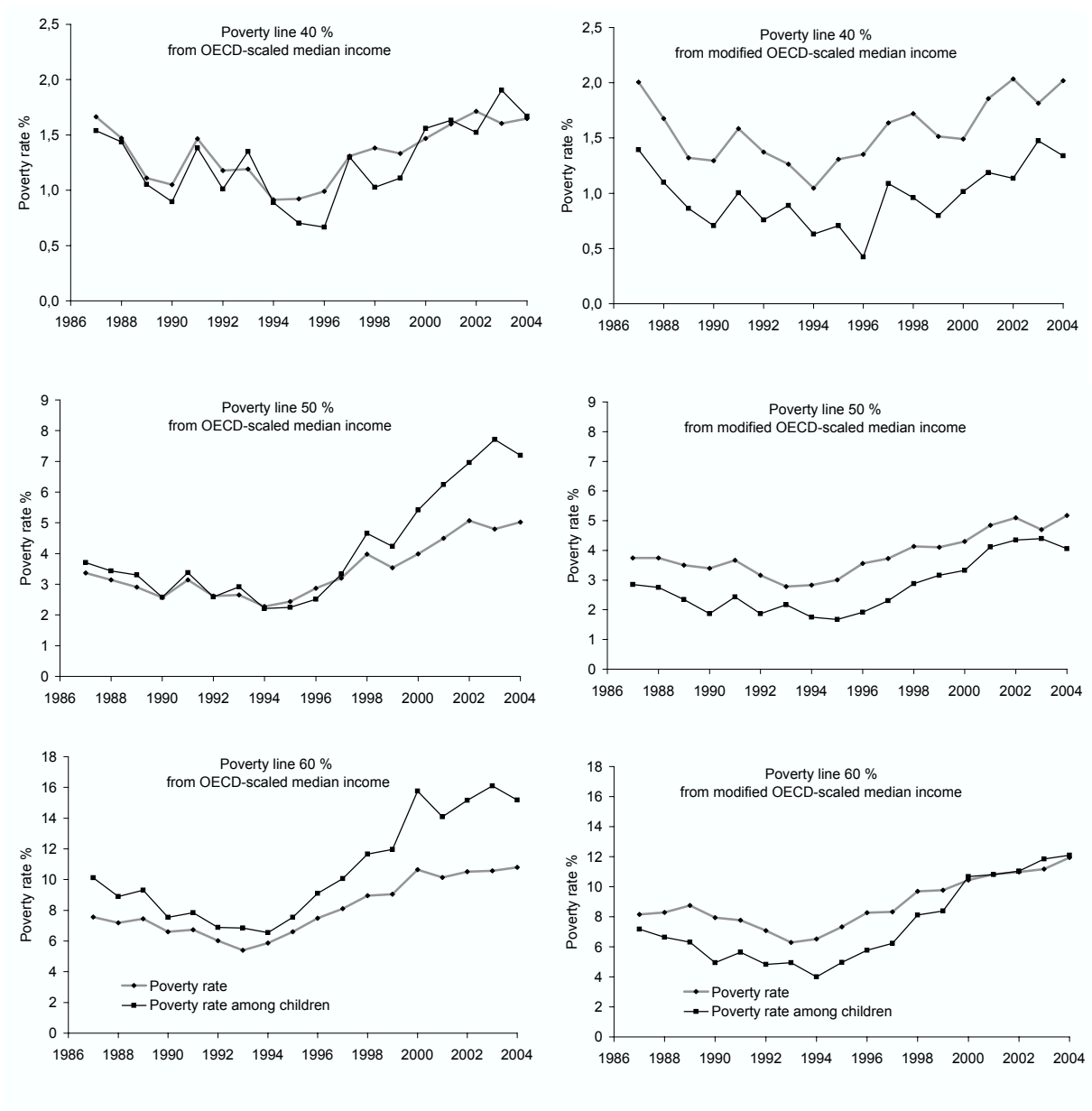


Table 5 Poverty profile by the household's stage of life cycle

Population group	Year	Population share by household type (%)	OECD-scale (50%) of median				Modified scale (60%) of median			
			H	S_k	HI	P_2	H	S_k	HI	P_2
One-person household (Household's head under 65 years old)	1987	9.6	11.6	33.1	3.1	1.2	21.2	25.1	7.0	3.2
	1990	9.6	7.2	27.0	1.8	0.8	20.6	25.0	5.2	2.1
	1993	10.6	8.4	33.8	2.3	1.3	19.2	32.4	5.4	2.5
	1997	11.5	8.3	29.8	1.9	0.8	25.2	35.0	6.0	2.3
	2000	11.7	8.3	24.3	2.2	1.1	25.8	28.9	6.2	2.5
	2004	11.8	10.8	25.4	2.7	1.2	28.3	28.1	7.5	3.0
Single-parent household (Household's head under 65 years old)	1987	3.3	2.0	2.0	0.8	0.4	9.9	4.0	1.6	0.6
	1990	3.7	5.7	8.2	0.9	0.2	10.2	4.8	2.0	0.6
	1993	4.4	7.7	12.7	1.5	0.4	12.9	9.1	2.8	0.9
	1997	4.4	5.8	7.9	1.4	0.5	10.5	5.5	2.3	0.9
	2000	4.6	9.1	10.5	1.7	0.8	24.2	10.6	3.9	1.3
	2004	4.2	10.6	8.8	2.1	0.8	26.6	9.3	4.7	1.4
Childless couple (Household's head under 65 years old)	1987	13.4	1.3	5.1	0.4	0.2	4.4	7.3	0.9	0.3
	1990	15.2	1.5	9.1	0.4	0.2	4.6	8.8	0.9	0.4
	1993	16.1	2.0	12.1	0.5	0.3	4.4	11.3	1.0	0.4
	1997	17.1	2.0	10.8	0.5	0.2	6.2	12.7	1.1	0.4
	2000	18.8	1.9	8.7	0.4	0.1	5.9	10.7	1.0	0.3
	2004	19.4	3.0	11.5	0.6	0.2	6.6	10.7	1.4	0.5
Couple with children, all children under 7 years old (Household's head under 65 years old)	1987	12.1	2.7	9.6	0.5	0.2	4.8	7.1	0.8	0.3
	1990	12.3	1.8	8.7	0.2	0.1	3.5	5.5	0.5	0.1
	1993	11.9	1.8	7.9	0.2	0.1	2.7	5.2	0.4	0.1
	1997	11.7	4.9	17.7	0.7	0.2	7.5	10.5	1.2	0.3
	2000	10.7	6.8	18.2	0.9	0.2	10.5	10.8	1.6	0.4
	2004	10.3	7.3	14.9	1.1	0.3	10.5	9.0	1.8	0.5
Couple with children, youngest children under 7 years old (Household's head under 65 years old)	1987	12.1	4.7	16.9	1.0	0.5	7.4	11.0	1.4	0.6
	1990	11.6	3.1	14.0	0.7	0.3	5.7	8.3	1.0	0.4
	1993	9.6	2.0	7.2	0.5	0.3	3.4	5.1	0.7	0.3
	1997	9.4	2.1	6.3	0.4	0.1	3.4	3.9	0.5	0.2
	2000	9.3	5.2	12.1	0.8	0.2	9.3	8.3	1.2	0.3
	2004	8.6	10.7	18.2	1.3	0.2	13.2	9.4	1.8	0.4
Couple with children, youngest children 7 - 12 years old (Household's head under 65 years old)	1987	10.1	2.7	8.1	0.6	0.2	5.2	6.4	1.0	0.4
	1990	11.0	1.7	7.3	0.4	0.1	2.8	4.0	0.6	0.2
	1993	9.9	2.8	10.6	0.5	0.1	5.2	8.1	0.9	0.3
	1997	9.9	0.6	1.8	0.2	0.1	3.6	4.2	0.3	0.1
	2000	9.7	1.9	4.5	0.2	0.0	4.7	4.4	0.5	0.1
	2004	9.4	1.8	3.3	0.4	0.1	4.2	3.3	0.8	0.3
Couple with children, youngest children 13 - 17 years old (Household's head under 65 years old)	1987	4.7	1.6	2.2	0.6	0.4	5.2	3.0	1.3	0.6
	1990	4.6	1.7	3.0	0.5	0.2	3.4	2.0	0.9	0.4
	1993	5.0	1.6	3.1	0.5	0.4	4.1	3.3	0.9	0.5
	1997	4.6	2.9	4.1	0.6	0.3	6.5	3.6	1.3	0.5
	2000	4.4	1.9	2.1	0.5	0.2	6.0	2.6	1.1	0.4
	2004	4.6	1.6	1.5	0.6	0.3	6.9	2.7	1.3	0.5
Other household (Household's head under 65 years old)	1987	23.2	2.7	18.3	0.6	0.2	5.2	14.8	1.1	0.4
	1990	19.4	1.8	13.8	0.4	0.1	3.9	9.5	0.7	0.2
	1993	19.0	1.5	10.9	0.4	0.2	3.6	11.0	0.7	0.3
	1997	17.4	2.3	12.3	0.6	0.3	5.9	12.3	1.1	0.4
	2000	16.5	3.2	13.3	0.5	0.2	5.4	8.6	1.0	0.3
	2004	16.6	3.7	12.4	0.6	0.2	7.3	10.1	1.3	0.4
Household's head over 64 years old	1987	11.4	1.4	4.7	0.2	0.1	15.2	21.3	1.9	0.4
	1990	12.4	1.8	9.0	0.3	0.1	20.5	32.2	2.7	0.6
	1993	13.4	0.3	1.7	0.0	0.0	6.8	14.6	0.6	0.1
	1997	14.2	2.1	9.3	0.2	0.1	7.3	12.4	1.0	0.3
	2000	14.4	1.7	6.2	0.3	0.1	11.0	15.2	1.5	0.4
	2004	15.2	1.3	4.0	0.2	0.0	13.7	17.4	1.6	0.3

H = Headcount ratio, S_k = Subgroup contribution to aggregate poverty, HI = Average normalized poverty gap, P_2 = Average squared normalized poverty gap.

Table 6 Poverty profile by the region (NUTS2)

Population group	Year	Population share by household type (%)	OECD-scale (50%) of median				Modified scale (60%) of median			
			H	S_k	HI	P_2	H	S_k	HI	P_2
Southern Finland and Åland	1987	46.9	2.7	38.1	0.5	0.2	6.6	38.1	1.3	0.5
	1990	47.5	2.1	39.0	0.4	0.2	6.0	35.9	1.2	0.4
	1993	47.7	2.3	41.5	0.5	0.2	5.2	39.5	1.1	0.4
	1997	48.9	2.7	41.6	0.6	0.2	6.8	39.7	1.4	0.5
	2000	49.8	3.0	37.6	0.6	0.2	8.6	41.0	1.4	0.5
	2004	49.6	4.0	39.2	0.8	0.3	9.9	41.0	2.0	0.7
Western Finland	1987	26.7	3.4	27.1	1.0	0.5	9.1	29.8	2.0	0.9
	1990	26.0	2.9	29.3	0.7	0.3	8.8	28.7	1.7	0.6
	1993	25.6	2.8	27.4	0.7	0.4	7.0	28.4	1.4	0.6
	1997	25.7	3.2	25.4	0.7	0.3	8.5	26.2	1.6	0.6
	2000	25.6	4.8	31.0	1.0	0.4	11.2	27.4	2.2	0.8
	2004	25.3	4.6	23.2	0.8	0.3	12.4	26.3	2.3	0.7
Eastern Finland	1987	13.8	4.5	18.3	1.2	0.5	10.2	17.2	2.4	1.0
	1990	14.2	3.8	20.7	0.7	0.3	11.9	21.2	2.1	0.7
	1993	13.9	3.8	19.8	1.2	0.6	8.9	19.8	2.0	1.0
	1997	13.0	3.9	16.0	0.9	0.4	11.3	17.7	2.1	0.8
	2000	12.4	5.3	16.5	1.0	0.3	13.5	15.9	2.6	0.8
	2004	12.8	8.0	20.3	1.4	0.5	17.0	18.2	3.2	1.1
Northern Finland	1987	12.7	4.4	16.6	0.9	0.3	9.6	14.9	1.9	0.7
	1990	12.4	2.3	11.0	0.6	0.2	9.1	14.1	1.6	0.5
	1993	12.7	2.3	11.3	0.6	0.2	6.1	12.3	1.1	0.4
	1997	12.5	4.3	16.9	0.7	0.3	11.0	16.4	1.9	0.6
	2000	12.2	4.8	14.9	0.7	0.3	13.4	15.7	2.1	0.6
	2004	12.3	7.1	17.3	1.3	0.4	14.1	14.5	2.6	0.8

H = Headcount ratio, S_k = Subgroup contribution to aggregate poverty,
 HI = Average normalized poverty gap, P_2 = Average squared normalized poverty gap.

5 Conclusions

We have examined trends in the economic poverty in Finland using two data sources, the IDS and the CES. We have drawn on the recent literature on poverty analysis to analyse a range of poverty measures, using dominance conditions to rank the distributions of living standards. As regards trends in poverty over time, the long-run perspective available from the CES indicates that from the early 1970s to the beginning of 1990s, the relative poverty rate has declined. The latter part of the 1990s and the early years of 2000s were clearly different. We find that relative poverty rose over the period 1995 - 2004 for a very broad class of poverty measures and a wide range of poverty lines. At the same time poverty has become more severe. We also found that since the mid 1990s the poverty rate among children has risen much faster than the poverty rate in the whole population.

Whilst the total numbers in poverty during the 1987 - 2004 on these various

Table 7 Poverty profile by level of education

Population group	Year	Population share by household type (%)	OECD-scale (50%) of median				Modified scale (60%) of median			
			H	S_k	HI	P_2	H	S_k	HI	P_2
Basic education	1987	44.7	3.6	47.2	0.8	0.3	10.5	57.7	1.9	0.6
	1990	41.0	2.8	45.0	0.6	0.3	11.9	61.3	2.0	0.7
	1993	37.6	2.6	37.1	0.6	0.3	8.1	48.6	1.4	0.5
	1997	33.7	4.1	42.9	0.8	0.3	10.7	43.3	2.0	0.7
	2000	30.7	5.3	40.6	1.1	0.5	14.7	43.3	2.7	1.0
	2004	26.1	6.2	32.3	1.2	0.4	19.0	41.5	3.3	1.0
Upper secondary education	1987	32.5	4.6	44.3	1.2	0.5	9.1	36.2	2.3	1.0
	1990	34.3	3.5	46.8	0.7	0.2	7.5	32.4	1.6	0.6
	1993	35.7	3.9	52.2	1.0	0.5	7.6	43.4	1.9	0.8
	1997	36.9	3.9	44.6	0.9	0.4	10.3	45.8	2.1	0.8
	2000	39.4	4.9	48.2	0.8	0.3	12.4	46.8	2.2	0.7
	2004	41.5	7.0	57.4	1.3	0.5	14.4	50.1	2.9	1.0
Lowest level of tertiary education	1987	11.6	1.6	5.6	0.4	0.1	2.9	4.1	0.7	0.3
	1990	12.2	1.4	6.5	0.4	0.2	2.9	4.5	0.6	0.3
	1993	14.2	1.2	6.4	0.2	0.1	2.2	5.1	0.5	0.2
	1997	15.2	1.8	8.4	0.2	0.1	4.2	7.6	0.7	0.2
	2000	14.4	2.2	7.8	0.3	0.1	4.8	6.6	0.8	0.2
	2004	13.6	2.1	5.8	0.4	0.1	4.2	4.7	0.8	0.3
Undergraduate level	1987	5.0	0.9	1.3	0.4	0.2	1.8	1.1	0.6	0.3
	1990	5.4	0.0	0.1	0.0	0.0	1.4	0.9	0.1	0.0
	1993	5.1	1.5	2.9	0.2	0.1	2.6	2.1	0.5	0.2
	1997	5.8	1.1	2.0	0.1	0.0	2.4	1.7	0.2	0.1
	2000	7.0	1.5	2.6	0.4	0.1	3.1	2.1	0.7	0.3
	2004	8.6	2.2	3.8	0.3	0.1	3.9	2.8	0.7	0.2
Graduate level	1987	5.6	1.0	1.7	0.5	0.2	1.2	0.8	0.6	0.4
	1990	6.3	0.7	1.6	0.1	0.0	1.0	0.8	0.2	0.1
	1994	7.0	0.1	0.4	0.1	0.1	0.3	0.3	0.1	0.1
	1997	7.6	0.9	2.1	0.2	0.0	1.8	1.7	0.4	0.1
	2000	7.7	0.4	0.8	0.2	0.1	1.7	1.2	0.4	0.2
	2004	9.1	0.2	0.4	0.0	0.0	1.0	0.8	0.2	0.0
Post graduate level	1987	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1990	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1993	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	1997	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2000	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2004	1.2	1.2	0.3	0.4	0.2	1.2	0.1	0.7	0.4

H = Headcount ratio, S_k = Subgroup contribution to aggregate poverty,
 HI = Average normalized poverty gap, P_2 = Average squared normalized poverty gap.

definitions have risen markedly, the composition of the poor has also changed significantly. There is little doubt that unemployed households are the most vulnerable group of the population. Another vulnerable group has been families with youngest children less than 7 years.

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Appendixes

Figure A1 Mean of poverty gaps and mean of disposable income amongst the poor and Sen index (poverty line 50 per cent of median disposable income)

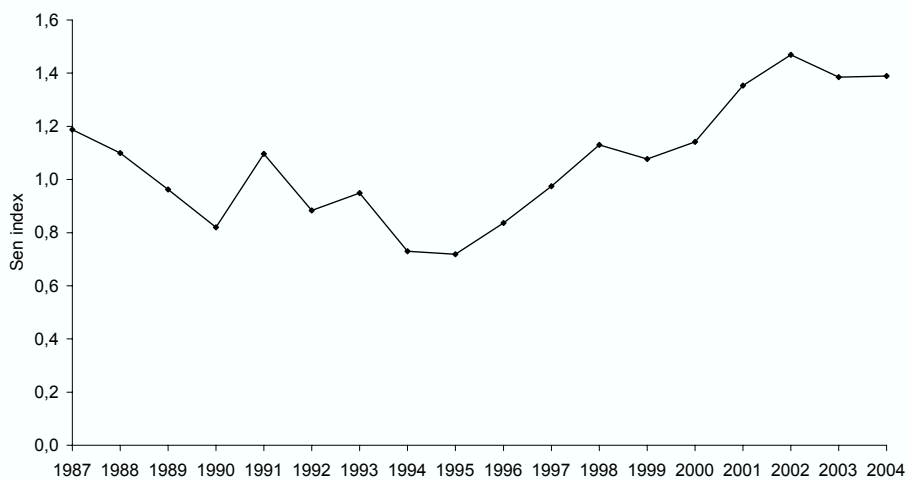
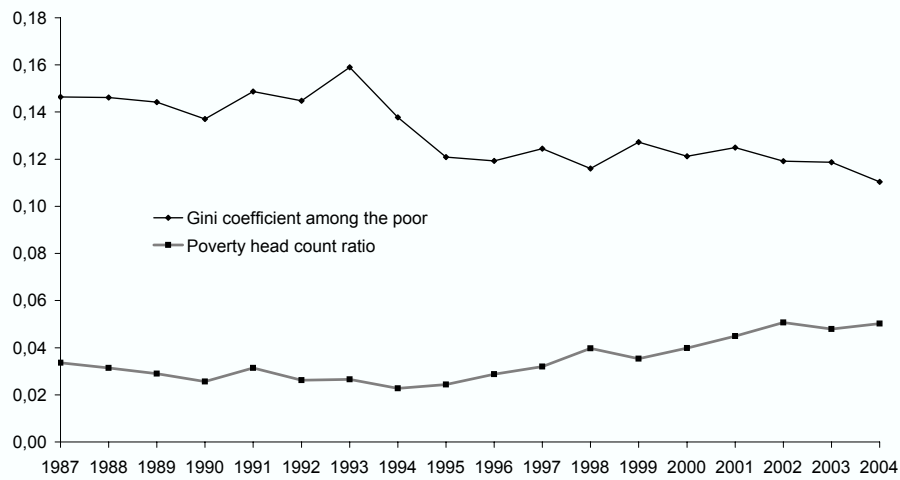
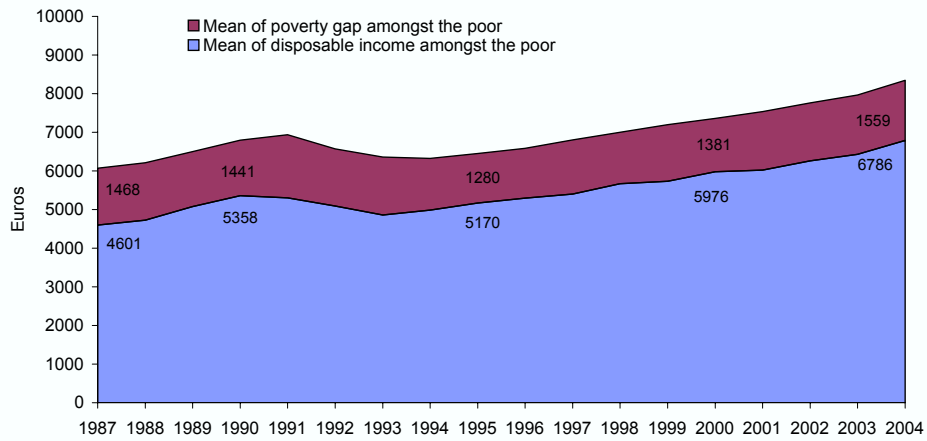


Table A1 Poverty rates of H, HI and P2 from mean and median by using OECD-scale in 1987 - 2004

Poverty rate %	Poverty measure	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	
From median																				
40	H	1.67	1.47	1.11	1.05	1.47	1.18	1.19	0.91	0.92	0.99	1.31	1.38	1.33	1.47	1.60	1.71	1.60	1.65	
	std.	0.14	0.12	0.10	0.10	0.12	0.11	0.14	0.12	0.11	0.12	0.16	0.15	0.15	0.15	0.17	0.17	0.17	0.16	0.14
	HI	0.42	0.39	0.33	0.27	0.39	0.30	0.35	0.24	0.22	0.25	0.30	0.30	0.33	0.34	0.34	0.42	0.44	0.41	0.39
50	P2	0.20	0.19	0.19	0.13	0.19	0.15	0.19	0.13	0.10	0.17	0.14	0.15	0.16	0.15	0.19	0.21	0.19	0.19	0.16
	H	3.36	3.14	2.90	2.56	3.14	2.62	2.65	2.28	2.44	2.87	3.20	3.97	3.54	3.98	4.50	5.07	4.79	4.79	5.02
	std.	0.21	0.18	0.17	0.16	0.18	0.17	0.19	0.18	0.18	0.22	0.24	0.29	0.26	0.27	0.30	0.32	0.30	0.30	0.27
60	HI	0.81	0.75	0.64	0.54	0.74	0.59	0.63	0.48	0.48	0.56	0.66	0.76	0.72	0.75	0.90	0.98	0.98	0.93	0.94
	P2	0.34	0.32	0.29	0.23	0.32	0.25	0.29	0.21	0.19	0.25	0.26	0.28	0.29	0.28	0.35	0.38	0.35	0.35	0.33
	H	7.56	7.18	7.44	6.60	6.74	6.02	5.39	5.87	6.60	7.49	8.11	8.94	9.05	10.64	10.15	10.51	10.57	10.79	10.79
From mean	std.	0.33	0.29	0.29	0.27	0.27	0.26	0.28	0.31	0.34	0.38	0.38	0.41	0.41	0.46	0.44	0.44	0.44	0.42	0.39
	HI	1.54	1.45	1.35	1.19	1.42	1.18	1.16	1.02	1.09	1.29	1.44	1.63	1.60	1.80	1.95	2.08	2.02	2.02	2.08
	P2	0.59	0.55	0.50	0.41	0.55	0.44	0.47	0.37	0.36	0.44	0.49	0.55	0.54	0.57	0.67	0.72	0.67	0.68	0.68
40	H	1.93	1.75	1.45	1.31	1.77	1.40	1.56	1.25	1.37	1.52	1.92	2.34	2.23	2.47	2.86	3.00	2.94	2.94	3.26
	std.	0.15	0.13	0.12	0.11	0.14	0.12	0.15	0.13	0.13	0.14	0.19	0.21	0.20	0.21	0.24	0.23	0.23	0.23	0.21
	HI	0.50	0.46	0.39	0.34	0.47	0.38	0.44	0.31	0.30	0.34	0.43	0.49	0.52	0.54	0.62	0.64	0.62	0.62	0.63
50	P2	0.23	0.21	0.22	0.15	0.22	0.18	0.22	0.15	0.13	0.19	0.19	0.20	0.20	0.22	0.26	0.27	0.26	0.26	0.23
	H	4.27	4.26	4.25	3.81	4.24	3.59	3.66	3.42	3.92	4.90	5.64	6.38	7.13	8.57	8.07	8.19	8.27	8.27	8.91
	std.	0.24	0.22	0.21	0.20	0.22	0.19	0.23	0.22	0.25	0.30	0.32	0.35	0.37	0.42	0.41	0.40	0.38	0.38	0.36
60	HI	0.99	0.93	0.83	0.73	0.93	0.77	0.84	0.69	0.72	0.86	1.03	1.22	1.28	1.42	1.52	1.60	1.59	1.59	1.66
	P2	0.40	0.38	0.35	0.28	0.39	0.31	0.36	0.27	0.26	0.33	0.37	0.43	0.45	0.47	0.54	0.56	0.55	0.55	0.54
	H	9.86	10.17	10.68	10.09	9.91	8.86	9.00	9.46	10.46	12.06	13.48	15.49	15.95	17.42	16.82	16.76	17.05	17.05	17.77
From mean	std.	0.37	0.35	0.34	0.33	0.33	0.33	0.37	0.38	0.41	0.47	0.48	0.52	0.52	0.55	0.54	0.53	0.51	0.49	0.49
	HI	1.94	1.88	1.86	1.69	1.86	1.62	1.67	1.58	1.77	2.07	2.41	2.77	2.94	3.32	3.27	3.33	3.39	3.39	3.58
	P2	0.72	0.68	0.64	0.55	0.68	0.57	0.63	0.52	0.54	0.66	0.77	0.89	0.94	1.03	1.09	1.13	1.12	1.12	1.16

Source: Income Distribution Surveys, Statistics Finland.

Table A2 Poverty rates of H, HI and P2 from mean and median by using modified OECD-scale in 1987 - 2004

Poverty rate %	Poverty measure	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
From median																			
40	H	2.01	1.68	1.32	1.29	1.59	1.37	1.26	1.04	1.31	1.35	1.64	1.72	1.52	1.49	1.86	2.04	1.81	2.02
	std.	0.15	0.12	0.10	0.10	0.12	0.11	0.13	0.11	0.13	0.13	0.16	0.16	0.15	0.14	0.17	0.17	0.16	0.15
	HI	0.52	0.46	0.38	0.33	0.45	0.37	0.39	0.28	0.28	0.33	0.36	0.36	0.41	0.41	0.38	0.48	0.51	0.46
50	P2	0.24	0.22	0.21	0.15	0.22	0.18	0.21	0.15	0.12	0.18	0.17	0.18	0.19	0.17	0.23	0.24	0.21	0.19
	H	3.75	3.74	3.50	3.40	3.67	3.16	2.79	2.83	3.00	3.56	3.73	4.13	4.10	4.30	4.85	5.10	4.70	5.17
	std.	0.20	0.19	0.17	0.17	0.18	0.17	0.19	0.19	0.20	0.23	0.24	0.26	0.27	0.26	0.29	0.29	0.26	0.24
60	HI	0.96	0.87	0.76	0.69	0.88	0.72	0.72	0.59	0.63	0.73	0.79	0.88	0.84	0.83	1.00	1.06	0.97	1.04
	P2	0.41	0.37	0.33	0.27	0.37	0.31	0.33	0.25	0.24	0.30	0.31	0.34	0.34	0.32	0.40	0.43	0.39	0.38
	H	8.15	8.29	8.75	7.94	7.78	7.09	6.29	6.53	7.33	8.27	8.32	9.70	9.77	10.44	10.83	10.99	11.17	11.95
From mean	std.	0.31	0.28	0.28	0.26	0.27	0.27	0.29	0.29	0.32	0.37	0.35	0.41	0.40	0.42	0.42	0.43	0.41	0.39
	HI	1.74	1.66	1.61	1.48	1.64	1.42	1.30	1.23	1.32	1.53	1.60	1.82	1.80	1.86	2.11	2.19	2.11	2.27
	P2	0.69	0.64	0.58	0.51	0.64	0.53	0.53	0.44	0.45	0.54	0.57	0.64	0.63	0.62	0.74	0.78	0.72	0.75
40	H	2.14	1.93	1.68	1.60	2.09	1.70	1.81	1.58	1.70	1.96	2.28	2.61	2.51	2.71	2.93	2.97	2.86	3.21
	std.	0.15	0.13	0.12	0.11	0.14	0.12	0.15	0.14	0.14	0.16	0.19	0.20	0.20	0.20	0.21	0.20	0.20	0.18
	HI	0.58	0.53	0.44	0.39	0.52	0.44	0.48	0.36	0.38	0.43	0.51	0.59	0.59	0.58	0.68	0.71	0.65	0.69
50	P2	0.26	0.25	0.23	0.17	0.25	0.21	0.24	0.17	0.16	0.21	0.21	0.24	0.24	0.26	0.24	0.30	0.31	0.28
	H	4.42	4.56	4.71	4.38	4.60	3.96	3.80	4.04	4.47	4.96	5.56	6.64	7.17	8.03	8.39	8.08	8.43	9.33
	std.	0.22	0.21	0.20	0.20	0.21	0.20	0.22	0.22	0.25	0.28	0.29	0.34	0.35	0.36	0.38	0.38	0.36	0.34
60	HI	1.09	1.05	0.94	0.88	1.05	0.89	0.92	0.81	0.88	1.00	1.16	1.33	1.38	1.48	1.59	1.63	1.57	1.72
	P2	0.46	0.43	0.39	0.33	0.44	0.36	0.40	0.31	0.32	0.38	0.43	0.49	0.50	0.51	0.58	0.60	0.56	0.59
	H	10.02	10.64	11.33	10.59	9.89	9.40	9.26	10.02	11.26	12.11	13.61	15.53	16.41	17.87	17.13	16.94	17.56	18.34
From median	std.	0.35	0.32	0.32	0.31	0.31	0.31	0.35	0.37	0.40	0.45	0.45	0.50	0.51	0.53	0.52	0.50	0.49	0.47
	HI	2.04	2.08	2.06	1.92	2.04	1.82	1.82	1.77	1.96	2.20	2.48	2.89	3.08	3.39	3.40	3.40	3.40	3.69
	P2	0.79	0.77	0.71	0.64	0.76	0.66	0.68	0.60	0.64	0.74	0.83	0.96	1.01	1.07	1.15	1.17	1.13	1.22

Source: Income Distribution Surveys, Statistics Finland.