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**POVERTY IN SWEDEN 1991-2007  
CHANGE, DYNAMICS, AND INTERGENERATIONAL  
TRANSMISSION OF POVERTY DURING ECONOMIC  
RECESSION AND GROWTH**

by

**Jan O. Jonsson, Carina Mood, Erik Bihagen**

# Poverty in Sweden 1991—2007

## Change, dynamics, and intergenerational transmission of poverty during economic recession and growth

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### Summary

- Has poverty increased or decreased in Sweden during the last two decades? The answer to this question depends on the definition of poverty. In relative terms poverty has increased due to increasing income differences, but in absolute terms poverty has decreased following increasing real incomes.
- Between 5 and 11 per cent of the population ended up in absolute poverty between 1991 and 2007. The proportions were much higher for those living alone, for young adults, and for immigrants, particularly those newly arrived.
- Half of the poor leave poverty already the year after entry. The group of poor therefore is composed to a large extent by those who are long-term poor. For those who have once been poor, the risk is high to return to poverty.
- Poverty is strongly associated with economic recession and growth. When the macroeconomic conditions are favourable fewer become poor and the persistence in poverty decreases.
- Long-term poverty, defined in absolute terms, has decreased but become more concentrated to those living alone and to immigrants. Among immigrants, persistence is higher than among those born in Sweden.
- An individual's incomes and risk of poverty are associated with the household incomes during childhood. Those who grow up poor have excess risks for ending up poor as adults. The probability of ending up as high-income earners is much higher for those who grew up under such advantaged conditions themselves as compared to others.

- Intergenerational income mobility increased between 1995 and 2005, approximately, but whereas inequality of opportunity thus decreased the economic consequences of the income background grew.

## Introduction

A lack of economic resources limits the scope of action of individuals and thereby decreases their welfare. Poverty is a central indicator of welfare also because small household resources correlate with other problematic conditions, such as health, over-crowding, low self-esteem, and lack of participation in social and political life. Especially long-term poverty can be assumed to lead to social exclusion and to a decline in self-confidence and initiative. Poverty during childhood may affect people not only by the low living standard as a child, but may also increase the risk of poverty as adult.

In this study, we analyze the change and prevalence of poverty, as well as its distribution and dynamics. We use data from the last two decades to address a series of important questions. The first section discusses conceptual issues and presents several measures of poverty. The second section describes the change in incomes and poverty from the onset of the 1990s up until 2007. The third section is about mobility into and out of poverty, adding a dynamic perspective. In the fourth and last section we study the association between parental poverty and children's poverty as adults. All in all, we aim at answering the following questions:

- Has poverty increased during the last two decades in Sweden?
- Which groups are poor, and has this pattern changed?
- Has poverty duration, that is, the difficulty in leaving poverty, changed?
- Has the risk of re-entering poverty increased or decreased?
- Has long-term poverty changed, and/or become more concentrated to certain groups?
- For those who grow up in poverty, what are the risks of ending up in poverty?

## 1. What is poverty, and who are the poor?

Poverty is most commonly studied through incomes, as they stand for the lion's share of individual's and families' economic resources. Furthermore, incomes are often the only economic resources that we can measure accurately, particularly when one can profit from tax data. There is a multitude of alternative definitions of poverty or related phenomena. Concepts like economic hardship, marginalization, exclusion, and deprivation are common. The Swedish government prefers "economic vulnerable", and earlier the concept "low-income-takers" was frequently used. In this chapter, we choose the traditional concept of "poverty", referring to different definitions of income poverty and social welfare reciprocity (see below on measures).

While it is far from certain how poverty shall be defined (cf. the discussions in Atkinson et al. 2002; Nolan and Whelan 2007), most definitions take the disposable income as a point of departure. At the same time, every-

one appears to agree that poverty has a relative dimension – who counts as poor changes over time and vary across countries (sometimes even across regions within a country). Other conditions determine who is considered poor in a welfare state such as present-day Sweden than in a developing country, or what would have been the case in Sweden a hundred years ago.

A common definition is that a person is poor who, because of limited economic resources, is unable to live a life that is acceptable or expected in his/her society. It is about not being able to participate fully in social life, about feeling ashamed, and about lacking self-esteem as a consequence of economic deprivation (Townsend 1979). Such poverty can for example become visible in the inability to buy new clothes to the children, to invite friends over for dinner, or not being able to participate in activities that cost money. Poverty, therefore, also has a social dimension.

Early research on poverty used different measures of “necessary consumption” to calculate at what income level a household could be regarded as poor (Rowntree 1901). A common method of estimating the poverty line is still today to put together a basket of goods and services that are regarded as necessary for a “decent”, or “acceptable” living standard, and calculate the value of this basket. This value is then adjusted according to needs by considering the composition and size of the household. The poverty line is sometimes used to investigate when the welfare state should offer different kinds of support, primarily social assistance (welfare benefits). A poverty line often used in Swedish research (Jansson 2000, Socialstyrelsen 2007), one that we also will use, is based on the inflation-adjusted norm for social assistance in 1985. This norm takes its departure in a calculation of necessary costs for an acceptable level of living (cf. Table 1). Even though the basket needed to accomplish such a level obviously is dependent on where and when one lives – and in this respect is relative – we will use this poverty line to define *absolute poverty*. The measure is absolute in the sense that the poverty line defines the same purchasing power from one year to the next, and is absolute also in the sense that someone with a given purchasing power is regarded as poor no matter how many others fall below this line.

More recent research into poverty has been critical to absolute definitions of poverty and instead preferred to measure relative poverty (Mack and Lansley 1985; Townsend 1979). The argument is that those who have an income much below what people in general have, in the society they live, should count as poor. It is the relative economic distance to others, not some absolute purchasing power, which determines the ability to live a life under the same conditions as others in society, and participate in social life like them. With a relative definition of poverty, the purchasing power at which one is considered poor can change from one year to the next. One can perhaps say that a general growth in affluence of a population has as one consequence that it becomes more expensive to maintain one’s self-esteem and social status; there is inflation in the amount of money needed to be on par with one’s likes. The absolute measure of poverty can of course be adapted to new “needs”, so that the content of the basket is updated (e.g., computer or mobile phone). In this sense, the measure is culturally relative, but the content is the same for everyone and if your income is not high enough to afford the basket you are considered poor no matter how many others are

not able to do this. Those who prefer relative measures of poverty, on the other hand, want the relative dimension to be built into the measure.

## Measures of poverty

### Absolute poverty

In our analyses, those who fall below the poverty line defined according to the 1985 social assistance norm are considered poor in an absolute sense. This norm is in turn based on an estimate (by *Konsumentverket*, an independent state bureau) of *acceptable living standard*, based on the costs for goods and services deemed necessary (such as housing, clothing, health care, TV, daily paper, telephone, insurances). The calculation of this “basket” includes estimated costs for housing and journeys to and from work, depending on region of residence, year, and household composition. The poverty line thus defined (in 1985) is adjusted annually with the consumer price index to compensate for inflation and deflation (Jansson 2000).

Income standard is calculated as the equivalized disposable income (see the key for Income measures) divided with the poverty line (taking into account residence and household composition). Income standard = 1 means an income just on the poverty line. Those with lower incomes are regarded as poor in an absolute sense. Those with incomes 25 per cent or more below the poverty line (i.e., 75 per cent or less than the income representing the poverty line), are considered *extremely poor*. Those who have incomes above the poverty line but not more than 25 per cent higher are considered *nearly poor*.

### Relative poverty

An individual is considered poor in a relative sense of the term if their equivalized disposable income falls below 60 per cent of the median of the population (EU standard since 2003). In OECD, the limit is instead 50 per cent of the median. We use this measure and the limit of 40 per cent of the median to define the very poor, in a relative sense. The relative poverty rate reflects the income distribution and does not relate to any estimate of how much money is needed to reach an acceptable living standard.

### Social assistance (*ekonomiskt bistånd*)

Social assistance (SA) is the last resort for people with temporary economic problems. After applying for SA, an official at the municipality social office makes an individual assessment of the need for support. The basic principle is that someone who has money in the bank or other economic resources (such as a car or a house) does not have the right to SA. The level of support is judged according to a standard of acceptable living conditions, but extra support can be given in particular cases, such as for dental care. The lower limit of SA is decided by the government, but apart from that, the decision of eligibility and amounts of support lies with local municipalities.

### Lack of cash margin

Lacking cash margin is defined as not being able to raise a given sum of money in a week. In the annual survey of living conditions (ULF), Statistics Sweden asks whether the respondent is able to get 15,000 SEK (2008; around 1,500 Euros) in a week, if needed (see Vogel et al. 1988). The sum is adjusted from time to time to adjust approximately for changes in consumer price levels.

There are several often used relative measures of poverty. One straightforward and for many purposes practical measure is to define those at the bottom of the income distribution (e.g., the lowest ten per cent) as poor. Such a measure is also in line with the idea that it is the relative position in the income distribution that is important for the consumption oppor-

tunities, especially for the cost of housing – those who are worst off are also those who have the worst housing conditions.

The drawback with a simple percentage measure is that it does not take into account just how large income differences are. Therefore, a commonly used measure of relative poverty is based on income differences. According to this measure, those who have an income that is less than 60 per cent of the median income in the population are considered poor (Eurostat 2009). This means that rather than having a given proportion being considered poor, this will instead be a function of the income distribution. In fact (though it is rarely noted), according to this relative measure we may well define *fewer* household as poor than we would with a measure of absolute poverty: with a very even income distribution it can even be the case that no one is defined as poor (this happens, obviously, if no one has an income below 60 per cent of the median, so it demands only that the income differences in the *lower half* of the distribution are small). If this is a theoretically desirable feature of the measure is not easy to say.

A more obvious drawback with the relative measures of poverty is however that comparisons between countries and change over time become difficult. With a relative definition, poverty is more wide-spread in Germany than in Bulgaria despite the fact that living standards are generally higher in Germany (Eurostat 2009). During times of rapidly growing affluence the somewhat strange situation can occur that the number of poor increases in relative terms, although the absolute poverty decreases dramatically – this is what has in fact happened in Ireland (Layte, Nolan, and Whelan 2001).

Maybe this is primarily a matter of time perspective: people's aspirations as well as the costs of social life no doubt increase during growth, but probably slowly. Critics have however asked whether it is reasonable that a person who cannot afford food, and therefore counts as poor according to an absolute definition, will not be considered poor in a relative sense if a sufficient number of others end up in the same precarious situation (Sen 1983). Another objection against a relative measure of poverty based on the income distribution is that it is simply another way of measuring inequality. If one cannot show a sharply changed importance of the position in the income distribution for people's living conditions at the poverty line, it is furthermore a dubious way of measuring inequality.

A criticism that is directed both towards the more traditional absolute and against the relative measure of poverty is that the definition of poverty should not only be based on income. Instead of measuring the *precondition* for an acceptable living standard, it is argued, we should measure poverty *directly*, as economic deprivation. It is, in other words, more correct theoretically, to measure the appearances of poverty, for example, whether people really participate in social life, if they have sufficient clothing, if their housing situation is acceptable, or whether they are characterized by low consumption (Ringen 1988). This approach is in practice, despite theoretical differences, quite close to the definition of the level of living in Scandinavian welfare state research (Johansson 1970; Erikson and Åberg 1987). Empirical studies also show that many of those who have incomes below the poverty line are not economically deprived, and vice versa (Ringen 1988, Halleröd 1995; Layte, Maitre, Nolan, and Whelan 2001; Halleröd and Lars-

son 2008). In studies concentrating on inequality of outcomes rather than inequality of resources one is however confronted with the problem that some people deliberately have a low level of consumption, or a life-style reminding of poverty. In an attempt to circumvent this choice problem, “consensual poverty” has been introduced as a theoretical concept, followed by a way of measuring it empirically. Respondents to a survey answer questions about what type of consumer goods or activities they consider necessary, whether they lack them, and if so whether they do so because they cannot afford them – those who lack things that are generally seen as necessary are defined as poor (Mack and Lansley 1985). This method has apparent problems too – one has to believe, for example, that people can and will respond to the question whether they lack things because they cannot afford them. Several studies use the concept of consensual poverty, and some studies also combine indicators of economic deprivation and low income to sharpen the identification of the poor (Halleröd 1995; Nolan and Whelan 1996; Ringen 1988; Jonsson and Östberg 2004).

Inevitably, the number of poor varies with the definition of poverty, which accentuates the fact that the measures of poverty are partly arbitrary. This is illustrated for relative poverty by the change, in 2003, of the EU poverty line from 50 per cent of the median income to 60 per cent. The absolute measures of poverty are less arbitrary, even if the same issues can be raised over the definition of the basket defining the minimum standard of living, particularly for items outside of the basic needs for nutrition.

Because the different measures reflect different dimensions of poverty, and because they have different pros and cons, we will use several of them. Apart from using income based indicators, we study the reciprocity of social assistance (SA). The advantage of using SA as a measure of poverty is that it is tested for needs, meaning that those who get it with some certainty are poor – apart from having low income, they also lack economic possessions. One drawback is that far from everyone who is poor applies for SA. Estimating this number is however very difficult. For Sweden, there is no exact information, but some estimates suggest that the proportion eligible who do not apply is large (Gustafsson 2002), leading to an under-estimation of the number of poor. Similar results are reported from a number of other countries, and it is probable that lack of information on eligibility of SA, and the stigma associated with it, account for this pattern (Mood 2006). Apart from the under-reporting problem, there is another drawback of using SA as an indicator of poverty: If we use a social policy instrument to calculate the poverty rate, politicians could in theory reduce poverty by raising the requirements for eligibility of SA – thus, cutting poverty support would in fact lead to shrinking numbers of poor. Finally, a third drawback is that a change over time in the number of SA recipients may take place either because of a real change in the number of poor; a changing propensity of applying for SA among the needy; changing routines among the social workers who grant SA; or changing directives from the parliament.

Despite the different theoretical underpinnings and the various pros and cons with different definitions of poverty, we can note, in Table 1, that the income limits used to define poverty according to a relative measure, an absolute measure, and SA, are very close to each other for a given year.

**Table 1. Threshold values for different poverty measures**

Threshold values (income in SEK) for the absolute and relative poverty line, and for social assistance. Households of different composition in different types of municipalities in 2007.

Household type	Place of residence								
	Sweden	Great Stockholm		Great Gothenburg		Other municipalities with 75 000+ inhab		Other municipalities	
	Relative poverty rate*	Absolute poverty rate	Social Assistance	Absolute poverty rate	Social Assistance	Absolute poverty rate	Social Assistance	Absolute poverty rate	Social Assistance
Living alone	9 575	8 331	8 243	8 158	8 071	7 938	7 850	7 634	7 546
Cohabiting or married									
With no children in household	14 459	12 969	12 637	12 673	12 341	12 508	12 176	12 194	11 862
1 child: 3 year old	19 438	17 079	16 425	16 758	16 105	16 542	15 889	16 182	15 528
2 children: 3 and 5 years	23 460	20 135	19 424	19 815	19 104	19 599	18 888	19 238	18 527
3 children: 2, 4, and 12	27 482	23 877	23 422	23 602	23 147	23 412	22 957	22 889	22 435
Lone parent									
1 child: 3 year old	14 555	12 238	12 637	11 942	12 341	11 777	12 176	11 462	11 862
2 children: 3 and 5	18 576	16 683	16 165	16 362	15 845	16 146	15 629	15 786	15 268
3 children: 2, 4, and 12	22 598	19 235	18 984	18 915	18 664	18 699	18 448	18 338	18 087

\* 60 per cent of the median income (disposable equivalized income).

Children below 12 are presumed to have child care at a cost corresponding to maxtaxa.

Source: HEK, Statistics Sweden

### Income measures

*Mean income* is the average annual income of a person or household.

*Median income* is the middle income in the income distribution. The median is often preferred to the mean when there are extreme values in the distribution, as particularly very high incomes can influence the mean.

*Disposable income* is the income an individual or household commands. It is calculated as income from employment and capital, adjusted for taxes and deductions, and adding monetary transfers and benefits.

*Equivalized disposable income*, or disposable income per consumption unit, adjusts the disposable income according to need, as estimated according to the size and composition of the household. Each household member gets a weight corresponding to their assumed needs and these weights are summed up. The equivalized disposable income is calculated as the total disposable income divided by this total household weight. The weights used in Statistics Sweden's study of the economy of households (HEK), which we base our first section on, are as follows:

- 1 – one adult
- 1,51 – two adults
- 0,52 – the first child in the household
- 0,42 – each of the other children
- 0,60 – children older than 19 and other adults in the household.

In the section *Poverty dynamics*, building on register data, we use another equivalence scale based on one made by Statistics Sweden for register-based studies (Statistics Sweden 2009a), with the following weights:

- 1 – one adult
- 1,66 – two adults
- 0,48 – child 0–3 years of age
- 0,57 – child 4–10
- 0,66 – child 11–17
- 0,83 – an additional adult (18+)

*Real income.* In order to make annual incomes comparable over time, they have been adjusted according to the price level of 2007 using Statistics Sweden's consumer price index.

*Irreliability in income data.* The income data, in our case gathered via the tax registers, come with errors. One reason is that non-declared incomes are not included, which may lead to a slight over-estimation of poverty rates. Another reason is that in register data, it is not always possible to correctly identify households, as we cannot identify non-married cohabitants without common children. This mostly affects households consisting of young childless partners, where the number of singles becomes over-estimated. It also overestimates the number of lone parents as an unmarried parent with no common child with their partner will be classified as a lone parent (cf. Statistics Sweden 2003). We have tested for the consequences this irreliability, and our conclusion is that our main results are not affected.

### **Measures of income differences**

*Gini-coefficient.* A statistical measure of income dispersion, and the most common indicator of income inequality. The value 0 means that incomes are equally distributed (everyone has the same income) and the value 1 that inequality is maximized (one person has all the incomes). The value reflects the average income difference between two randomly chosen individuals in a population divided by the mean income in that population.

*Percentile quotients (95/5 and 90/10, respectively).* A simpler measure of income dispersion showing the contrast between those with high and low incomes, respectively. To construct this measure, the population is divided into 100 equal-sized groups (percentile groups). Those with the lowest incomes are in percentile group 1, those with the next lowest in group 2 and so on up to percentile group 100 which consists of the percentage of the population with the highest incomes. *Percentiles* are the values that represent the borders between these groups – the first percentile separates the lowest percentile group from the second lowest, and so on. The percentile quotient is defined as the income that identifies those with the higher incomes (percentiles 95 and 90, respectively) divided with the income that identifies those with the lower incomes (percentiles 5 and 10, respectively). In the figures, we entitle the fifth percentile P05, and so on.

## **2. The change in and distribution of income and poverty, 1991—2007**

Has poverty increased or decreased during the last decades in Sweden? Who are poor today? In this section, which builds on the discussion of poverty measures above, we study the change and distribution of income and poverty 1991-2007. This was a turbulent period economically with 1991 as the last year of a rather extreme economic growth, followed by one of the deepest recessions in Sweden's modern history – around 1992—1997, after which there was an irregular but sustained improvement up until 2007. We also cover a turbulent period when it comes to migration, with a drastically increased immigration, in particular of ex-Yugoslavian and non-European groups, coupled with quite high return-migration rates as well.

In this section, we identify groups that are at risk of poverty, make comparisons over time, and make an international comparison of relative pover-

ty. Unless otherwise stated, the analyses are based on data from Statistics Sweden's study of the economy of households (HEK, see Statistics Sweden 2009b). All incomes are adjusted to the 2007 years price levels.

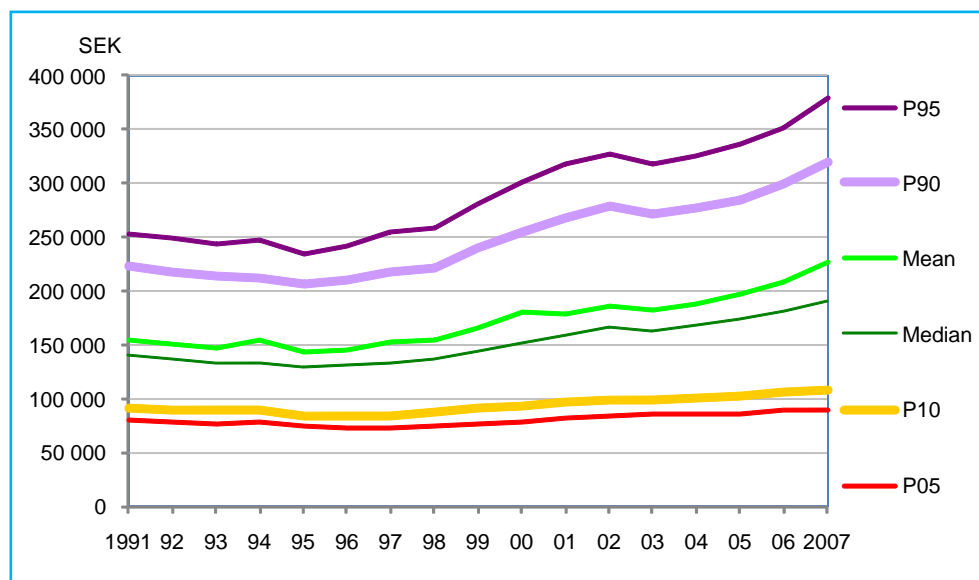
### Increased real incomes – and growing income differences

In order to understand the change in poverty rates, it is important to know the changes in both average incomes and the variance in income. Figure 1 shows the development of these two measures (without taking capital income into account).<sup>1</sup> The starting year in this analysis (as in other analyses in this section) is 1991. This is partly because of data comparability, partly because we then cover the macro-economic shift described above. This shift is in fact reflected in the average and median incomes, showing a decrease in real incomes up until 1995 and a rapid increase after that – during this latter period of economic growth real incomes grew with no less than 59 per cent.

We can also note, in Figure 1, that the spread in income increased. This is evident from the fanning out of the curves showing incomes at different percentiles. Almost all income strata have experienced a favourable development of their real disposable annual incomes during the period, but high-income earners have increased their incomes the most.

**Figure 1. Income development 1991–2007**

Average income, median income, and income at different percentiles.\* Equivalized disposable income, excluding income from capital, in 2007 price level. SEK (Euro\*10)



\* Percentiles. E.g., P05 defines the income for the 5% lowest incomes, and P95 for the 5% highest. Values for 1992 are interpolated  
Source: HEK, Statistics Sweden

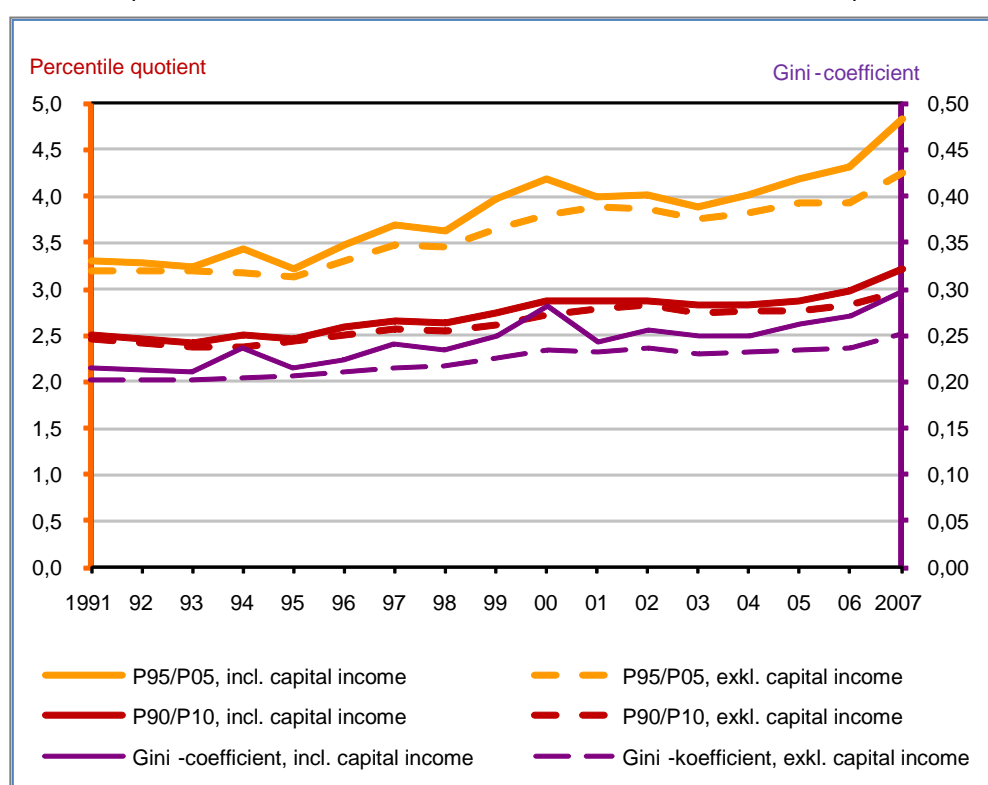
<sup>1</sup> Capital income generates money that can be used for consumption. However, capital incomes are sensitive for changes in tax regulations. In 2001, for example, a change in the taxation of profit from selling condos made many realize these profits in 2000 with a consequence that they were registered with high incomes that particular year (Statistics Sweden 2002).

The equivalized disposable incomes at the fifth percentile (representing the incomes of the economically most vulnerable) have increased from around 75k SEK during the 1990s to around 90k SEK in 2006-2007. At the 95<sup>th</sup> percentile, however (i.e., among those with the highest incomes) the growth has been dramatic from a good 250k to 380k. Households at all income levels (also those not shown in Figure 1) have witnessed increased real disposable incomes, and thus become richer, but the richest have become much richer.

The increasing income disparities are obvious when we study direct measures of income spread in Figure 2. To avoid registering sudden changes in taxation, we show incomes both with and without capital incomes. Either way, the message is that of growing income differences. With the previous analysis in mind, we deduce that this is because income growth was greatest for high-income earners. In fact, the Gini coefficient (including capital income) increased from around 0.22 in 1991 to around 0.30 in 2007, which is a remarkable change. Also excluding capital income, the change is noticeable, from 0.20 to 0.25. Nevertheless, compared to other countries, Sweden has a relatively even income distribution (excluding capital incomes), far off the high marks of Great Britain, Portugal, Italy, and Germany (Figure 3) – though Sweden does follow an international trend towards growing income disparities (OECD 2008).

**Figure 2. Income inequality in Sweden 1991–2007**

Percentile quotient\* P95/P05 and P90/P10; Gini-coefficient, with and without capital incomes



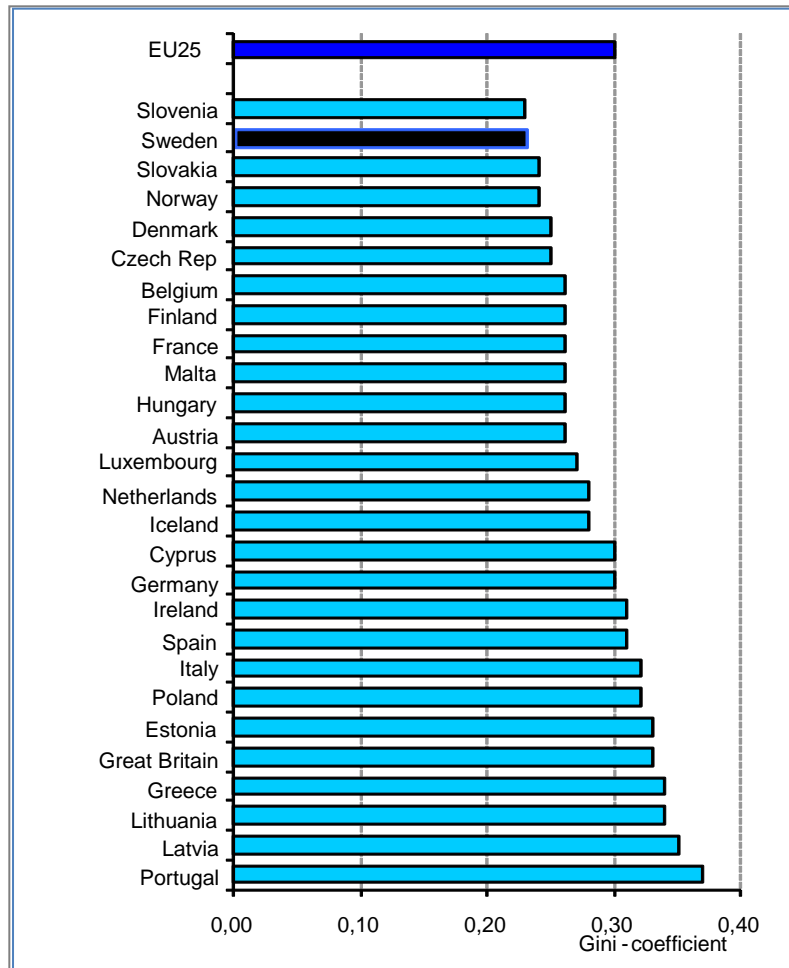
\* The quotient between incomes at different percentiles in the income distribution.

Values for 1992 are interpolated.

Source: HEK, Statistics Sweden.

**Figure 3. Income inequality in an international perspective in 2007**

Gini-coefficients for EU member states (EU25) plus Norway and Iceland. Equivalized disposable income.\*



\* The data come from country-specific studies, adjusted with OECDs modified equivalence scale: 1,0 for the first adult person in the household, 0,5 for other persons aged 14 and older, and 0,3 for children 0–13. Note that other equivalence scales are used in other analyses in this chapter. Source: Eurostat (2009).

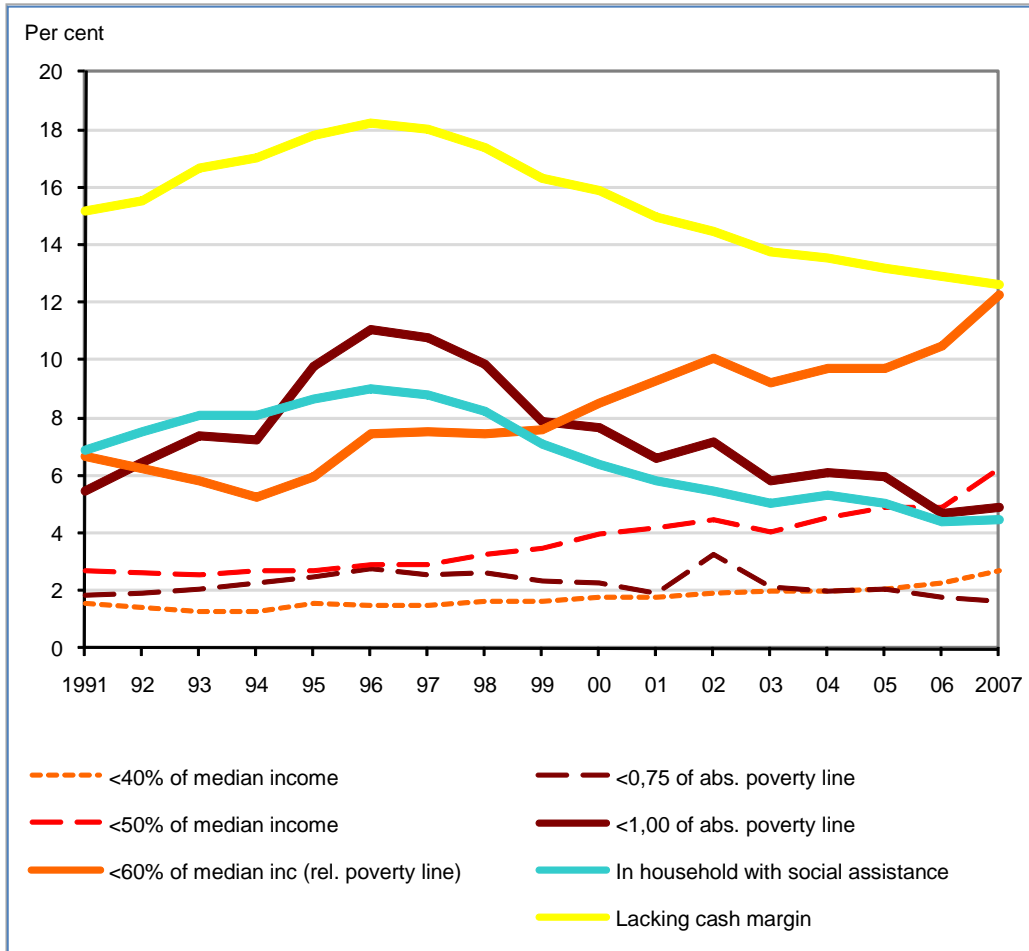
## The change and distribution of poverty

### *Increasing relative poverty – and decreasing absolute poverty*

In times of growing income dispersion, the number of relatively poor typically increases, as that measure is based on income differences. The proportion of relatively poor did also increase markedly during the period under study. Using the EU standard definition of poverty (the poor having incomes less than 60 per cent of the median), the poverty rate increased from a good 5 per cent in 1994 to more than 12 per cent in 2007, with a particularly rapid increase during the most recent years (Figure 4). Using even lower incomes (50 and 40 per cent of the median) to define the very poor, the development shows a similar increasing trend, though not with the same speed in absolute terms.

**Figure 4. Poverty 1991–2007 according to different measures**

The proportion with incomes\* below the relative and absolute poverty line, respectively, and the proportion in households with social assistance some time during the year, both of the whole population. The proportion aged 16-84 without cash margin. Per cent



\* Equivalized disposable income.  
 Values for 1992 are interpolated.  
 The curve for cash margin collapses two adjacent years and is based on moving averages.  
 Source: HEK and ULF (cash margin), Statistics Sweden.

Neither increased income dispersion, nor a growing proportion of relatively poor, tells us anything about the development of absolute poverty. There are several reasons for this, notably that the absolute rate of poverty is closer connected with purchasing power than with income dispersion. Interestingly enough, but not altogether surprisingly, the development of absolute poverty shows a marked *decrease* (Figure 4). The proportion in absolute poverty (i.e., with an income below the absolute poverty line) increased substantially during the economic recession in the 1990s, but has since then decreased steadily. In fact, this type of poverty was halved between 1996 and 2007.<sup>2</sup>

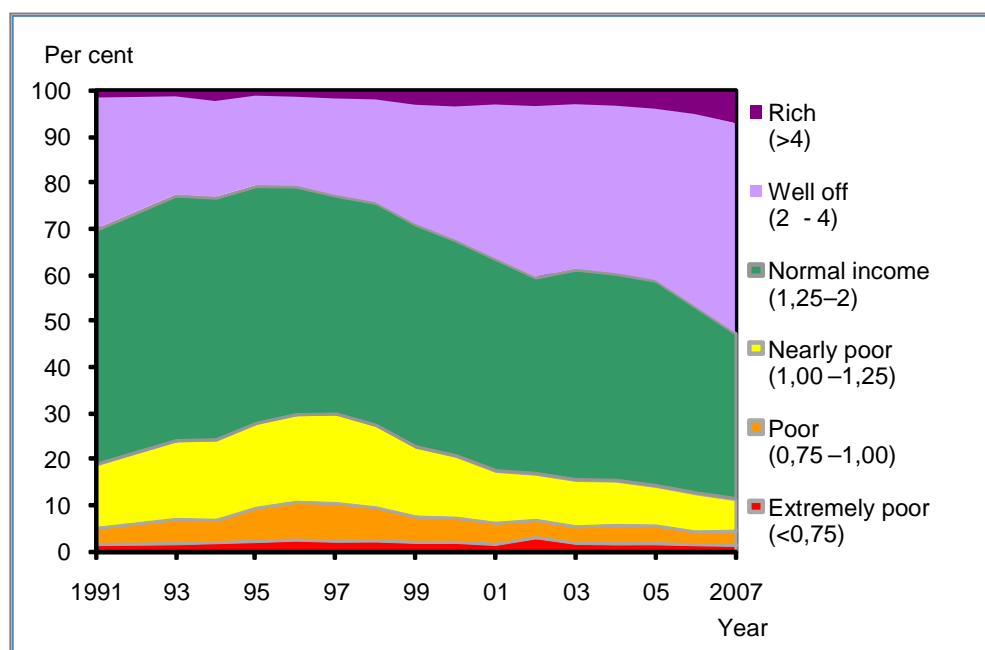
<sup>2</sup> Some studies use “anchored poverty”, which takes its starting point in relative poverty a given year, but then holds constant for purchasing power (i.e., using an absolute definition in practice). The trends in absolute poverty in Figure 4 are very similar to the ones based on this hybrid measure (cf. Figure 1.2, Appendix 4 to the budget bill of 2009).

The reception of welfare benefits describes a similar development, mainly because SA eligibility depends more on the absolute than the relative income – the proportion on SA shrunk from 9 per cent in 1996 to a good 4 per cent in 2007. The group extremely poor (income below 75 per cent of the poverty line) also diminished in size, but at an appreciably slower rate.

Figure 4 shows also another indicator of poverty, the lack of cash margin. This is a more immediate measure of economic problems or vulnerability that may stem from too low income in relation to needs, or from too large expenses in relation to income (for example, by high mortgages). The relevance of the measure is high because it is important in everyday life to meet a sudden economic need (e.g., for changing a defect washing machine, or repairing the car). In difference to the income-based measures of poverty (but just like SA), the cash margin depends on the total economic situation, for example also on savings and other economic resources. It is an interesting complement to the other measures because it lies closer to the definition of economic deprivation in being a more direct indicator of poverty. It is entirely possible that the reduction of absolute poverty over time was counteracted by a raising consumption level following growing real incomes. At the core of the view of poverty as a relative phenomenon lies the assumption that the “acceptable” living standard increases with generally increasing disposable incomes, because the surplus is used for “keeping up with the Joneses”. If this is true, we can imagine that the access to cash margin does not respond to general economic growth or contraction. This is not the case, however: the proportion lacking cash margin, as defined here, follows the change in absolute poverty closely. While it is greater than the proportion on SA, these two indicators change almost exactly at the same pace over time.

**Figure 5. Poor and rich 1991–2007**

The proportion of people living in households with different income standards in relation to the absolute poverty line. Disposable equivalized income. Whole population. Per cent.



Values for 1992 are interpolated.  
Source: HEK, Statistics Sweden.

In Figure 5 we can see the change in absolute poverty in perspective of the total distribution of absolute income. At the same time as poverty declined, the group of “well off” – having at least twice as high income as the absolute poverty line – increased markedly, and comprised in 2007 more than half of the population.

From a poverty perspective, it is important to note that not only did the poor group decrease in size, but also those near the poverty line (up to 25 per cent higher). In 1996-97, when absolute poverty peaked, the nearly poor comprised almost 20 per cent of the population, while in 2007 they were below 7 per cent. In 1991, at the onset of the recession, the poor and extremely poor constituted almost the same share of the population as in 2007, but the nearly poor were twice as many (not shown in Figure 5). Thus, the development during the first decade of the new millennium was especially positive because it removed many people from the forecourts of poverty.

### *Change in the distribution of poverty*

The fact that the proportion of people under the absolute poverty line has been halved from the end of the 1990s is of course not the same thing as saying that poverty is no longer a problem. While the scope of the problem has evidently decreased, poverty can be even harder to endure for those who are poor in good times, and if poverty gets more concentrated to some groups in the population the relevance for fighting it increases. An important question is therefore who are poor at given points in time. In the following section we study the change in absolute poverty in different population groups. We give an account of the average poverty rates across three longer periods, 1993—1998, 1999—2002, and 2003—2007, where the first period represents the economic recession, the second a recovery phase, and the third a new “normal” situation (Table 2).

We should note that poverty is always based on the total household income (see the description of the measures) and therefore everyone in the same household has the same income situation per definition. In households with one man and one woman (married or cohabiting) there can be no sex differences in poverty, as defined here. The assumption that everyone in the same household has the same income is of course a strong one, and probably contributes to underestimating the poverty among women (and perhaps children). Calculating the actual access to economic resources at the individual level is not possible with our data, however, and hardly with any available data (Burton, Phipps, and Woolley 2007).

Generally, in Table 2, we register the same differences between population groups, and the same change over time, for poor or nearly poor alike. The development for the extremely poor in the different groups is by and large the same too, with some deviations. We can conclude, in line with earlier research (e.g., Socialstyrelsen 2006; Gustafsson, Zaidi, and Franzén 2007), that children, youth, young adults, students, lone mothers, and immigrants have higher poverty risks than other groups. Among the foreign-born, newly arrived immigrants have particularly high risks of ending up in poverty. This also goes for non-European immigrants, mainly because these groups belong to those who arrived more recently.



The fact that some groups have a higher risk of poverty than others is of course no surprise. The more incomes in a household, and the fewer that have to share that income, the smaller is the poverty risk. We thus expect that households with two adults but no children have low poverty risks and lone parents have high. Poverty risks are also about having gainful employment – those who lack incomes due to sickness, studies, or unemployment (particularly before entering the labour market) have higher poverty rates. This is also expected, because the economic support and contributions from the social insurance system, and from study loans, are substantially smaller than incomes from employment. At the same time as it is natural in a labour market such as Sweden's (with high-level low incomes) that those with jobs are to a large extent safe-guarded against poverty, it raises the question why some groups – notably foreign-born – more often than others lack gainful employment.

It should be noted that absolute poverty is not especially high among the oldest group. The Swedish pension system has complete coverage and pension levels are high for a large majority, so, in difference to many other countries, relatively few pensioners are poor (e.g., Palme 1990; Gustafsson, Johansson, and Palmer 2009).

The increasing economic living standard following the recession in the mid-1990s is primarily a consequence of increasing incomes from gainful employment, partly because more people have jobs. There is no guarantee that the income levels of social benefits and study loans follow the economic growth (because these are political decisions), and Table 2 also demonstrates that groups who have their economic support from other sources than gainful employment have lagged behind during the later time period under study.

How, then, has the distribution of poverty risks changed? The answer is that there has been an equalization of absolute poverty – as poverty has decreased generally, it has done so more for the more exposed groups. The improvement has been particularly noteworthy in some categories characterized by high poverty rates during the recession (1993-98), such as foreign-born and lone parents. Categories that have not followed the positive trend are young adults and non-employed for whom the poverty risks remain at a high level also during the last period.<sup>3</sup>

We have to remember that the first time period reflects an extremely deep recession and it is therefore not surprising that the income increases following the economic growth in the more recent periods are higher for those who started off at very low levels. When we instead compare the situation in 2007 with that of 1991 – at the onset of the recession – poverty risks have clearly been equalized between different household types, whereas the difference between foreign- and native-born has grown (this cannot be seen in Table 2).

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<sup>3</sup> A closer investigation of the high poverty rates among young adults in 2003-2007 reveals that it is primarily due to high poverty risks among male students (not shown).

**Table 3. Relative poverty, 1993–2007**

Proportion with incomes\* below the relative poverty line (60% of the median income). Averages for the periods 1993–1998, 1999–2002 och 2003–2007. Whole population.

Population group	Relative poverty		
	Income below 60% of median income		
	1993– 1998	1999– 2002	2003– 2007
	%	%	%
<b>All</b>	<b>6,6</b>	<b>8,9</b>	<b>9,1</b>
Women	6,7	9,6	9,6
Men	6,4	8,1	8,6
Born in Sweden (20+ years of age)	4,5	6,4	7,3
Foreign-born (20+)	12,5	17,6	20,6
Years since immigration			
0– 5 years	28,3	38,0	43,1
6–10	17,5	30,3	33,8
11–20	12,9	16,9	21,9
21+	4,4	8,2	10,0
Birth region			
Nordic	4,7	8,1	8,9
Western Europe**	7,2	9,4	13,1
North East Europe	7,1	9,6	13,9
South East Europe	16,1	25,2	19,7
Middle East/North Africa	31,0	35,7	38,8
Africa, other	20,1	29,6	30,4
Asia, other	19,4	20,2	28,5
Latin America	14,2	13,0	20,8
Household type (20+)			
Women, living alone	8,9	15,7	14,4
Men, living alone	9,0	11,9	13,1
W/M living with partner			
No children in household	1,6	2,6	2,4
Common children, 0–18 years, in household	6,3	7,4	7,6
Children 0–18, in household, none common	3,8	3,0	5,3
Single, children 0–18			
Women	13,4	18,5	22,4
Men	9,9	10,9	10,9
Socio-economic class (20–64)			
Workers	2,4	3,4	3,8
Higher official/professional	0,7	0,8	0,9
Labour market status (20–64)			
Gainfully employed	3,2	3,7	3,6
Student	19,4	25,9	33,7
Unemployed/sick/early retired	5,7	7,9	10,7
Age-group			
0–19	10,2	12,5	12,8
20–24	15,3	18,6	22,3
25–44	6,4	8,1	10,0
45–64	2,8	3,7	4,9
65–74	2,2	6,0	3,7
75+	6,0	13,2	10,6

\* Equalized disposable income.

\*\* Incl. Australia, Canada, New Zealand and the USA.

Source: HEK, Statistics Sweden.

The same categories that have high incidence of absolute poverty also have higher risks of relative poverty – that is, primarily newly arrived immigrants and lone mothers (Table 3). As pointed out above, relative poverty rates increased during the period under study. The difference between categories has also grown, and the poorest groups have fallen even further behind. Whereas 12 per cent of lone mothers were poor in relative terms in 1991, this was true for no less than 28 per cent in 2007 (single years cannot be discerned in the table). Among newly arrived immigrants the proportion of relatively poor doubled during the period, from 25 to 50 per cent. The high levels demonstrate that these groups to a large extent have incomes that are substantially lower than those of others in the population.

### An international comparison

Despite the increase since 1991, the proportion in relative poverty is low in Sweden in an international perspective (Figure 6). Sweden is in fact among the countries with the most equal distribution of income. Within EU, on average 16-17 per cent of the population fall below the relative poverty line. In many countries outside of the EU the relative poverty rate is as high as 25 per cent of the population, for example in the USA, Turkey, and Mexico (data from the mid-2000s; see OECD 2008). For Sweden, the figure estimated by OECD is 11 per cent.

An important reason for the low rate in Sweden is that transfers such as child allowances, welfare benefits, and housing allowances have a strong equalizing effect. This can be seen when comparing the bars in Figure 6. The difference between the proportions relatively poor calculated with and without transfers (but discounting pensions) reflects the monetary effects of welfare state redistribution on poverty. Not surprising, Sweden and other Nordic countries display large redistributive effects (OECD 2008, Esping-Andersen 1990), even if these decreased somewhat from the mid-1990s to 2004 (OECD 2008).

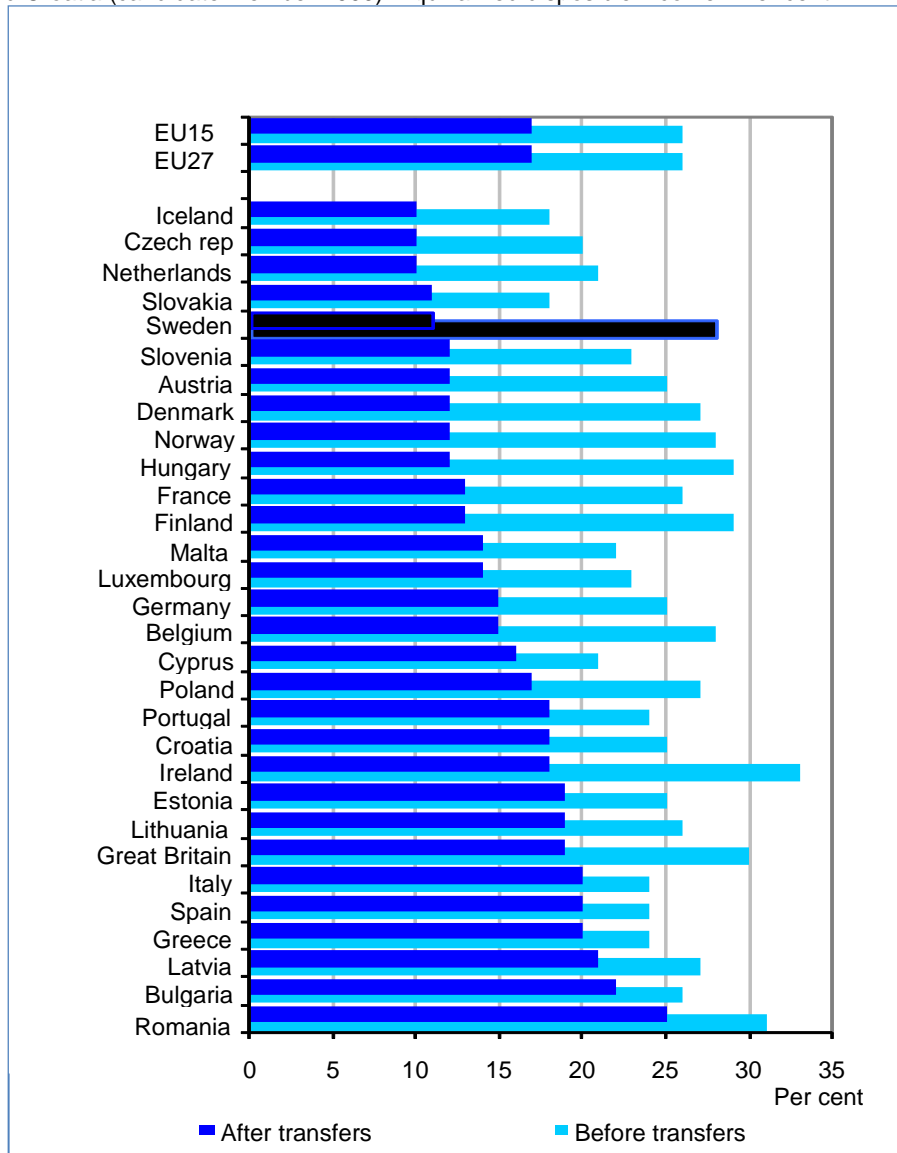
The welfare state has an impact on poverty not only via economic transfers (benefits-in-cash) but also through services provided for free or heavily subsidized through taxation (benefits-in-kind). In Sweden, these services are predominantly in the form of care for children and elderly, education, and health services. Estimating the redistributive effects of such services is complicated, but the studies that have attempted to do so have concluded that such welfare state provisions further contributes to equalizing economic resources. In an international perspective, taking the redistributive effects of benefits-in-kind into account further emphasizes that the Nordic countries are among the most equal OECD-countries (OECD 2008). To what extent this reduces poverty is unclear, even if the welfare state of course cushions some of the negative consequences of poverty. For example, poor families with children in Sweden can afford to use the health care, and can utilize higher education which is free of direct costs.<sup>4</sup>

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<sup>4</sup> Estimates from OECD [2008, Figure 9:7], suggest that the decrease in income inequality (as measured by the Gini-coefficient) by benefits-in-cash in Sweden is around twice that of benefits-in-kind.

**Figure 6. Relative poverty in an international perspective, 2007**

The proportion with incomes below 60 per cent of the median income (relative poverty line) in each country, before and after transfers. EU member states (EU27) plus Norway, Iceland and Croatia (candidate member 2009). Equivalized disposable income.\* Per cent.



\* The data come from country-specific studies, adjusted with OECDs modified equivalence scale: 1,0 for the first adult person in the household, 0,5 for other persons aged 14 and older, and 0,3 for children 0–13.

Note that other equivalence scales are used in other analyses in this chapter.

Source: Eurostat 2009.

### Concluding discussion

Has poverty increased or decreased in Sweden since the beginning of the 1990s? The answer to that question depends entirely on the definition of poverty. It is clear that fewer Swedes are poor in an absolute sense of the term, fewer receive social assistance, and more claim that they have a cash margin. At the same time, more people have incomes below those in the middle of the income distribution, and the income distance between high- and low-income earners have grown substantially. The recovery after the deep recession at the beginning of and in the mid-1990s is real: on average, people now have a better economic situation. The increasing income spread

may have negative consequences for those with average and low incomes, but when we concentrate, as we do, on the economically vulnerable, we have to conclude that the development from the 1990s to 2007 has been characterized by decreasing poverty.

Poverty risks are unevenly distributed in the population. Those with gainful employment are rarely poor, neither in an absolute nor in a relative sense of the term. Categories in which many are unemployed or do not yet have a footing in the labour market, on the other hand, have high proportions of poor. This concerns students, as well as recent and non-European immigrants. Pensioners do however not run great risks for being poor in Sweden, unlike in many other countries. The differences between groups have generally decreased in terms of absolute poverty, due to increased real incomes. In terms of relative poverty, the differences have instead increased due to growing income dispersion.

In total, the picture of the change in poverty in Sweden is contradictory. The judgment of the development depends on the weight we want to give to the absolute poverty definition as opposed to the relative. This, in turn, is a valuation which is difficult to make. It appears that the warnings often raised in Sweden for increasing poverty and poverty gaps are too focused on a view of poverty as predominantly a relative phenomenon. It is easy to overlook the importance that the growth of real disposable incomes has had for lifting people out of poverty during the last decade. What consequences the downturn in the economy that started with the international recession in 2008 will have for poverty rates are still too early to say, but remains an important task for future studies in income distribution and poverty.

### 3. Poverty dynamics 1991-2007

With cross-sectional data we are able to show poverty estimates at given points in time and with many time points we are able to analyze poverty trends, just like we did in the previous section. With cross-sectional data we are however not able to analyze *poverty dynamics*, that is, analyses that follow individual income and poverty trajectories over time. One of our main questions in this section concerns long-term, or persistent, poverty. Such “stickiness” may be particularly problematic because the negative consequences of poverty for an individual can be assumed to increase over time, and because poverty may get more difficult to escape the longer one has experienced it. This, in turn, may be because employers hesitate to hire those who have been out of the labour market for a long time, or because long-term poverty makes people lose their energy and ability to change their situation. The dynamic study of poverty allows us to distinguish not only between transient and persistent poverty, but also to study repeated poverty. Just as long-term poverty, the risk of falling back into poverty once out of it is an important indicator of economic vulnerability.

One of the first analyses of poverty over the life-course found a surprisingly high volatility into and out of poverty (Duncan 1984), but Ellwood and Bane (1986) showed this to be an incomplete characterization: The long-term poor are a small proportion of all those who are ever poor, but they remain a very high proportion of all who are poor at a given point in

time. They compare this with the situation in a hospital: Most of those who ever come to the hospital are there only briefly, but a small group stays at the hospital for a long time. At a given point in time, many of the hospital's beds will be occupied by long-term ill, because only a few of those who ever are briefly ill will be at the hospital at that moment. The long-term ill (or the long-term poor) have a higher probability of being observed at any point in time, because their episode at the hospital (or in poverty) extends over many time-points, while those briefly ill can only be observed at one or a few time-points. It is also important to consider relapses into poverty: Huff Stevens (1999) found that half of those who exited poverty had fallen back within four years.

The studies referred to above are based on American data. International comparisons do however imply that some conditions are similar across countries (OECD 2001, Whelan et al. 2000). Duncan et al. (1993) show that in European countries, many people leave poverty from one year to another (25–40 per cent, in Sweden 37 per cent), while exit from poverty is much slower in the US. Oxley, Antolín, and Dang (2000) followed individual income trajectories over six years, and found that between 1 per cent (Sweden) and 6 per cent (US) of the population had been poor for all the six years, and the expected poverty spell for those entering poverty was between 1.6 and 2 years in both countries (Swedish data from 1991-1996).

A big step forward in Swedish research on poverty dynamics was Fritzell and Henz (2001) study based on 18 years' data from the Swedish Level of Living Survey (1974-1991). One conclusion was that exit from poverty was on average rather quick: After 8 years, 90 per cent had left the lowest decile group (the tenth of the population with lowest incomes) whose average income was around 70 per cent of the median income. Family events – such as divorce or a change in the number of children in the household – were important for women's entries to and exits from the low income group, and labour market events were important for both men and women. For a later time period and using another definition of poverty, Oxley et al. (2000) found that labour market events were more important than family events for poverty transitions in Sweden.

Below, we analyze duration and relapse patterns, and investigate the proportion in long-term poverty. We study these patterns in general, but also ask whether certain groups have higher risks of long-term poverty, and whether these risks have changed over time. Duration of and transitions into and out of poverty are studied from two perspectives: absolute poverty (defined above) and Social Assistance (SA).

To study poverty in a dynamic perspective, and also over historical time and across groups, raise extreme demands on the data material, because it must be large, longitudinal, and cover many consecutive years. Because of attrition and small sample sizes, it can hardly be done using existing survey data. We therefore turn to register data covering the entire Swedish population during the period 1990-2007. We use annual individual level data from the STAR database, created by Statistics Sweden for a research group at the Swedish Institute for Social Research and the Demography Unit at Stockholm University. The data base contains de-identified individual-level data from the censuses (FoB), tax registers (IoT), and other administrative data

(e.g., RTB, LISA). For the analyses here, we exclude self-employed as their registered incomes are not always good indicators of their actual living standard (Engström and Holmlund 2009).

Poverty is defined based on calendar year household incomes, which means that we may miss poverty episodes that are short (if the incomes the rest of the year are high enough to bring the annual income above the poverty line), and we do not know the exact length of spells. For immigrants, the poverty line during the first calendar year in Sweden is defined by dividing the annual income poverty line by 12 and multiplying it by the number of months of residence in Sweden. All analyses are made on persons 16 years and older, excluding those who does not live in own households (in practice, most 16-19-year-olds live with their parents).

As discussed in the previous section, the different poverty measures have their strengths and weaknesses. In the dynamic analyses we have chosen to use (1) the absolute poverty measure that defines a constant purchasing power over time, and (2) a variable measuring whether the individual was in a SA-receiving household the year in question. In the first case, individuals are defined as poor if their annual income falls below the absolute poverty line. One-year spells out of poverty are not considered in the analyses if income during that year is below 110 per cent of the poverty line. We find the relative measures less suitable for dynamic analysis, as people may enter poverty if others' incomes increase even though their own purchasing power remains constant (or even increase), and they may remain in poverty even though their real incomes increase substantially, if only others' real incomes increase even more.

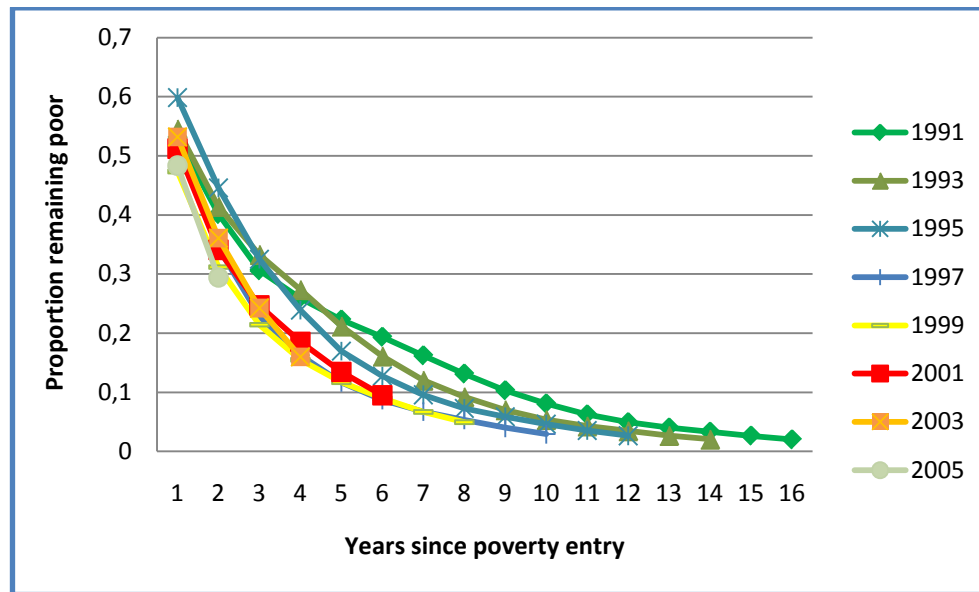
### Outflow from absolute poverty

First, we show the proportion that remains in poverty a certain number of years after the start of a poverty spell. If someone who exits poverty falls below the poverty line again, the second episode is counted as a new episode with a new start-year (the analysis is thus based on poverty episodes, not individuals). Figure 7 shows the outflow from poverty during the period 1991–2007, where each curve represents an inflow cohort, i.e., those who share a common start-year in poverty. For the sake of clarity, we show only every second inflow year. The 1991 inflow cohort can be studied for 17 years, and later inflow cohorts can be studied over shorter periods of time, so the curves are of different lengths.

Figure 7 demonstrates that on average, outflow from poverty is swift: Around half of all spells end within a calendar year. After four years, 15 to 25 per cent remain in poverty, and after ten years only around 5 per cent remain. The curves reveal similar patterns, but at different levels. Those who entered poverty in 1991 remained poor much longer than those who entered poverty 1997-2005. After five years, the poverty of those who entered poverty in 1991 was 22 per cent, while it was only 12 per cent among those who entered poverty in 1997-2001. Those with start years 1993-1995 lie in between. Unsurprisingly, it appears that the duration of poverty is associated with the economic cycles: People tend to remain in poverty longer if the poverty spell occurs during a recession.

### Figure 7. Outflow from absolute poverty

Proportion of inflow cohorts that remain in uninterrupted poverty by years since inflow. Cohorts with inflow years 1991 to 2005, every second year.



### Poverty histories and episodes

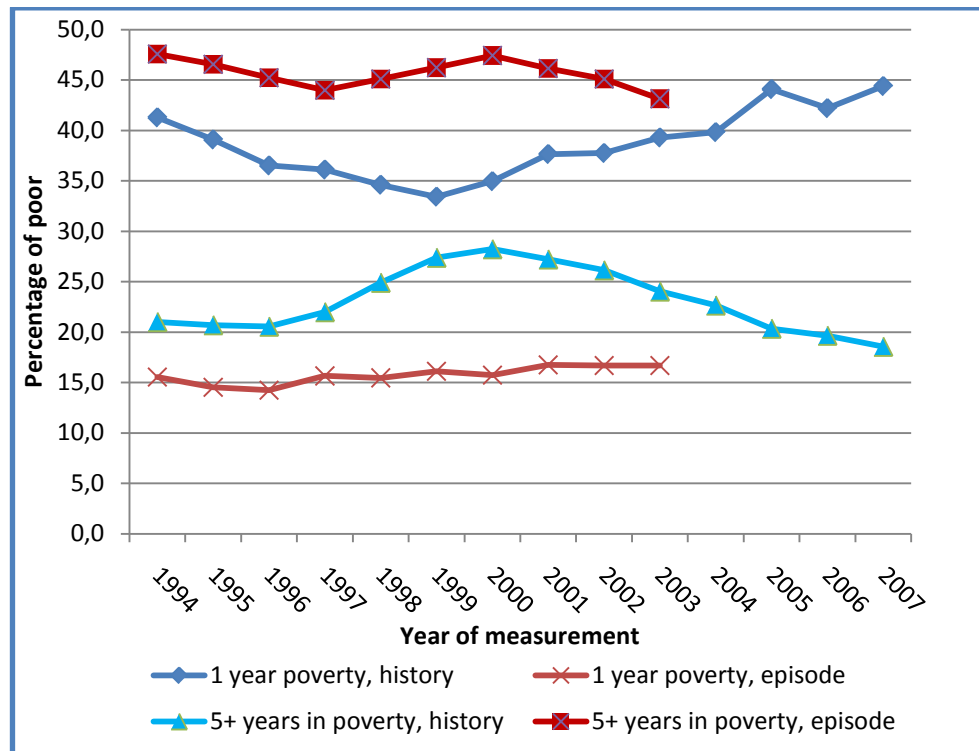
Above, we study poverty durations among all who have entered poverty. Another option is to study the distribution of poverty durations among those who are poor at a given point in time. The most common approach is to measure how long the poor have been poor – the *poverty history* looking back in time from a given year. This measure is easy to understand and is in itself correct. However, it can be misleading, as many of those who are poor and have a poverty history of a certain number of years will continue in poverty (Bane and Ellwood 1986). An alternative measure is poverty episodes, which sums concluded episodes of poverty from the beginning to the end. These are rarely possible to estimate as they require long-term individual level panel data. Because we have such data for the years 1990–2007, we can study *poverty episodes* as well as *poverty histories* for the period 1994–2003. We contrast short-term poverty (which we define as spells spanning no more than one calendar year) with long-term poverty (spells spanning at least five calendar years).<sup>5</sup>

The choice of definition of long-term poverty makes a great difference to the conclusions. In 1994, 20 per cent of the poor had been poor at least five years (poverty history), but 47 per cent of the poor was in a spell of five years or more (poverty episode). Similarly, 42 per cent of the poor had a short-term poverty history but only 16 per cent were in a short-term episode. The difference occurs because many of those with a one-year history of poverty will continue in poverty one or more years after the observation year. These results show that it is not straightforward to summarize poverty dynamics, because the conclusions depend strongly on the chosen definition.

<sup>5</sup> We start in 1994 because our first income data come from 1990, so 1994 is the first year when we can classify people as long-term poor according to our five-year definition.

**Figure 8. Short- and long-term absolute poverty**

The proportion short-term (1 year) and long-term (5 years+) poor among people in absolute poverty. Poverty history (1994–2007) and poverty episodes (1994–2003).

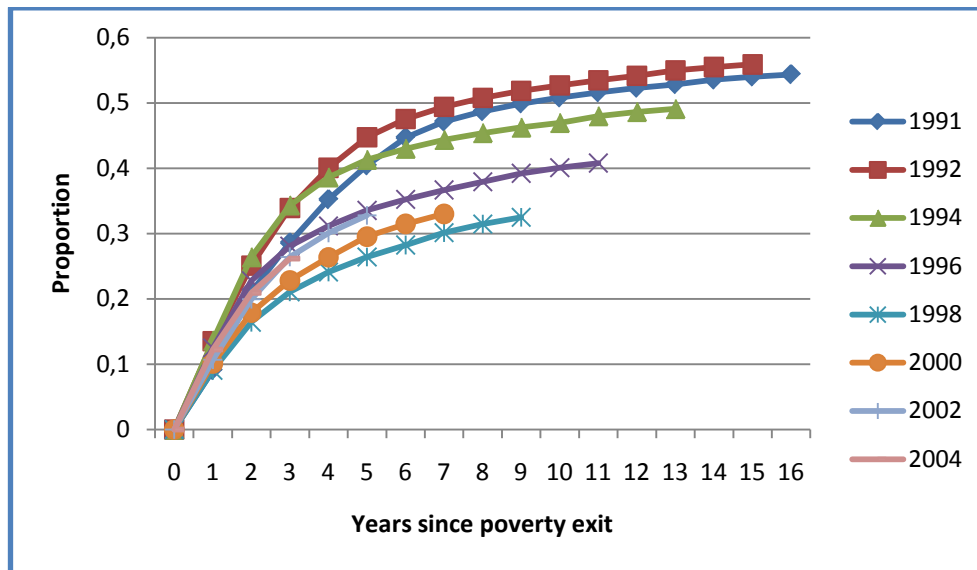


When focusing on poverty episodes, we see that the proportion of the poor who are in long-term poverty decreases slightly over time from 47 to 43 per cent between 1994 and 2003, and there is a corresponding increase in short-term poverty. Looking at poverty histories, on the other hand, we see a strong increase in long-term poverty among the poor until 2000, and a decrease after this year. The pattern for short-term poverty is almost exactly opposite. The difference in the patterns for histories and episodes reflects the fact that histories only summarize poverty up until the year in question, and thus strongly reflects the macro-economic conditions during the past five years. This means that the proportion long-term poor among the poor is higher the more the five-year-period overlaps with the deep recession 1991-1997. When long-term poverty is defined in terms of concluded episodes (the shorter curves in Figure 8), we see instead a decreasing trend, which means that many of those who entered poverty during the final years of the recession managed to leave it rather quickly.

It deserves mentioning that even though those in long-term poverty episodes make up a decreasing share of all poor during a given year, their proportion is still very large: More than 40 per cent of all who are poor a given year are in an episode spanning five calendar years or more. At the same time, around half of those who ever enter poverty exit it again within a calendar year. This might seem contradictory, but is a correct characterization of poverty dynamics in Sweden: Most of those who become poor exit quickly, and the stock of poor at a given time consists to a large extent of people in long-term poverty episodes.

**Figure 9. Re-entry to absolute poverty**

Proportion of different exit cohorts that has re-entered to poverty by number of years since exit (year 0). Cohorts with exit years 1991 and 1992-2004 (every second year).



### Re-entry into poverty

It is not always the case that an exit from poverty is an end to poverty, because exits may not be permanent – for vulnerable groups, temporary escapes from poverty and recurrent spells in poverty may be a reality. It is therefore also relevant to study the extent of re-entry into poverty. Figure 9 shows how many of those who exited poverty a given year who had relapsed at least once (one calendar year) into poverty after a given duration. To count as a re-entry, one single calendar year of poverty is sufficient, which means that far from all who re-enter will remain in poverty for the entire duration shown in the curves.

Figure 9 reveals that the calendar year after the poverty exit, around 10 per cent have re-entered into poverty. Of those who exited 1991-1994, around half had re-entered into poverty after eight years, but the pace of re-entry decreased strongly for later exit cohorts: Of those who exited poverty in 1998, only 30 per cent had re-entered after eight years, which is around 20 percentage units less than for those who exited poverty in the early 1990's. This pattern reflects the higher risk of poverty (and thus re-entry) during the recession between 1991 and 1997. However, the pattern for the early 2000's is surprising: Re-entry increases gradually for exit cohorts from 1999. This cannot be explained by the business cycle, but is most likely due to the composition of the population of poor.

## Poverty exits and duration in different population groups

We know that certain groups, such as single parents and recent immigrants, have a higher degree of poverty than others – but do they also have longer poverty durations? Here, we focus on the differences between immigrants and Swedish-born, and between different family types. Poverty episodes for immigrants are divided into two categories: those that start the year of immigration and those that start some other year. New immigrants that are poor their first calendar year in Sweden will thus be in the first category until their first poverty exit.<sup>6</sup>

As above, an individual can contribute several poverty episodes to the analysis. If a new immigrant leaves poverty and re-enters it some later year, the first episode will be classified as an episode starting at the year of immigration, while the second episode will be classified as a poverty period not starting the immigration year. As regards family types, we study the probability of poverty for individuals in a given family type *at a given duration of poverty*: The individual may not have had the same family type during the entire poverty episode. For example, the exit rate for single mothers six years after poverty entry is the exit rate among all those who were single mothers six years after poverty entry, whether or not they were single mothers the preceding years. All analyses use individual-level data, so the results concern dynamics for individuals in certain types of households – not dynamics of households.

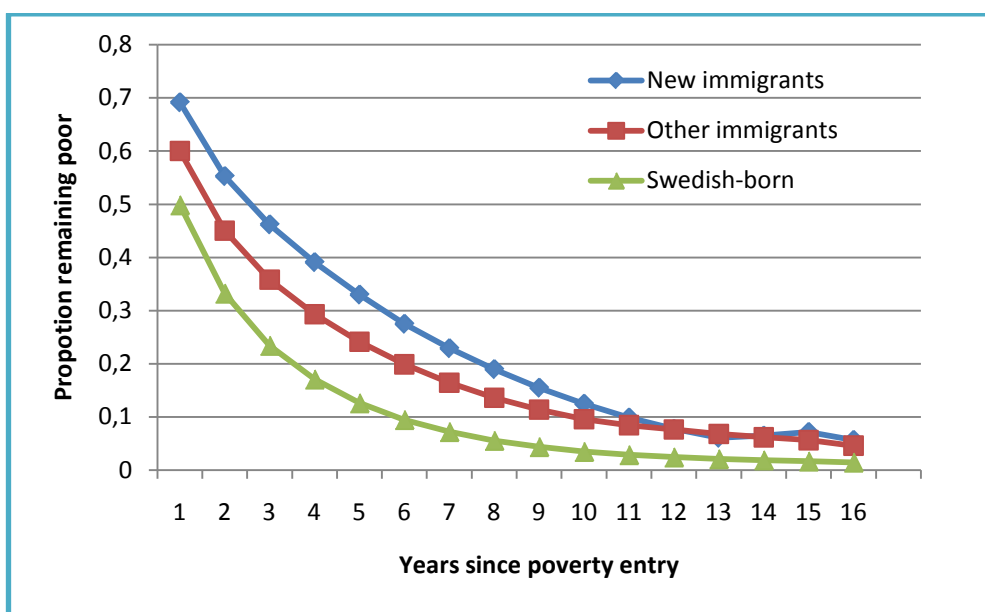
Figure 10 shows that Swedish-born leave poverty quicker than immigrants, and new immigrants have a slower outflow than other immigrants. The year after the poverty entry, half of the Swedish-born and 60-70 per cent of immigrants remain in poverty. Ten years after the poverty entry, 3.5 per cent of the Swedish-born remain in poverty, while 9-12 per cent of immigrants do so. Analyses not shown here demonstrate that the probability of re-entry is much higher among immigrants: Four years after the poverty exit, almost 30 per cent of Swedish-born but 50 per cent of immigrants have re-entered poverty.

There are no large differences in poverty durations between individuals in different family types, but those who live alone remain in poverty somewhat longer than individuals that live with a partner (results not shown). Re-entry shows larger differences: Individuals in couple households (with and without children) have the lowest rate of re-entry to poverty, and single parents with children have the highest rate of re-entry. After four years, 30 per cent of those with a partner and 33 per cent of singles without children had become poor again, compared to around 40 per cent of single parents with children.

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<sup>6</sup> Immigration year is defined as the year when permanent residence permit was granted. People may have lived in Sweden (sometimes up to several years) while waiting for the residence permit.

**Figure 10. Outflow from absolute poverty for Swedish- and foreign-born**  
 Proportion of the inflow cohort in uninterrupted poverty by number of years since poverty entry.

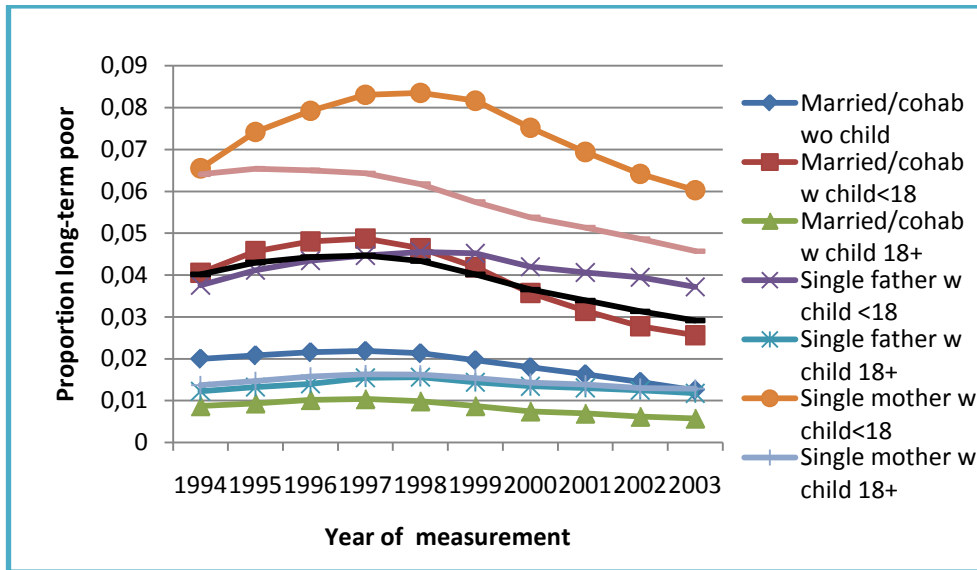


Turning to poverty episodes, Figure 11 shows the probability of long-term episodes (at least five calendar years) for individuals in different family types. Singles have the highest risk of long-term poverty. In 2003, which is the latest year that we can study long-term poverty, single mothers with young children had the highest rate of long-term poverty (6 per cent), followed by singles without children (4.5 per cent) and single fathers with children (4 per cent). Individuals in married and cohabiting couples with young children also had a rather high rate of long-term poverty (around 2.5 per cent). Together, this means that long-term poverty is a reality for a substantial proportion of young children in Sweden. Poverty risks are small for individuals with children aged 18 or over, which is probably partly due to the fact that parents in these households are older and therefore have higher incomes. Long-term poverty has decreased for individuals in all family types since 1997-2001. The smallest relative decrease was for single fathers, who have had an almost constant and rather high poverty level.

We can also turn the perspective around and study the *composition* of the group of long-term poor (Figure 12). This question is relevant if one wants to identify the groups that should be targeted if long-term-poverty is to be efficiently reduced. Several of the high-risk groups that we have identified are too small to constitute a large proportion of the long-term poor: For example, single fathers have a high risk of long-term poverty but are so few that they make up only 1.5 per cent of all long-term poor in 2003. Not more than 10 per cent of the long-term poor are single mothers, despite their high risk of experiencing long-term poverty. Instead, the group of long-term poor is dominated by singles without children, who make up more than half of all long-term poor.

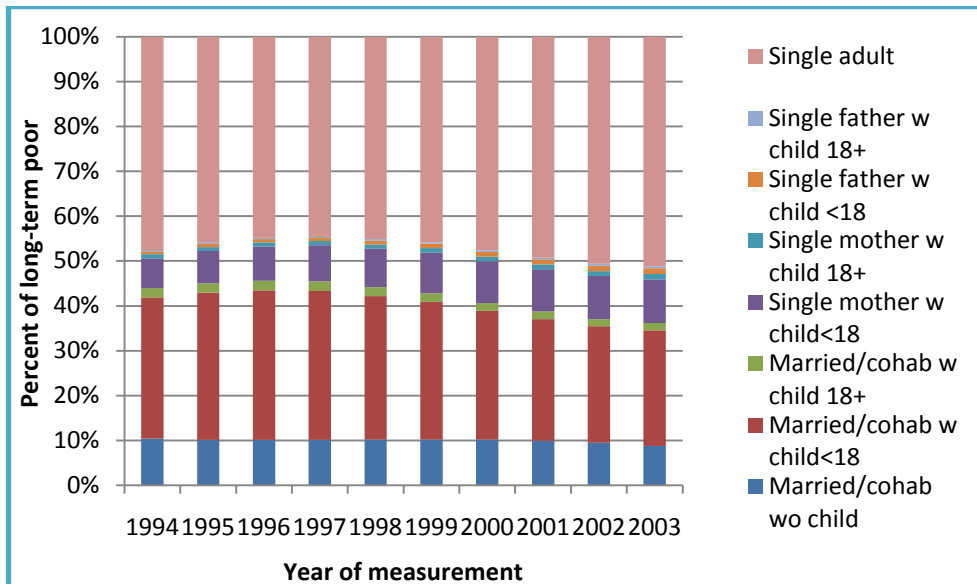
**Figure 11. Long-term poverty for individuals in different family types 1994–2003**

Episodes of at least five years poverty.



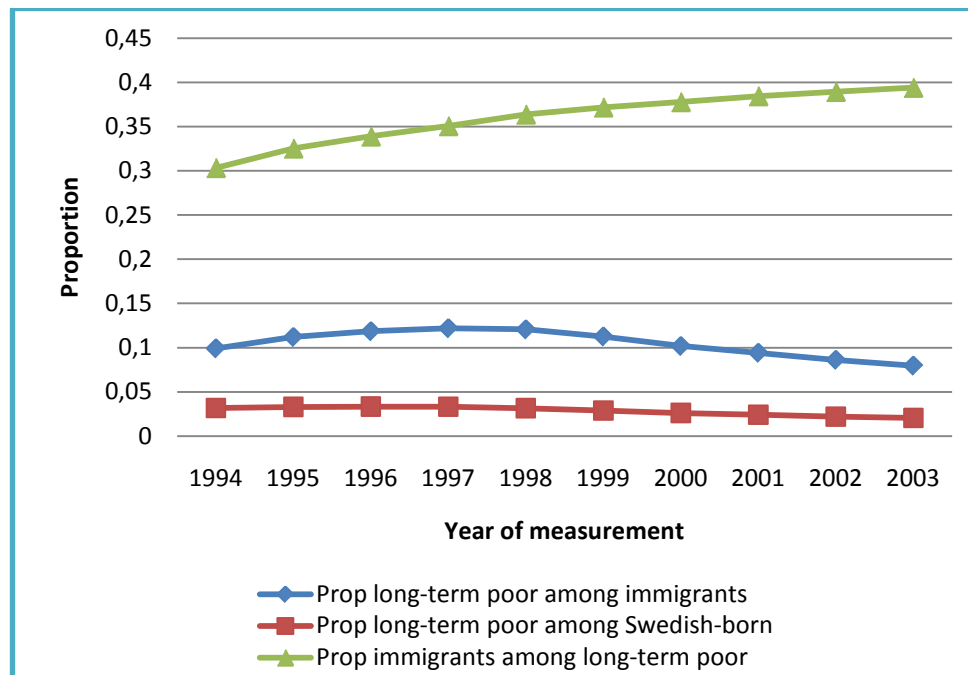
**Figure 12. Family types among the long-term poor 1994–2003**

Episodes of at least five years poverty. Persons 16 years and older in own households. Per cent.



**Figure 13. Long-term poverty and immigrants**

Proportion long-term poor (episodes of at least 5 years) among immigrants and Swedish-born and proportion immigrants among long-term poor. Persons 16 years and older in own households 1994-2003.



Among immigrants, long-term poverty has decreased both among new immigrants and others (Figure 13). In 1994, 10 per cent of immigrants and 3 per cent of Swedish-born were long-term poor, and the corresponding proportions in 2003 were 8 and 2 per cent. At the same time, the proportion immigrants among the long-term poor has increased steadily over the period, from 31 per cent in 1994 to 40 per cent in 2003. So, even though long-term poverty has decreased among immigrants, their share of the long-term poor has increased.

Our focus here has been on differences between family types and immigrant groups, but it deserves mentioning that as regards age, the situation for young adults appears much less adverse when we study poverty longitudinally instead of cross-sectionally. While young adults have very high poverty rates, they are only slightly over-represented in long-term poverty. Thus, it appears that poverty for young adults is mostly a short-term experience.

### Exits from and durations of Social Assistance reciprocity

Entries to and exits from social assistance usually follow the general poverty pattern. Andrén and Gustafsson (2004) showed that the average time in SA was two years, but in a given year half of those receiving SA had received it for at least five years. Re-entry was shown to be substantial: 50 per cent of those with only one calendar year of SA re-entered within ten years, and in total two thirds of those who received SA a given year received it at least one additional year during the following ten years. Bergmark and Bäckman (2001) found that those who received SA at least ten months during a calendar year during the 1990's had a very low probability of exiting from SA:

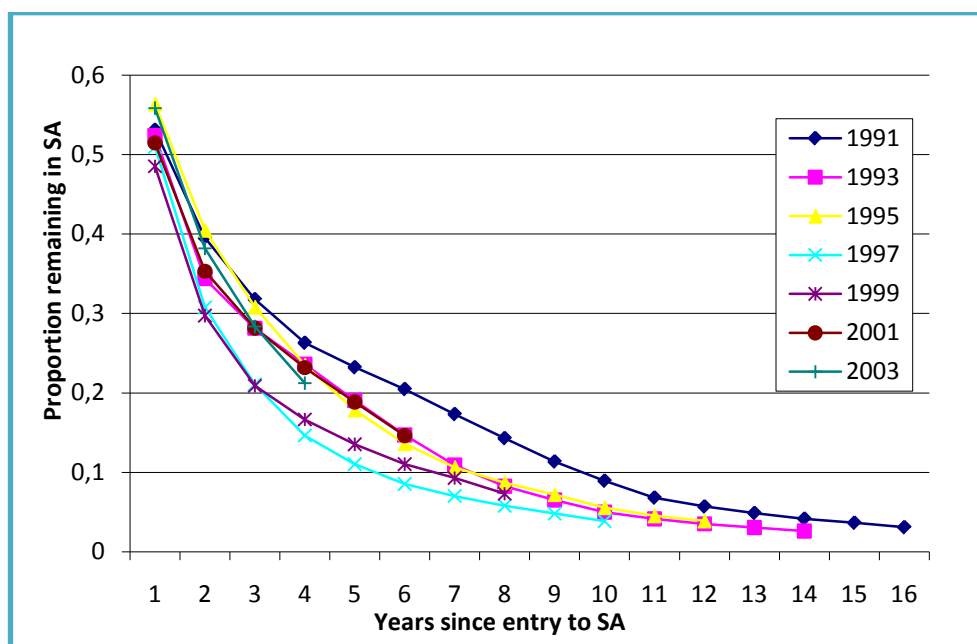
Around 95 per cent received SA the following year and between 50 and 70 per cent received SA during at least 10 months also this year.<sup>7</sup>

In this section, we study the duration of SA reciprocity, its changes over time and differences between groups – continuing our focus on differences between immigrants and Swedish-born, and between individuals in different family types. Regarding exits from SA for cohorts with different start-years (Figure 14), we see the same pattern as for poverty above: The 1991 entry cohort exits SA at a slow pace – after six years 20 per cent remain with SA. The exit rate increases for entry-cohorts up to 1997, when it starts slowing down again: Those who entered SA in 2001 and 2003 left it at the same low rate as those who entered it in 1993 and 1995, during the recession.

As was the case for poverty (Figure 10), immigrants leave SA at a slower rate than Swedish-born (Figure 15), and it appears particularly difficult to exit SA spells that started the year of immigration. One explanation is that new immigrants normally lack alternative sources of income, while other groups can receive unemployment benefits, sickness benefits, pensions etc. This is supported by comparing figures 10 and 15, as the differences between new immigrants and others are not as large for exits from poverty as for exits from SA reciprocity.

#### Figure 14. Outflow from Social Assistance

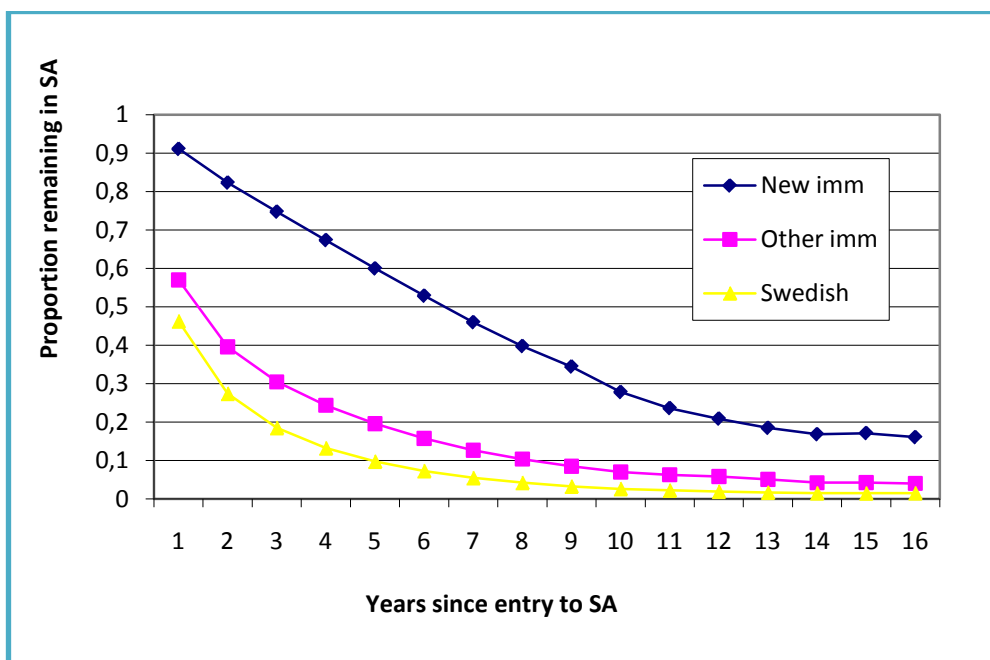
Proportion of different entry cohorts that remain in Social Assistance by number of years since entry. Cohorts with entry years 1991-2003 (every second year). Persons 16 years and older in own households.



<sup>7</sup> This high persistence must be seen in light of the fact that benefit periods often stretch out over two calendar years (especially when the study is based on those who have had at least 10 months of SA).

**Figure 15. Outflow from Social Assistance among immigrants and Swedish-born.**

Proportion remaining in Social Assistance by number of years since entry. Persons 16 years and older in own households.

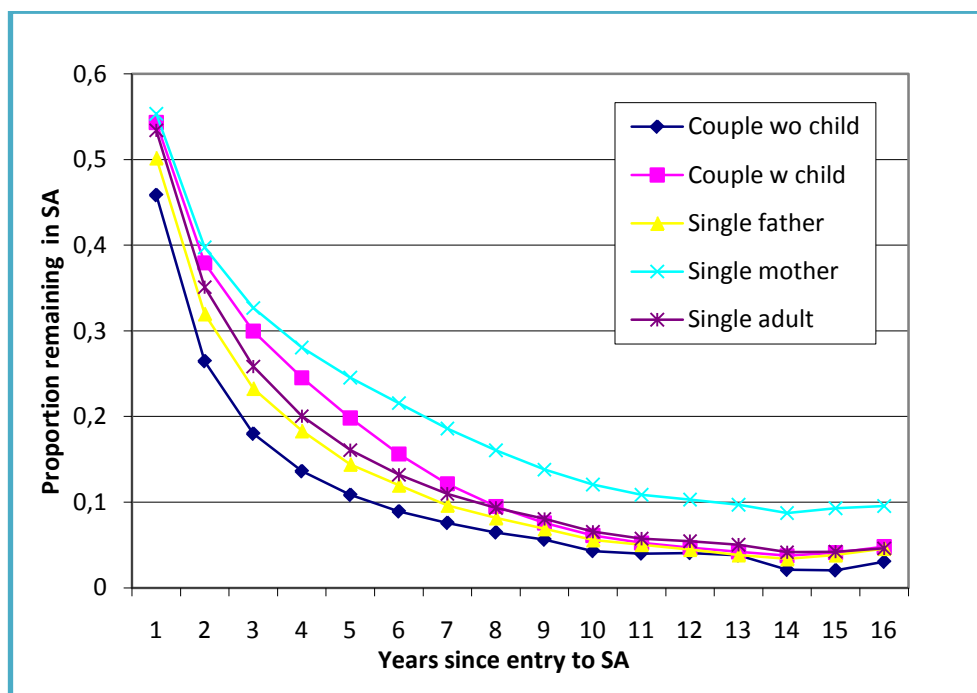


One can compare not only the level of exits from SA, but also the pattern of exits over time. The SA durations for Swedish-born and non-new immigrants have an exit rate that is decreasing over time, that is, the probability of exiting SA is high at first, but decreases strongly with time on SA. Long-term SA reciprocity is thus related to a lower probability of finding other sources of income. There is no definite explanation of this pattern: It can be that the time on SA affects opportunities and motivation to find other incomes (state dependence), but it can also be that those on long-term SA have a lower probability of exiting to begin with because of some underlying characteristic (a selection effect).

The exit pattern for new immigrants is very different: The exit rate is almost constant up to very long durations (ten years or more), and we see no gradual decrease in the exit probability. This constant exit rate is probably the result of two counteracting mechanisms: On the one hand, time on SA is (as for others) probably related to a decreasing probability of exit, but on the other hand, time since immigration is related to an increasing probability of exit. Because the time on SA coincides completely with the time since immigration, these two mechanisms balance, resulting in a constant rate of exit. Even though the level of SA reciprocity is high for episodes starting the year of immigration, it must be considered positive that the time on SA is not associated with an increasing risk of remaining in SA, as it is for other SA recipients.

As regards re-entry (not shown), immigrants have a higher re-entry rate than Swedish-born. After exiting from SA, it takes 13 years for Swedish-born but only 9 years for immigrants until 50 per cent has received SA again.

**Figure 16. Outflow from Social Assistance in different family types.**  
Proportion remaining in Social Assistance by year since entry.



Of all family types, single mothers remain longest in SA (Figure 16). Partnered parents also have an initially low outflow, but while 10 per cent of single mothers remain in SA after 11-16 years, only around 5 per cent of parents in couples do so. The differences in poverty persistence are even more evident if we consider re-entry (not shown): After exiting SA, it takes only 4 years until half of the single mothers have re-entered, compared to 7 years for single fathers, 10 years for singles without children, 13 years for partnered parents and 16 years for partnered individuals without children.

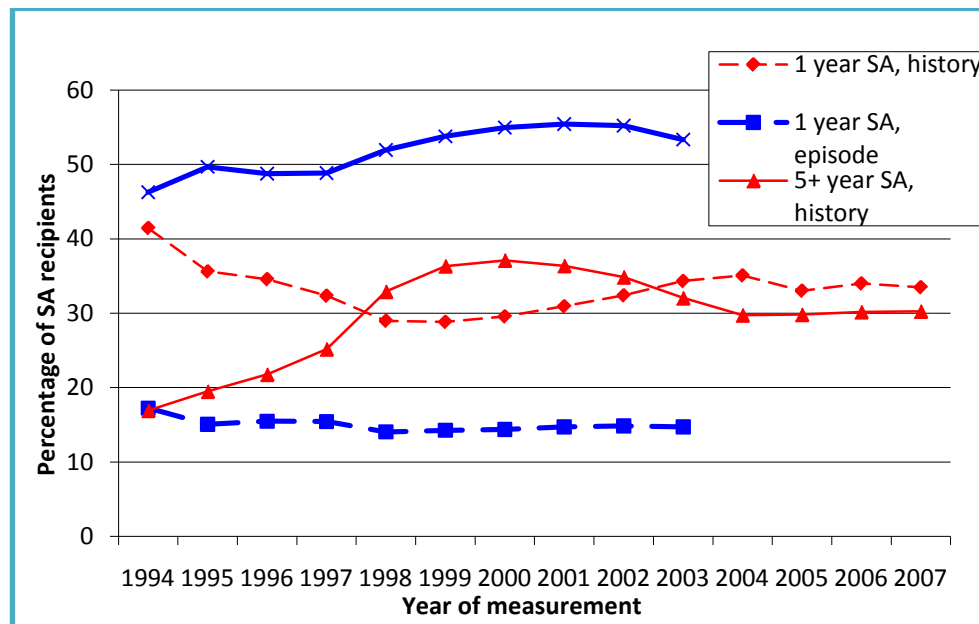
As for absolute poverty (Figure 8), we can look upon persistence in SA in terms of histories and episodes. Figure 17 shows that around half of those who receive SA in a given year are in a long-term episode. Importantly, long-term SA episodes have not decreased much after the 1990's recession – the 2003 level is higher than the one in 1994 (during the recession). This pattern deviates from the one for absolute poverty, where the proportion of the poor that was in long-term episodes decreased after the recession.

While the proportion of all SA recipients that are long-term recipients has increased, the proportion of the entire population that are long-term SA recipients has decreased somewhat. In 2003, 2 per cent of the population were long-term SA recipients, as compared to 3 per cent in 1994. Even though this is a small group, long-term SA makes up a large proportion of the total SA payments, which means that a large proportion of these benefits goes to a rather small group of recipients.

Differences between groups are similar for long-term SA and long-term poverty. Long-term SA has decreased since the end of the recession among Swedish-born and immigrants, and in all family types, but immigrants and singles without children make up increasing proportions of the long-term SA recipients (these results are not shown here).

### Figure 17. Short and long durations in Social Assistance

Percentage short-term (1 year) and long-term (5 years) Social Assistance recipients. Reciprocity histories (1994-2007) and assistance episodes (1994-2003). Persons 16 years and older in own households.



In our data, we cannot see whether the proportion long-term SA recipients in the population has returned to the levels before the recession. Several previous studies, with other definitions of long-term SA, have found that the proportion long-term SA recipients of the population was clearly higher 2000-2005 than in 1990-1991, even though the proportion SA recipients in the population has decreased (Socialstyrelsen 2006, 2007, 2008, Bergmark and Bäckman 2007). Many have expressed a concern over this development, but it must be understood as a consequence of the change of the population composition during the period. Immigration was large during the 1990's, and new immigrants normally lack access to social insurances (such as sickness benefits, parental leave benefits, pensions, unemployment insurance) which means that they have to resort to SA when lacking labour income. Mood (2009) shows that around half of the total increase in long-term SA since 1991 is explained by the increased representation of immigrants in the population, 38 per cent is explained by an increasing dependence among immigrants (most likely because the proportion new immigrants has increased), and 15 per cent is caused by increased dependence among Swedish-born. It is of course alarming that a large group of immigrants are long-term SA recipients, but Swedish-born can be equally poor without having to apply for SA because they receive other benefits. An upshot of this situation is that while immigrants are over-represented in both long-term poverty and long-term SA, their overrepresentation is much larger in long-term SA.

### Concluding discussion

In the first section, we showed that the annual poverty rate during the period 1991-2007 was between 5 and 11 per cent. By applying dynamic analysis to

longitudinal data on income and poverty, we found that most of those who ever became poor during this period exited poverty within a calendar year, and the risk of long-term poverty was small: Around 3-4 per cent of the population in a given year were long-term poor (defined as being poor for five consecutive years). However, of those poor in a given year, around 40 per cent were in a long-term poverty episode (of five years or more). Of those who exited poverty, many returned: Seven years after exit, between 30 per cent (those who exited in 1998) and 50 per cent (those who exited in 1992) had experienced a new poverty spell. Poverty is sticky, but our analyses cannot ascertain whether it is because of some underlying characteristic of the poor, or whether poverty itself has such detrimental effects.

As we saw in Section 2, poverty is strongly related to the business cycle, and this is true also for poverty dynamics. In good times, the probability of leaving poverty or SA increases and durations become shorter. However, relapses to poverty do not follow this pattern: Re-entry to poverty decreased among those who exited poverty between 1992 and 1998, but increased from 1998 onwards.

Our results show that immigrants have longer durations and a higher risk of falling back into poverty, and this pattern is particularly strong for recent immigrants. The proportion long-term poor among immigrants has decreased since the recession, but the proportion immigrants among the long-term poor has increased from 30 to 40 per cent the last decade. Thus, poverty is becoming more concentrated to immigrants. This is true also for SA: Of those who were in a long-term SA episode at the end of the period, no less than 60 per cent were immigrants.

Another group with a high risk for long-term and repeated poverty is single mothers with young children. The risk of long-term poverty in this group is twice the risk in the entire population. Of all poor, this group does however make up only 10 per cent. Instead, the group of long-term poor is dominated by one-adult households without children. This, in turn, is a rather heterogenous group, with roughly equal shares women and men, and only a slight over-representation of the youngest and the oldest.

## 4. Transmission of income and poverty from parents to children

A crucial aspect of poverty is to what extent it is inherited between parents and children – the more it is inherited, the less fair a society appears. Previous studies have documented that those who grow up in poverty have a higher risk of becoming poor as adults themselves (Corcoran 2005; Stenberg 2000). Such an intergenerational association is often taken as an indicator of inequality of opportunity, and is studied within a wider research field addressing the transmission of resources across generations, for example social mobility (Breen and Jonsson 2005) and income mobility (Björklund and Jäntti 2009).

Due to their size, coverage, and precision, register data in Sweden (just like in other Nordic countries, and Canada) offer unusually good opportunities for studying the transmission of socioeconomic positions, income and

poverty across generations (Björklund, Lindahl, and Plug 2006; Bratsberg et al. 2007; Corak and Heisz 1999; Jonsson et al. 2009). Most previous studies have been concerned with social and income mobility in general and have not focused on poverty. One study, however, looks at the relation between parent's and son's income for different levels of parental income in the Nordic countries (Denmark, Norway, and Finland) and when comparing with England and the USA they find a weaker intergenerational transmission of low incomes in the Nordic countries (Bratsberg et al. 2007).

Our analytical strategy falls into two parts, one concerned with the excessive risks for poverty that may prevail for those from economically disadvantaged backgrounds; the other with change over time. For the former aim, we ask, first, what the overall association between parents' and children's income is. Second, we study mobility between decile groups (parents' and children's, respectively) to find out whether those who grew up in the poorest tenth of the income distribution have particularly small chances of leaving poverty. Third, we take this one step further by asking whether those who grew up in families at the very bottom of the income distribution (defined in terms of percentile groups) stand out as having exceptionally large risks of ending up in poverty themselves.

Just as in the previous sections, we are interested in change over time. We take as a point of departure a similar time-period as analyzed in Section 2 and 3 above, namely (approximately) 1995 to 2005 (by studying those born 1960-70 at ages 33-37). We are interested in whether there was any discernible impact of the recession and, perhaps, of the economic recovery during the most recent period, on intergenerational mobility. We know from earlier studies that social mobility has increased in Sweden during the post-War period (Erikson 1983), but that this equalization leveled off during the 1980s and 1990s (Jonsson 2004). In a related research area, it has been shown that the importance of social origin on educational attainment has decreased for children born from the 1920s and up to the 1950s, but this trend has also leveled off for younger generations (Jonsson and Erikson 2000). A similar trend has been reported for the association between parents' and children's incomes (Björklund, Jäntti, and Lindqvist 2009). Because trends in intergenerational processes are to a large extent produced by cohort replacement, it is likely that they are quite slow (Breen and Jonsson 2007), but as we study a relatively small age band it is still possible to explore any instantaneous impact of macro-economic change with some precision.

For the analyses we use (just as in the previous section) the STAR register data base, which allows us to connect data on parents and children via a unique individual identifier in Statistics Sweden's multi-generation register. Previous research in income mobility has mostly been concerned with the association between fathers' and sons' labour incomes. Particularly when the issue is poverty, we find it preferable to study income mobility in a more comprehensive way by using the household disposable incomes, just as we have used in previous sections. In addition, we include also women in the analysis.

## The income growth for people from different economic backgrounds

The question of the intergenerational transmission of income and poverty is important but difficult to study. One reason is that few data sets have information from two generations who are at around the same ages. To capture generational differences in life-time income it is also important to measure income at an age when each generation has reached a relatively stable income level (approaching what the economists call “permanent income”). Both studies of socioeconomic positions (Jonsson 2001) and income (Böhlmark and Lindqvist 2006) suggest that such a level of “maturity” is reached somewhere between 30 and 40 years of age. In addition, when studying income (in difference to occupation) it is very important to include several years of income to reduce the risk that one registers temporary deviations in income, due to a sudden drop or increase in income or because of measurement error, something that leads to an under-estimation of the intergenerational income association (e.g., Solon 1999; Corak and Heisz 1999).

We have access to register information on incomes during the period 1968–2007. With these data we can study the association between parents’ and children’s incomes for cohorts born between 1960 and 1970. We measure parental income during 1968 to 1985, averaging over the period when the children were 8-15 years of age. The children’s incomes are measured 1993-2007, that is, when they were 33-37 years of age. To gain precision in our estimates, we use the average of the positive incomes of parents and children over these eight and five years, respectively.<sup>8</sup> The foundation is, as in our previous analyses, the equivalized, disposable household income.<sup>9</sup> As before, we exclude self-employed from our analyses, because their registered incomes are no good estimates of their real economic situation.

A first question is whether there are any noticeable differences between children of different economic backgrounds in income growth over their early career. Is it the case that children from poor homes experience a slow income career themselves compared to those from more fortunate income origins? If so, when in the income career does this difference occur? Figure 18 displays the income development for the child generation when these were in the ages 18-47 (provided that they have formed their own household). The point of departure is the relative income position during childhood. We have divided those born 1960-70 into ten equal-sized (decile-) groups (thus we use a different definition of relative poverty than in previous sections). The reference group, those coming from the lowest (poorest) income decile group, has been set to zero, that is, they are represented by the horizontal bold (red) line in the graph. They have also experienced income growth during the ages 18-47, but we have set them to zero each

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<sup>8</sup> Because we use disposable incomes, there is hardly any household with zero or negative values.

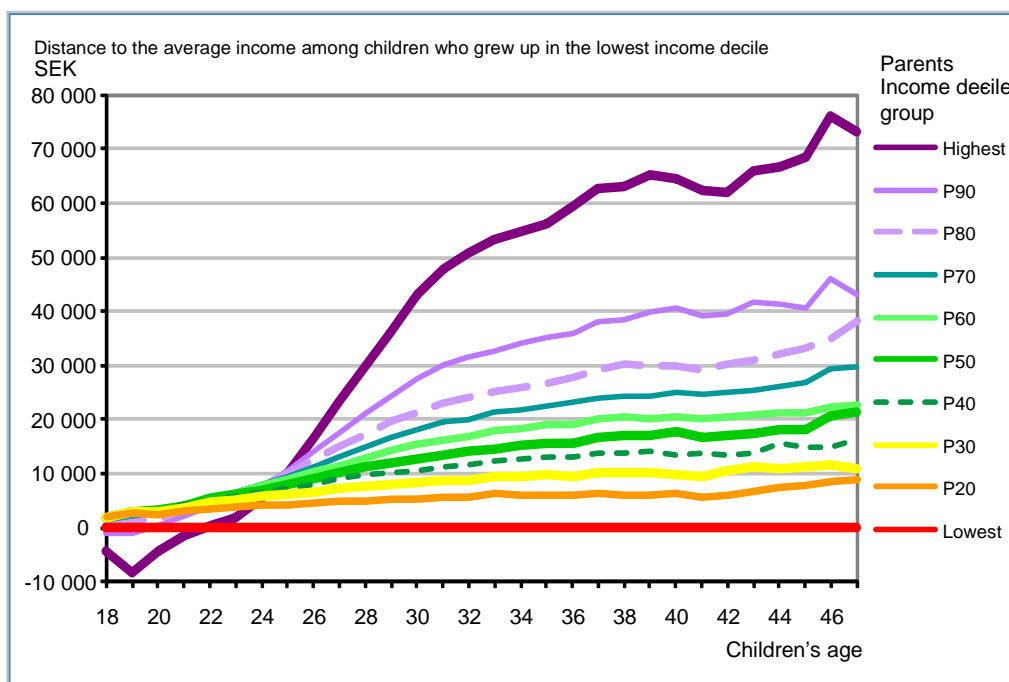
<sup>9</sup> The main reason for using household income in the child’s generation is that this is what is relevant for poverty. It should be noted that this also brings in the spouse’s income. As a consequence, we study the “total” intergenerational association, which also captures parental resources as materialized in residential location, social networks, school choice, and other characteristics that influence the spouse-selection process.

year because we then can illustrate the change in *income differences* across ages.

Figure 18 shows that by the age of 30 those whose parents belonged to the highest decile group had more than 40,000 SEK more in equivalized disposable income than the reference group from the poorest decile group. The general picture that stands out from Figure 18 is one of growing income gaps, implying that the intergenerational income association increases with children's age. The pattern we see can however not easily be generalized in its detail to other cohorts than those born 1960-70, who attended the labour market at a certain historical time at a given age.<sup>10</sup> What we believe is possible to generalize though, is the fanning out of the differences, that is, the increasing income origin differences facing a cohort of children as they grow older. This "gradual inheritance" of parents' income positions shows that for every age older than 25 those who experienced a relatively poor upbringing lag more and more behind those from richer backgrounds (cf. Erikson and Jonsson 1998).

**Figure 18. The development of intergenerational income differences from age 18 to age 46**

Income differences among children (born 1960-70) from different income deciles (parents' income when the child was 8-15 years of age). Equivalized disposable incomes adjusted to 2007 price level. SEK.



<sup>10</sup> In fact, we have studied the pattern in more detail, and conclude that it is produced by a complex mix of age, period, and cohort effects.

The pattern in Figure 18 is interesting also in its details. The income differences widen dramatically between 25 and 30 years of age, approximately. Before the age of 25, it is hardly possible to discern any intergenerational income association. In fact, up to age 20, those from the highest income background are the worst off – no doubt because they are still in higher education (where we saw above that poverty is common) while those of other income origins have their first jobs. The educational investment pays off quite well, according to our estimates, as those from the richest tenth have left the others behind already at age 30, their income advantage growing further as they grow older.

The results suggest that the association between parents' and children's incomes is possible to study when the children are around 35 years old, as we do below. The association is likely to increase as these children age – at least up to their mid-40s – but at around 35 it is, we believe, sufficiently representative to use for our purposes.

### The association between parents' and children's incomes

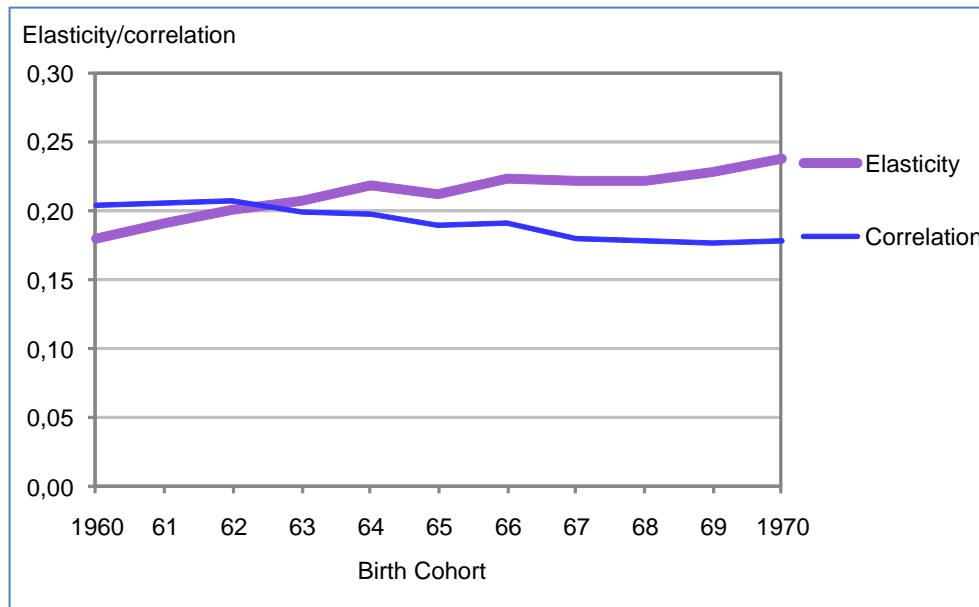
Has the association between parents' and children's income increased or decreased during the last decades? When measuring this intergenerational association, economists normally use the *elasticity*, which is the regression coefficient of parents' income on child's income (where incomes are transformed using the natural logarithm) (Solon 1999). The elasticity can be interpreted as the fraction of the income differences in the parental generation that is transmitted to children.

However, the elasticity, while an important measure in itself, is partly determined by changes in the distribution of incomes across generations. If the variance in income grows, for example, the elasticity is likely to increase too. If we want to capture the underlying association, we can control for the changes in the spread of income by calculating the intergenerational *correlation* (which is the elasticity multiplied by the ratio of the variance in parents' income to child's income). The correlation is thus more closely related to what is often termed *inequality of opportunity*, interpreted as differences between children of different origins in the probabilities of reaching given positions (in this case, income positions).

In Figure 19 we show the change in both the elasticity and the correlation for those born 1960-70 – and as we use children's incomes in the ages 33-37, in historical time Figure 19 corresponds approximately to the period 1995-2005. Because we use household income the estimates are the same for men and women by definition.

**Figure 19. Intergenerational income\* association in terms of elasticities and correlations for birth cohorts 1960-1970**

Parents' income measured when the child was 8–15 years of age, and the child's income as adult measured as the average of income for ages 33–37.



\* Equivalized disposable income

The intergenerational elasticity has increased from 0.18 for those born in 1960 to 0.24 for those born in 1970, which is no small growth in the transmission of advantages across generations. However, the increasing elasticity does not tell the whole story. In fact, the reason why it increases is that the variance in income increased during the period. As we saw in the analyses in Section 2 above, income inequality has increased since the mid 1990s, and this is also true for those 33-37 years of age. This increasing variance in child income across cohorts means that it takes less of an income advantage during childhood to produce a given proportional income advantage among children.

When we hold constant for the change in the spread in income – by calculating the intergenerational income correlation – the change over time is instead in the opposite direction: The intergenerational income correlation fell from a good 0.20 to a good 0.17 during our period (*circa* 1995-2005), meaning that the proportion of children's income that can be accounted for by parents' income decreased.<sup>11</sup> It would thus seem to be the case that inequality of opportunity decreased during the period while the economic consequence of this inequality worked in the other direction, to widen the income differences among children from different income origins.

It should be noted that our conclusions relate to household income, which we have argued is especially appropriate when studying poverty. However, we have also conducted the trend analysis using household incomes for par-

<sup>11</sup> To check whether this decrease is due to changes in the intergenerational relation between particularly high or low incomes we divided the incomes (in both generations) into percentile groups and calculated the cohort-specific correlations. While these are slightly higher than the ones reported in Figure 19, the trend over time is the same.

ents (as in Figure 19) but the individual disposable income for their children. This analysis (not shown here) reveals that the trend for men is identical to the trend using household income, but that there is no discernable trend for women.

Although previous research (e.g., Solon 2002; Jäntti et al. 2006) has shown the parental income effect to be substantially stronger in the USA and Germany, and probably England as compared to the Nordic countries, our estimates verify that there is a fairly strong association between parents' and children's incomes also in Sweden.<sup>12</sup> The degree to which this association is based on a *causal* effect of parents' income on children's is difficult to establish, because the association captures also the effect of several other factors related to fathers income, such as parents' education, and cognitive as well as non-cognitive traits (e.g., Mood, Jonsson, and Bihagen 2010).<sup>13</sup>

As mentioned, intergenerational associations are probably driven mainly by cohort processes (Breen and Jonsson 2007). However, more detailed analyses (not shown here) reveal that also period effects are behind the development in Figure 19. The intergenerational income association can, via different mechanisms, be strengthened or weakened at the same historical point in time for people of different ages. For example, changes in taxation regulations may make it profitable to take home capital profits a given year (cf. Figure 2), and if such profits largely go to children to high-income earners, this can give rise to a period effect.

Our results suggest that the intergenerational income mobility increased recently in Sweden, thereby equalizing opportunities, which is a remarkable and surprising result, contrasting the increasing income inequality shown in Section 1. Falling intergenerational income correlations may stem from an increasing *general* equality during childhood, in our case between the 1960s/70s and 1970s/80s, so a given sum of money among parents have come to "buy" less advantage for children. This can be the case if welfare state provision expanded, or if higher education became more available, which demonstrates that equality of opportunity is not only a matter of incomes (e.g., Solon 2004).

### Income mobility with focus on low- and high-income earners

A disadvantage with the approach used so far, centered on the intergenerational income elasticity and correlation, is the underlying assumption that the relation is linear, that is, that a given income increase in the parental generation generates the same income increase in the filial generation irrespective of whether it takes place at high or low incomes.

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<sup>12</sup> However, our estimate is not so easy to compare with international estimates as those often pertain to father-son (or, in rare cases, father-daughter) correlations. The father-son correlation using only labour income is higher than our estimates, around 0.3 (see Mood, Jonsson, and Bihagen 2010, for those born 1962-65 studied at age 38-42 with fathers' incomes averaged over the ages 44-55).

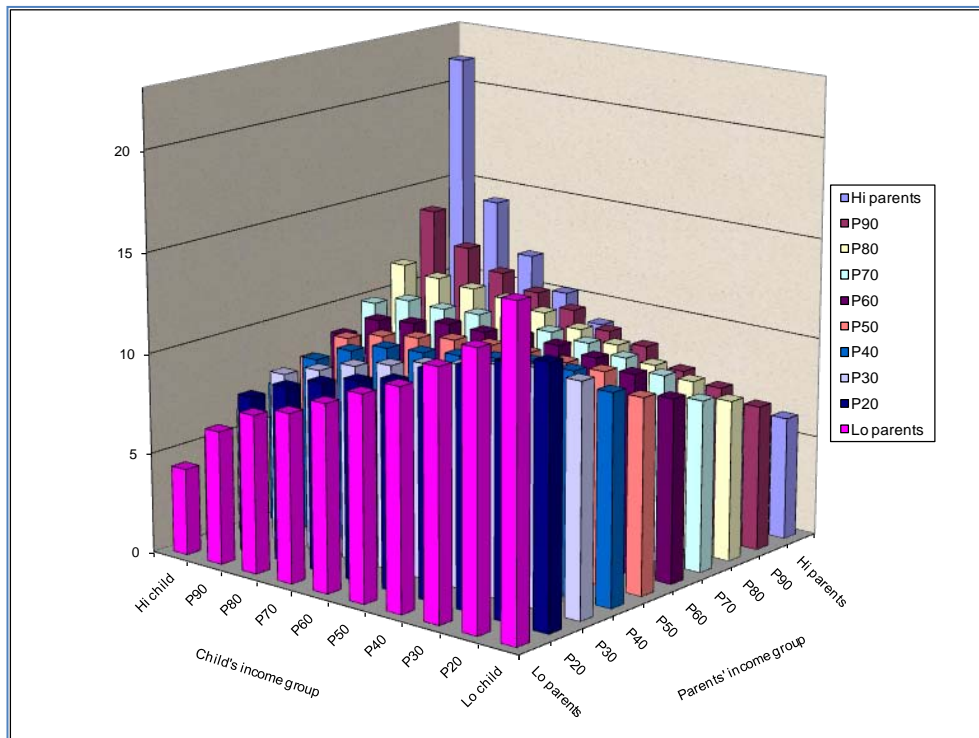
<sup>13</sup> For a review and discussion of causal intergenerational effects, see Black and Devereux (2010).

Because we are especially interested in whether children who grow up in poverty face distinctive disadvantages, we divide the income distribution into ten (decile) groups for both generations and focus on those in the lowest, that is, those who are poorest. Figure 20 shows the proportion of the children growing up in households with different incomes who themselves end up in different income decile groups as adults. If there were no association between parents' income and children's, the bars would all represent 10 per cent probabilities.

The graph clearly demonstrates that there is, by and large, a gradually increasing probability to end up in lower income deciles the lower income the parents had. If we focus on the lowest destination decile group (the front left set of [pink] bars) we see that the proportion who end up there is somewhat higher among those who themselves come from poorer circumstances than what we would expect from a linear relationship (the nearest [pink] bar). The deviation from a linear trend is however greatest for those who grew up in high-income families. In particular, those who come from the richest ten per cent of the origin families have very low risks of ending up in the lowest decile group and rather extreme chances of find themselves among the top ten per cent (the tall [light blue] bar at the far end of the graph). This result mirrors one that is also shown in studies of social mobility – the intergenerational association is stronger at the top than at the bottom. The inheritance of privileges is of course an example of inequality, but if we take the perspective of the children it is still positive that poverty is less inherited than affluence.

**Figure 20. Intergenerational income mobility between income decile groups**

The proportion of those born 1960-70 growing up in different income deciles (age 8-15) who end up in different income deciles at the age of 33-37. Equivalized disposable income. Per cent.



Did the deep recession during the first half of the 1990s increase the risk of ending up in poverty for those who grew up in the lowest income decile group? Did it reduce the chances of inheriting high-income positions? Figure 21 follows children who grew up in the lowest and highest income decile group, respectively, and give the probabilities of being found in each of the ten income groups at age 33-37. Curves sloping downwards show the destination of those who grew up in the lowest income group, and we recognize the pattern from the previous graph (the nearest [pink] bars that slope down left). The focus of Figure 21 is instead to display this pattern (and the corresponding one for those of richer origins) for three different cohorts – those born in 1960, 1965, and 1970 – to trace changes over time. However, there are almost no changes across these cohorts, which can be seen by the overlaid three curves. This means that, with only small exceptions, the mobility from the highest and lowest decile groups remained the same during the period under study.

Around 15 per cent of those who grew up in the lowest decile group ended up there themselves. While that is higher than the expected 10 per cent (if income destinations had been uncorrelated with income origins) it is still not extraordinary high. But a decile group is quite heterogenous, and it would be interesting to know whether there is, within this group, a smaller group with an extremely poor childhood who perhaps do much worse. That is, the inheritance of poverty may be stronger for those growing up in the very poorest percentages of a cohort. To test this, we next study income mobility with income origin divided into percentiles (a hundred equally big groups).

**Figure 21. Change in intergenerational income mobility among those who grew up in the highest and lowest income decile, respectively.**

The proportion of children in different income deciles at age 33–37, shown for three different birth cohorts: 1960, 1965, and 1970. Equivalized disposable income.

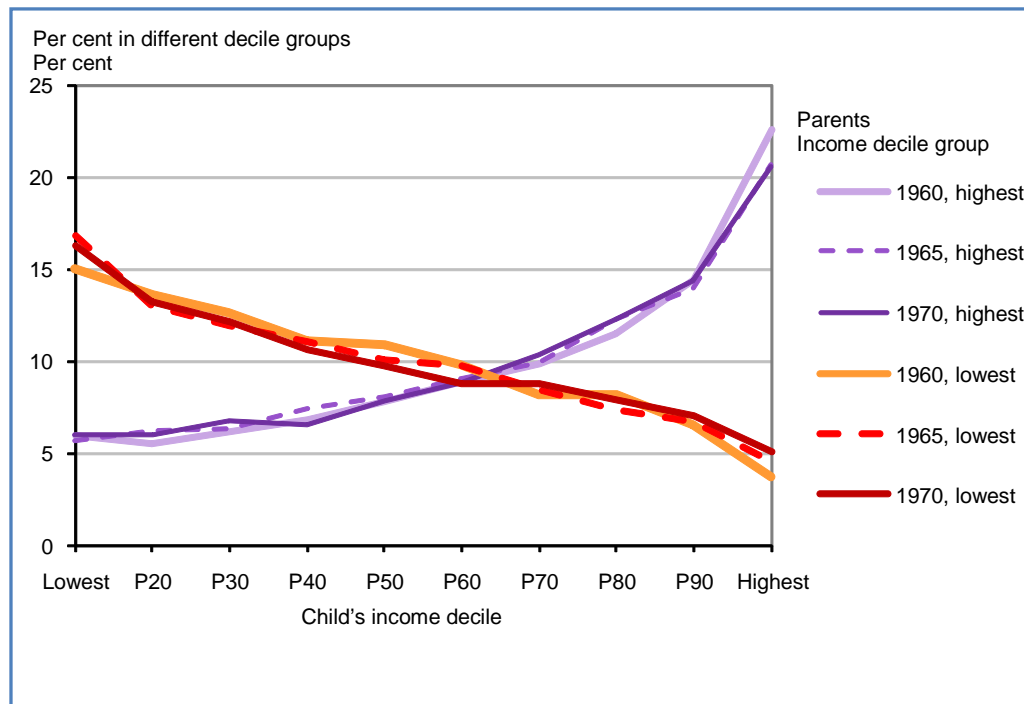
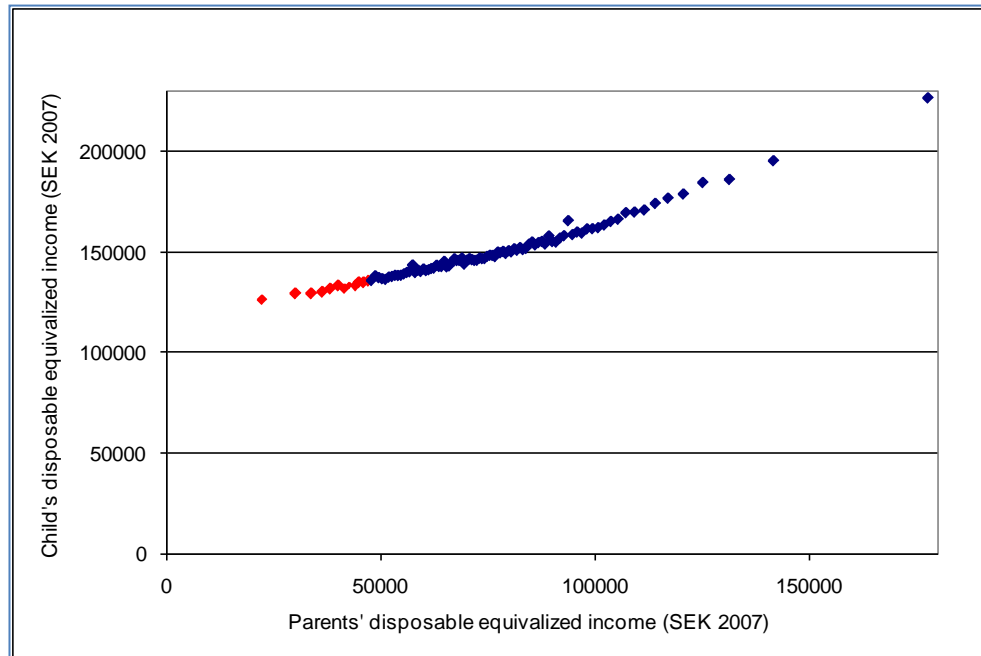


Figure 22 shows the average income during childhood and the average income at age 33-37 for each of these percentile groups. Each dot represents a percentile group in parents' income distribution, and the hundred dots form an upwardly sloping "row" along the horizontal x-axis showing the income during childhood. Along the vertical axis, we show the average income of the children themselves at age 33-37.

The fact that the dots form an upward slope simply reiterates the fact that there is a positive association between parents' income and children's income as adults. The distance between the dots in the horizontal dimension shows the absolute income differences during childhood between the percentile groups. It is interesting to see that parents in the highest percentile group (furthest to the right) are far away from the rest, but also that the lowest-income group is lagging behind the next-lowest group. While that might be thought of as an indication of a division within the lowest decile group just analyzed (which we have indicated by a darker [red] colour of the ten leftmost dots in the graph), the consequences of belonging to this group do not seem to be overly negative. This can be seen by the fact that the placement of the lowest percentile (the dot furthest to the left) is not much different from the adjacent dots along the vertical dimension – though the dots form an upward slope also among the ten poorest percentiles. This means that the more-or-less linear (in fact smoothly upwardly convexing) relation between parental and filial incomes is preserved also at the very bottom of the income distribution.

**Figure 22. Intergenerational income mobility between percentile groups\***  
Children born 1960–1970



\* Every dot represents a percentile group in parents' income distribution

Under condition that the lowest percentile groups do not contain households with unobserved economic resources, it appears that those who grew up in a family at the far left end of the income distribution do not have much lower average incomes than others whose childhood income was in the lowest decile. That should not, however, conceal the fact that there is a general association between parents' and children's incomes, so it is worse being right at the end than being just near it. Again, however, we are more impressed by the advantages passed on between generations: those who come from the highest percentile group do have a clear advantage also over those who come from the next-to-highest.

## Concluding discussion

This section has demonstrated that there is an association between parents' income during their offspring's childhood (age 8-15) and the income this offspring achieves when grown up (age 33-37). The correlation (for household disposable equivalized income) is around 0.18 for the most recent period, while the elasticity is around 0.24. These figures are not negligible, but do not represent great inequalities of opportunity.

The probability of ending up in the lowest income groups decreases almost linearly with the income experienced during childhood. Those with the lowest incomes do not stand out as very different from those next to them in the income distribution. Instead, those who come from the real high-income families have an extra advantage – very high incomes, it seems, are more easily inherited than poverty. This separates the Nordic countries from the USA (and possibly England), where also the lowest income origins generate big disadvantages in relation to the adjacent income groups (Bratsberg et. al 2007). In most of these studies, however, there remains some uncertainty about the measurement of those with the absolutely lowest incomes

The inequality in income careers between children from different income backgrounds becomes visible first after the age of 25, to some extent because many children from high-income groups study at the university and therefore have low incomes in their early 20s. Between age 25 and 40 income differences increase rapidly, and it is especially children from the most privileged income positions that leave the others behind.

There is a tendency that the intergenerational income correlation falls between cohorts born 1960 and those born 1970, i.e., approximately between 1995 and 2005. This is a surprising result which should be interpreted somewhat cautiously.<sup>14</sup> If the equalization is real, it may stem from conditions during the children's upbringing that took place in the 1960s to the first half of the 1980s, a time period which was characterized by a general (and not only economic) equalization in Sweden (e.g., Erikson and Åberg 1987). This speculation reminds us that changes in intergenerational income associations is merely one of several possible indicators of inequality of

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<sup>14</sup> For example, even if the data are of high quality, changes in taxation regulations make incomes difficult to make fully comparable over time. Also, household definitions are not fully reliable for some family types (e.g., non-married cohabitants with no common children).

opportunity, and private means and public expenditures are communicating vessels in this process. It is also important to note that the “income return” of parents’ income during childhood (the elasticity) increased during the period under study. Because income inequality grew, so did the advantage of coming from a high-income family in real monetary terms.

Finally, it is worth noting that the association between parents’ and children’s incomes not necessarily reflects a causal effect. Parents at the lowest income levels may have other characteristics that suppress their children’s educational careers and occupational and income attainments. For example, they often have lower education, and they may have less human capital in other respects too. As we have shown in previous sections, among those in poverty there is a large representation of immigrants, making it possible that labour market discrimination is behind a part of the intergenerational income association. Only further research can shed light on which factors are of importance for inequality of opportunity, and changes in these.

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