The illusion of spells: Making sense of poverty dynamics

Carina Mood Institute for Futures Studies
Jan O. Jonsson Swedish Institute for Social Research (SOFI)

Introduction

Research on poverty dynamics and durations has grown immensely the last 30 years. The dynamic perspective emphasizes that cross-sectional poverty rates can represent very different realities, as they do not say whether the same people are poor from year to year, or whether the group of poor largely consists of people with short poverty durations. This does make a lot of difference: Although all episodes of poverty are unwelcome, the real downsides lie with the long-term, persistent, or recurrent poverty. Long spells in poverty are likely to increase the risk of exclusion, deprivation, and human capital depreciation, and frequent mobility in and out of poverty discourages long-term investments, such as in home ownership or in children's education. To understand the persistence and recurrence of poverty, dynamic analyses are needed.

Until the 1980's, studies on poverty dynamics were scarce, mostly due to a lack of individual-level panel data. Cross-sectional poverty rates gave an imprecise image of "the poor", often unreflectedly understood as a static group. This changed in the 1980's: In one of the first analyses of poverty dynamics, Duncan (1984) found a surprisingly high volatility into and out of poverty. 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 a very high proportion of all who are poor *at a given point in time*. In 1999, Stevens supplemented this insight by showing that taking multiple spells into account increased the time that the most vulnerable groups spend in poverty.

The influence of these studies and the value of their reported results have been immense, and especially the spell approach initiated by Bane and Ellwood (1986) has spawned a large literature using hazard regressions to study poverty exits and durations. However, the research agenda in this tradition only builds on one part of the insights of Bane and Ellwood – it focuses on the poverty durations of inflow cohorts, but largely ignores the distribution of poverty durations among the poor and in the entire population of poor and non-poor. The methodological finesse of the hazard approach, though sound in itself, has contributed to a biased view of poverty as primarily a brief and transient experience, famously formulated as the "individualization" or "democratization" of poverty (Leisinger and Leibfried 1999, Beck 2001). The irony is that the innovative design suggested by Bane and Ellwood has unintentionally served to conceal one of their central findings: that the majority of those poor at a given time are in long-term poverty, and the majority of the person-years of poverty are accounted for by the long-term poor.

The understanding of poverty dynamics has also been inhibited by a lack of adequate data sources. Selective non-response, measurement error and recall bias loom large in survey data, and mobility

into and out of poverty will be severely overestimated in the presence of such problems (Breen and Moisio 2004). The literature furthermore suffers from small samples, panel attrition and/or short observation windows, meaning that estimated exit rates and derivation of concluded episodes often rely on assumptions that affect the results to an unknown extent. As pointed out by Bane and Ellwood (1986, p. 6): "The ideal methodology for examining durations of spells of poverty and the characteristics of spells of various lengths would utilize an extremely large data set covering a very long period of time. With such a data set, one could simply tabulate the actual distribution of completed spells for people who began a spell in some previous year long in the past. One could also tabulate the distribution of completed spells for those people who were poor at some time in the past. Unfortunately, such a dataset does not exist."

In this article we use population register data that are not a far cry from the ideal condition described by Ellwood and Bane. The data cover the entire Swedish population aged 16 to 75 for a period of 18 years (the number of person-years is 102,754,809, with 7,989,847 persons observed for an average of 13 years). The use of population register data means that we can almost entirely avoid problems of small n, attrition, and non-response; and although censoring is unavoidable, we benefit from very long observation windows. Hence, the first contribution of our analysis is to give precise and reliable calculations of completed durations over a substantial period of time.

Our second contribution is to move beyond the conventional inflow-cohort approach to using also the total number of poor, the number of poverty years, and the whole population as denominators. These are all intuitive reference points, while arbitrary inflow cohorts can conceal important variations in composition, opportunities, poverty levels, and poverty durations. Thus, we extend the common portrayal of poverty experiences by not only asking "How quickly do those who enter poverty in a given year exit?" and "How long time will those who enter poverty in a given year spend in poverty in total?", but also "How much of the total poverty (in a year and over a number of years) is borne by the long-term poor?", and "How frequent is long-term poverty in the population?" The analyses cover mobility into and out of poverty, the length of poverty spells, and the sum of poverty experiences over given time periods. In our data, we are able to show such sums of poverty experience over an 18-year period, which is a unique coverage considering that it is not affected by attrition.

Our third contribution to previous studies is to widen the perspective and discuss which relevant questions about durations that the existing dynamic poverty research does and does not answer. In doing so, we reconnect to the studies that sparked the dynamic line of poverty research.

Previous findings on dynamics and durations of poverty

The dynamic study of poverty has its longest tradition in the US, but during the 1990's and the 2000's, findings from a large range of countries have been reported.[1] In the US, poverty is generally

[1] There is a related literature on *chronic poverty*, where individuals are typically classified as chronically poor if their income, averaged over several years, fall beneath a given poverty line. This tradition uses longitudinal data, but differs from the dynamic tradition by giving one single poverty status to a person over a period of several years; although recent developments do incorporate a time dimension (e.g., Gradín, del Río, and Cantó 2011; Bossert, Chakravarty, and D'Ambrosio 2010).

measured using an absolute poverty line, whereas European researchers most commonly use a relative definition of poverty (which is also the EU standard). While absolute and relative measures of poverty can give very disparate images of the change in poverty over historical time (Jonsson et al 2010), previous findings tend to show similar individual-level dynamic patterns for absolute and relative poverty. In this article, we define poverty using an absolute definition based on a poverty threshold (see below).

The availability of high-quality population data makes it ideal to study the case of Sweden. At first sight, one may believe that Sweden, as a classic example of a social-democratic welfare state (Esping-Andersen 1990), may be somewhat of an outlier when it comes to poverty; and (absolute and relative) poverty rates are certainly lower than in some, but not all, other western countries (Notten and de Neuborg 2011, Eurostat 2009, Smeeding 2006). The low relative poverty rates are mostly due to an even income distribution, and with a comprehensive welfare state, redistribution policies, and a large public sector (e.g., fee-free schools, free hospital care, and heavily subsidized day-care), absolute poverty is also held at bay. However, the consequences of such factors for poverty dynamics and durations are not self-evident (Fritzell 1990). In fact, the central patterns of poverty dynamics *per se* are to a large extent similar across nations, while the levels often differ (e.g., Duncan et al. 2003, Oxley, Antolin and Dang 2000) so there may still be a lot to learn from the case of Sweden. The time period we study (1990-2007) spans boom and bust, with a deep recession in1992-1996 and economic growth in the following period, and while poverty rates hover around a fairly low 5-6 per cent during good times, they do respond to macro-economic conditions – during the recession they rose to 11 per cent (Jonsson et al. 2010). We study business cycle effects on poverty dynamics in a separate paper (Authors 2012), and below we sum over the whole time period to get estimates that average over several business cycles (something that is rarely done in previous literature).

Poverty dynamics revolve around five phenomena: Entries, exits, re-entries, durations (over single spells), and total poverty experiences (over multiple spells), where entries, exits and re-entries are the actual dynamics, and durations and poverty experiences are the results of these dynamics.[2] One task is to estimate the rates and distributions of one or more of these phenomena in a population of interest, and sometimes also over time or across countries; another is to estimate how they are affected by events (typically family or labour market changes) or characteristics (such as race, immigration status or education). This paper focuses on the first task.

The annual entry rate to poverty is around 4-5 percent in a range of western countries (Cellini et al 2008, Valletta 2006), and the exit rate from poverty normally lies between 25 and 45 percent (Duncan et al. 2003, Cellini et al 2008). Exit rates do however differ dramatically between groups with different poverty durations. For example, Ellwood and Bane (1986) estimate exit rates for those in PSID 1970-1982 who have been 1, 2, or 3 years in poverty at 0.45 (1 year), 0.29 (2 years) and 0.21 (3 years), and the same pattern of decreasing exit rates (although at different levels) is found in the 11 European countries (Sweden not included) studied by Damioli (2009). This decrease can be an effect of selection of more vulnerable people into higher durations, or of so-called duration

[2] Virtually all poverty research uses year as the accounting period, and the normal definition of entries and exits is to go from a year above/below the poverty line to a year below/above. Thus, the number of years in poverty normally refers to the number of calendar years that income lies below the poverty line. This holds also in this article.

dependence or state dependence where previous poverty affects the risk of continuing in poverty (Cappellari and Jenkins 2004, Heckman and Borjas 1980).

The study of exit rates by durations is the most common form of dynamic analysis: People are followed from the poverty entry, and their transitions to non-poverty are observed. From exit rates, durations of poverty can be derived. Within the framework of common hazard analyses, durations are expressed as proportions of one or more inflow cohorts, normally showing how many of those who entered poverty (at time-point t) are still in poverty a certain time-point k after t (tk). To be exact, this analysis normally shows the proportion that has been in uninterrupted poverty from t to tk among persons who started in poverty at t and remain in the population at tk. Spells may continue after tk, so this analysis shows the proportion with durations *at least* corresponding to tk-t. The analysis can be done separately for different inflow cohorts (i.e., those entering poverty different calendar years), but can also be aggregated over several inflow cohorts, setting different calendar years to t, thus telling us the durations of people who entered poverty during a certain number of calendar years (period) instead of a given calendar year. If there is no censoring, i.e. if all poverty exits are observed, the analysis starting from poverty entries can be used to derive the distribution of completed spell durations: For example, the proportion who exit poverty after three years simply equals the proportion remaining poor at t4 minus the proportion remaining poor at t3. If censoring is present, which normally is the case, one must however make some assumption about the completed durations among the censored observations in order to derive distributions of completed durations.

The general impression from the above approach is of poverty as a largely short-term phenomenon. Regardless of poverty definition, and for a wide range of countries and time periods, it has been found that around half of those who enter poverty exit the next calendar year (Bane and Ellwood 1986, Stevens 1999, Oxley, Antolin and Dang 2000, Jenkins 2000, Fouarge and Layte 2005, Fritzell and Henz 2001), and only a small proportion of each inflow cohort remain in uninterrupted poverty for several years.

The impression given from the study of exit rates is however too optimistic if the risk for re-entry is not also taken into account. Stevens (1994, 1999) found massive re-entry in the US during the 1970's and 1980's: After one year out of poverty, 27 percent returned, and within five years of exit 50 percent had returned to poverty. For 11 European countries, Damioli (2009) reported that between 21 and 34 percent had re-entered after one year out of poverty, and between 37 and 62 percent had re-entered within five years. The stark difference between entry and re-entry rates shows that the part of the population that has recently exited poverty is much more economically vulnerable than the other non-poor in the population, and single-spell analyses can therefore underestimate the persistence of poverty. For example, Stevens (1999) finds that 53 percent of those who entered poverty in US between 1968 and 1979 had a spell of no more than one year, but because of thehigh re-entry rates, only 30 percent were poor only one out of the ten years after poverty entry.

Although analyses of durations commonly follow inflow cohorts, this is a rather special reference population and one that is not always intuitive. Someone interested in social policy consequences might rather ask what the proportion of the *entire population* are long-term poor – indeed, for studying trends over time in economic vulnerability, that would appear to be a highly relevant measure. In other instances, we would rather want to know what proportion of the (at-a-given-point-in-time) poor are long-term poor. For example, if cross-sectional estimates of poverty are increasing,

we would draw other conclusions about both causes and consequences if this was due to an increasing proportion of long-term poor rather than an increase among those with short poverty spells.

A natural measure of durations among the "point-in-time-poor" is the *poverty history,* looking back from a given point in time (e.g., the interview date) and saying for how long the currently poor have been poor. Poverty histories are easy to understand and are in themselves correct, but easily give a misleading impression due to the right-censoring of the data, as many of those who are poor will continue in poverty (Bane and Ellwood 1986). Poverty histories will thus underestimate the length of spells. To account for this, one can look back *and forward* from a given point in time and measure concluded *poverty episodes* from the beginning to the end for those who are currently in poverty. Naturally, this requires long observation windows. As shown by Akerlof and Main (1981) for unemployment, average episodes are twice the length of average histories in the steady state (i.e., if the same macroeconomic conditions before and after the point of observation). Estimates of durations (histories and episodes) among the point-in-time-poor are rare in the literature. Bane and Ellwood (1986) estimated that over half of those poor at a point in time were in an episode of 8 years or more, while 10 percent were in a one year episode. Looking at histories, 25 percent had been in poverty more than eight years, and 24 percent only one year.

Another option is to summarize poverty experiences over a given period, accounting for multiple spells regardless of when their poverty spells started. For example, Duncan (1984, Table 2.1) finds that only 0.7 percent of the population (as estimated in PSID) were poor ten out of the ten observed years (using the official US poverty line), and Oxley, Antolín and Dang (2000) found that between 1 percent (Sweden) and 6 percent (US) of the population had been poor (<60% of median) for all the six observed years. This method is however highly sensitive to censoring and will almost inevitably underestimate the number of long spells. For example, to be poor for ten out of ten observed years, one must have entered poverty the first year, and all ten-year spells starting after the first observed year will be taken for shorter spells because of the right-censoring set by the time-frame. Rank and Hirschl (1999) take a different perspective by summarizing cumulative poverty experiences by age (20-85) among individuals in PSID 1968-1992. They estimate that 27 percent had experienced any poverty by age 30, and around half of the population had experienced it by age 65. However, these estimates are not based on actual poverty experiences, as individuals are only observed for parts of the age span, so estimates depend on assumptions about homogeneity in poverty distributions over different cohorts.

Data and the poverty definition

We use data from the STAR database, administered by Statistics Sweden for the Swedish Institute of Social Research at Stockholm University. The analyses in this article include all individuals aged 16 to 75 who ever lived in Sweden during the period 1990-2007 and who do not live with parents.

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 monthly 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.

Household incomes that are zero or negative (0.8 percent of the population) have been coded missing for reliability reasons. True zero incomes are very unlikely in Sweden due to the many available cash benefits, and an unknown proportion of those with zero incomes do no longer live in Sweden.

The development of cross-sectional poverty in Sweden 1991-2007 shows a striking divergence in trends between different poverty measures. When poverty is defined in relative terms (as a proportion of median income), poverty is pro-cyclical: it decreased during the recession but has since then gradually increased over the period. However, when poverty is defined either as (1) having an income below a line defining a constant consumption capacity (2) lacking cash margin or (3) receiving social assistance, it increased during the recession but has since decreased; poverty in such "absolute" terms being lower in the 2000's than in 1991, before the recession (Jonsson et al 2010). Two factors lay behind this divergence in trends: Real incomes have increased and so has income inequality. That is, real incomes have increased more for those with higher incomes. The level of absolute poverty has decreased as a consequence of the increased real incomes, while the level of relative poverty has increased as a consequence of increased income inequality.

In this paper, we have chosen to use an absolute poverty measure that defines a constant purchasing power over time. We find the relative measures less suitable for dynamic and trend analysis, as people may enter poverty if others' incomes increase even though their own purchasing power remains constant (or even increases). Similarly, they may remain in poverty even though their real incomes increase substantially, if only others' real incomes increase even more. Our poverty definition is based on a calculation of the poverty line defined as the norm for social assistance in 1985 (Jansson, 2000; Socialstyrelsen, 2008).[3] 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, radio and TV, daily paper, telephone, insurances). This 'basket' is adjusted annually with the consumer price index to compensate for inflation and deflation, and the poverty line is defined as this basket plus estimated costs for housing and journeys to and from work, depending on region of residence, year, and household composition. Individuals are here defined as poor if their annual household disposable income falls below the absolute poverty line. One-year spells out of poverty are not considered as exits from poverty in the analyses if income during that year is below 110 per cent of the poverty line. We analyze poverty on the individual level, but because disposable household income is used to define poverty all persons in the same household in a given year have the same income and the same poverty status.

As has been touched upon already, the handling of censored spells is a complex and important issue, and some measures are more sensitive to censoring than others. Censoring can be of two types: left-censoring, which means that the start of a spell is not observed, and right-censoring, which means that the end of a spell is not observed. Censoring can occur because of the natural time-frames set by the data (some persons are still poor when the observation period ends, or were poor already when the observation period started), or because persons entry the dataset late or drop out of the data.

[3] Poverty levels and trends are virtually identical if the social assistance norm for more recent years is used. We use the 1985-based measure as it is a standard measure used also in other Swedish studies (e.g., Jansson, 2000; Socialstyrelsen, 2008).

Drop-out from the data, or panel attrition, has different meanings in register data as compared to survey data: In register data, people can only drop out because they leave the population of interest (in our case, because they die, emigrate or reach the upper age limit), but in survey data people can choose to drop out, meaning that a large fraction of those who leave a panel are still in the population of interest but we do not know their true poverty status. The consequences of censoring and different handling of it will be discussed in connection to the results.

Results

Outflow from poverty

The most common type of dynamic poverty analysis gives the proportion that remains in poverty a certain number of years after the start of the poverty spell. Figure 1 shows this analysis for the period 1991–2007, where we have taken the average of the proportion who remains each (duration, not calendar) year after the poverty entry – in essence, Figure 1 represents the typical outflow from poverty for the period in question.[4] For each duration, the average proportion is calculated among all those who entered poverty in 1991-2007 and who still remain in the Swedish population at this duration. 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 1 demonstrates that outflow is in general rather quick: Around half of all spells end within a year. After four years, on average around 20 percent remain in poverty, and after ten years only around five percent remain.

[4] With the provision that the estimate for the first year after inflow (value 1 on the x-axis) is based on seventeen inflow years (1991-2006), the estimate for two years is based on sixteen entry years (1991-2005), and so on until the last, seventeenth, duration year which is represented by the inflow year 1991 only.

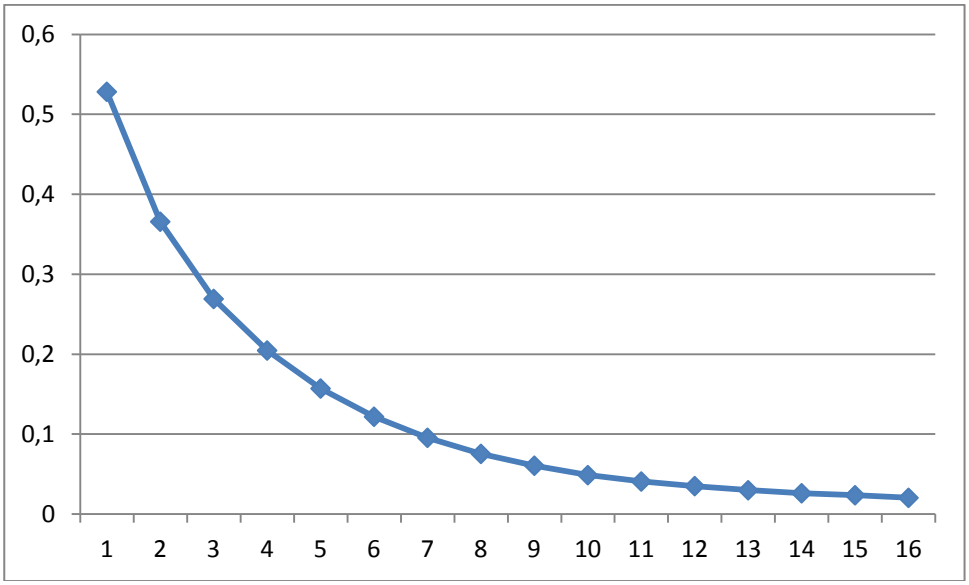

Figure 1. Outflow from poverty
Proportion of inflow cohorts that remain in uninterrupted poverty by years since inflow. Cohorts with inflow years 1991 to 2006. Persons 16-75 in own households.

The pattern shown by the outflow analysis in Figure 1 is the familiar one seen from other countries: most poverty spells that start during the period are brief, and only a small proportion of those who enter poverty stay in poverty over many years. This analysis is relevant if we wish to predict the probability to remain in poverty among those becoming poor. In addition, the analysis is a natural starting point for multivariate analyses aiming to understand which factors affect the probability of poverty exits. However, the focus of the inflow approach is exits in normally one (occasionally several) inflow cohorts, which leads to three kinds of problems: the first is a selection problem, the second a "scale" problem, and the third is a re-entry problem. The selection problem indicates that the method is particularly sensitive to the historical time-point in which the entry year is chosen: It is highly likely that the characteristics of those who entry poverty differ depending on macro-economic conditions for example (one risk being that those who enter during good times are negatively selected on unobserved variables). In Figure 1, we have merged many inflow cohorts to minimize such risks. The scale problem means that the sheer size of the inflow population – the choice of which is most often constrained by the access to data, and thus theoretically arbitrary – will affect the implications of the results. For example, imagine that the durations are identical for two inflow cohorts, but one of these cohorts is bigger than the other – this would mean that more people remain in poverty after a given duration since poverty entry. Clearly, the inflow cohort approach, while very commonly used, can neither answer questions about durations in the population of all poor, nor in the population of both poor and non-poor. The third problem, that of re-entry into poverty, means that studying only outflow underestimates the number of total poverty years over a given period. The second and third problems will be dealt with in the following.

Poverty histories and episodes

When expressing poverty durations in relation to all poor in a year or the total population in a year, estimates depend strongly on whether durations are defined as histories (i.e., right-censored) or as

completed episodes. Table 1 shows averages of both measures over the years 1994-2003[5], and the difference is dramatic: On average, 24 percent of the poor in a given year had been poor at least five years (poverty history), but 51 percent of the poor were in a spell of five years or more (poverty episode). Similarly, 37 percent of the poor were in their first year of poverty, but only 18 percent were in a one-year episode. This is because many of those with a one-year history of poverty will continue in poverty one or more years after the observation year. Expressed as a proportion of the entire population, 4,4 percent have episodes of five years or more, but only 2,3 percentage units have a poverty history of five years or more.

Table 1. Average yearly proportion in poverty spells of different length, 1994-2003 (average yearly poverty is 9,6 percent of the population)

	Spell length				
	1	2	3	4	5+
	Proportion of the population				
Poverty histories	0,036	0,018	0,012	0,008	0,023
Poverty episodes (non-censored)	0,015	0,011	0,009	0,008	0,044
	Proportion of the poor				
Poverty histories	0,37	0,19	0,12	0,08	0,24
Poverty episodes (non-censored)	0,18	0,12	0,10	0,09	0,51

Re-entry to poverty

Outflow from poverty is in many cases temporary, and ignoring multiple spells therefore leads to an underestimation of the concentration of poverty experiences to certain persons. In Figure 2 we complement the results in Figure 1 by showing the extent of re-entry into poverty. We define re-entry as having had at least one new experience of annual poverty in a given period – far from all of these new poverty spells consist of new uninterrupted poverty spells. Figure 2 is constructed as Figure 1, but shows the duration of non-poverty after poverty exit (year 0). We can see in Figure 2 that after five years, 35 percent of those who exited poverty have experienced it again, and after twelve years half of those who escaped poverty in 1991-2006 have fallen back in again.[6]

[5] We use this observation period because1994 is the first and 2003 the last year that we can classify people into five year episodes (as we have data from 1990 to 2007).

[6] The reason that the curve is not smooth is that we average over a number of exit years that, due to business cycle effects, differ in the rate of re-entry (see Author 2012).

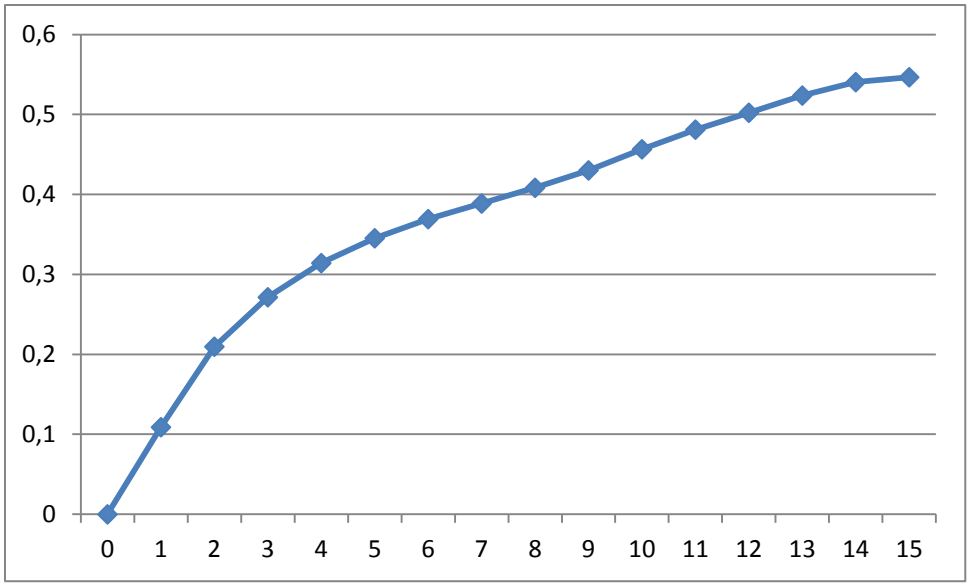

Figure 2. Re-entry to poverty

Cumulative experience of poverty after poverty entry

The high re-entry rates are primarily interesting as a step towards understanding the total experience of poverty over multiple spells. We can synthesize the results on outflow and re-entry by counting the cumulative number of years in poverty (with or without interruptions) within a given time after the first observed poverty entry. In Figure 3 we set the observation window to ten years after the first observed inflow, and it is clear that this measure suggests much more rigidity in poverty status than the single-spell persistence in Figure 1. Figure 3 reveals that 29 percent of those who enter poverty experience only this single year in poverty in the following ten years, but another 29 percent experience at least five years of poverty, in one or multiple spells during the following ten years.

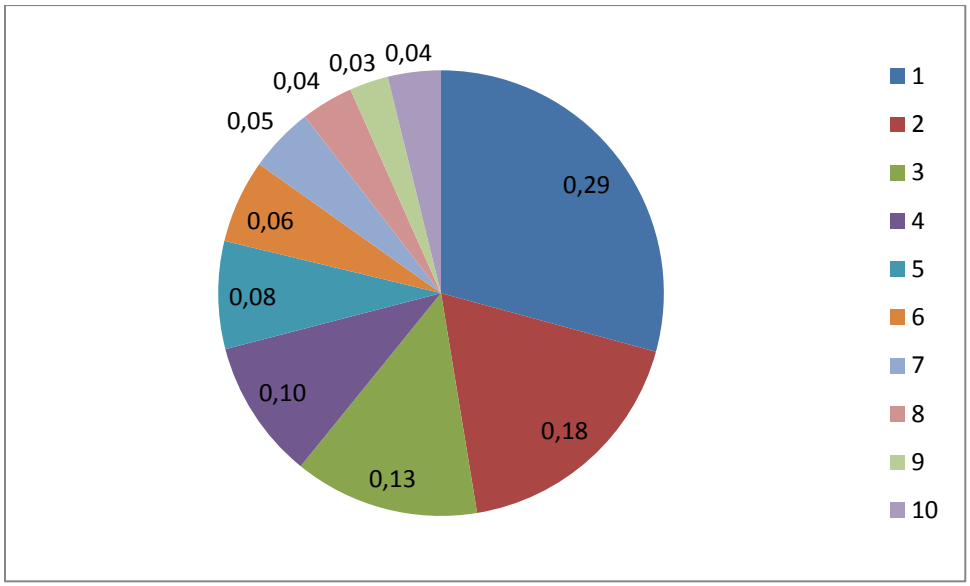

Figure 3. Total number of years in poverty 10 years after first observed poverty entry

Multi-spell poverty in the population

The maximum period that people in our data can be observed is 18 years (1990-2007). Figure 4 shows the accumulated number of calendar years in poverty among all those who have been observed during all 18 years. This means that only those aged 16 or over in 1990 are included, and no immigrants arriving after 1990, since these cannot be observed for all the 18 years. The STAR population (Swedish population aged 16 or over) in 2007 is 6,394,266, and 70 percent (4,423,532) of these have been observed all years since 1990. Out of this population, 72 percent had no calendar year with incomes below the poverty line over the 18 years, which means that 28 percent were touched by poverty at least one calendar year out of 18. Only 9 percent of the population, or 33 percent of those who were ever poor, were poor only for one year. Out of the population, 8 percent were poor 5 years or more, and 2.5 percent were poor ten years or more. Those who were poor 10 years or more were 9 percent of all who were ever poor in the population, but as they were poor for so long, their time in poverty was 29 percent of the total number of years spent in poverty in the population. And correspondingly, those who were poor only one year were 33 percent of the ever-poor but their years in poverty were only 9 percent of all years spent in poverty.

Although 18 years is a long period of time, it must be kept in mind that the sum of poverty experiences would increase if more observation years were added, and the proportion with no poverty experience would decrease. A further downward bias comes from the fact that Figure 4 includes only those who have been in the population for the entire period 1990-2007, so young people are underrepresented and immigrants who came from 1991 are not included, and these two groups are over-represented in poverty.

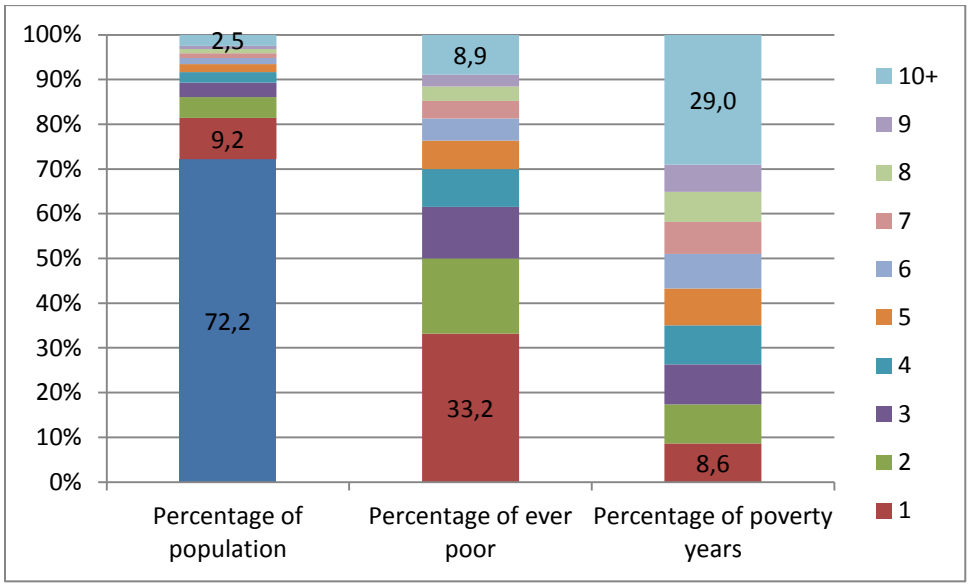

Figure 4. Accumulated poverty experience for the population observed all years 1990-2007, as a percentage of 1. Population, 2. Ever-poor and 3. Poverty years. N=4,423,532

Poverty concentration

From Figure 4, it is clear that the distribution of poverty experience is heavily skewed: A small proportion of the population bears a large proportion of the time in poverty. This skewness can be

visualized more comprehensively by fitting Lorenz curves. Such curves are common in the description in income inequality, but can be used to show inequality of other outcomes, such as poverty years. Figure 5 gives the cumulative proportion of all poverty years on the x-axis and the cumulative proportion of all individuals on the y-axis, and the diagonal gives a hypothetical reference point which would hold if all had equal numbers of years in poverty (i.e. if there was complete "democratization" of poverty experiences). The population is the same as in Figure 4, i.e. all individuals who were in the population during the entire 18-year-period, and the total sum of poverty years is for this population during this period. The upper curve relates the distribution of poverty years to the entire population, while the lower curve relates it only to those who have experienced some poverty during the period. As in Figure 4, we see that all poverty years are accounted for by 28 percent of the population, while 72 percent never experience poverty during this 18-year period. Figure 5 tells us that the distribution is highly unequal, and that the burden of poverty is far from equally shared: 50 percent of all poverty years were borne by 5 percent of the population, which equals 20 percent of those who had some experience of poverty, and 80 percent of all poverty years were borne by 13 percent of the population (38% of the ever-poor).

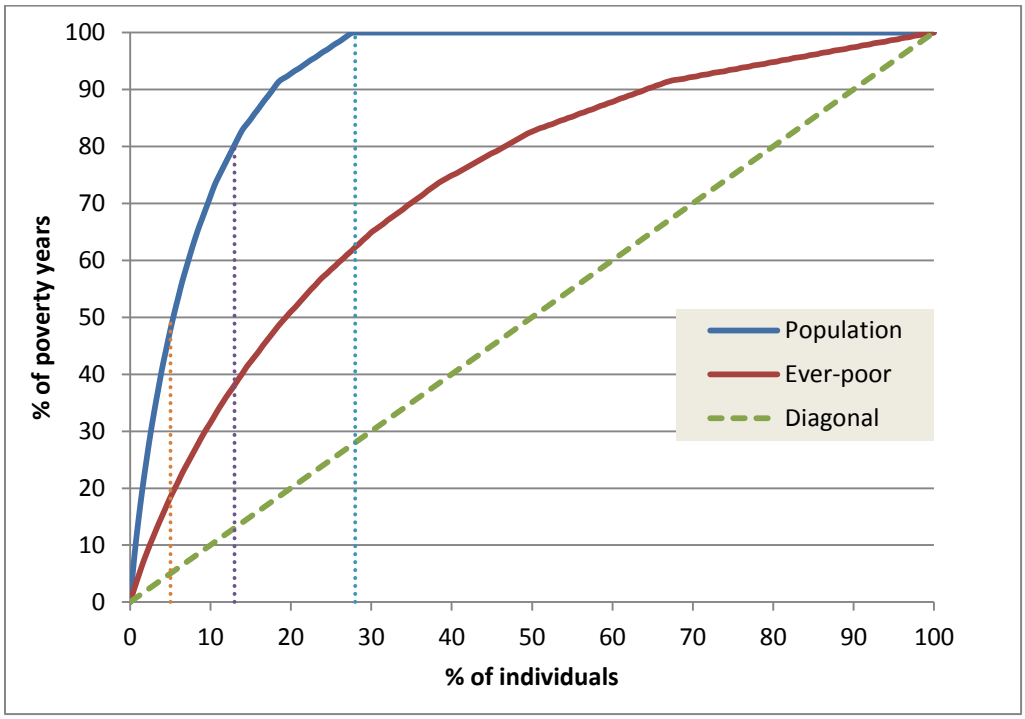

Figure 5. Lorenz curve. Cumulative proportion of all poverty years by cumulative proportion of all individuals in the population (blue line) and among ever-poor (red line)

Conclusions

Without much discussion, the poverty dynamic literature has gravitated towards a heavy focus on the exit rates of (arbitrarily chosen) inflow cohorts, with the normal finding being that only a small fraction of those who enter poverty remain in poverty for long spells. This has contributed to the theoretical view that poverty is "democratized" and "individualized" (Leisering and Leibfried 1999, Beck 2001). According to this thesis, poverty is a widely shared risk that varies within individual life

courses rather than between persons, and affects most people now and then rather than some people both often and for a long period of time.

We address the issue of poverty dynamics anew, by using Swedish population data which overcome most problems plaguing this research field: small n:s, bad attrition, low response rates, and short observations windows. We replicate the common finding that most poverty spells are brief: Around half of all spells end within one calendar year. However, we argue that while this may be true, it is an incomplete portrayal of poverty dynamics. Our further analyses show that these brief spells make up just a small fraction of all poverty experienced in the population over the 18-year period that we study: only 9 percent of all years spent in poverty were contributed by persons that have no more than one calendar year of poverty. The burden of poverty and its individual and societal costs lies not primarily on the short-term poor, but on the persistently poor: In fact, 5 percent of the population account for 50 percent of all poverty years in our data. In the scientific literature on poverty, it is often emphasized how much more concerned we should be with long-term poverty because of its detrimental consequences for individuals (and probably for society): here, we find compelling evidence to suggest that this concern for the long-term poor can also be mustered from an analysis of the distribution of poverty durations in the population.

Between the persistently poor and the briefly poor lie the recurrently poor. Although some presume that it is worse to have a given number of poverty years in one long spell than in several short spells, there is no convincing argument for this. Accounting for multiple spells adds further to the image of persistence rather than transience: While half of all spells end within one calendar year, merely a third of those who experience poverty have only one year in poverty over a ten-year period. This is a consequence of high re-entry rates, and testifies to the importance of considering multiple spells.

So while outflow is swift for many, most people in poverty at a given point in time are in fact in a long spell. We find that while only 15 percent of those who entered poverty were poor for a continuous period of at least five years, 51 percent of those in poverty in a given year were in an episode of five years or more. This pattern is similar to that found by Ellwood and Bane in 1986. To most people, these results appear paradoxical and counterintuitive, so what should we make of them? Is poverty long or short, persistent or transient?

The principal difference between the “ever-poor” and the “point-in-time-poor” perspective on episodes is the weight given to poverty spells versus poverty years. The “ever-poor” approach gives the proportion *of all spells* during a period that are of a certain length, which means that each spell has a weight of one, regardless of its length, and the “point-in-time” poor (episodes) gives, in effect, the proportion *of all poverty years* during a period that are spent in episodes of a certain length. This is because long episodes will have a larger likelihood to be observed in any given year, so spells are in effect weighted by their length. The ever-poor and the point-in-time-poor perspectives are thus both correct *per se*, but as their results appear contradictory the relevant questions that they inform us about also differ in a central way. The difference is the weight given to time in poverty. Paradoxically, the dynamic literature has tended to miss the importance of time in poverty because of its strong focus on entry cohorts and use of the “ever-poor” perspective.

The developments in the dynamic research on poverty in the 1980’s were preceded by similar developments in the research on the dynamics of unemployment. At the end of the 1970’s, several economists (e.g. Clark and Summers 1979, Akerlof and Main 1981) expressed a clear preference for

the point-in-time perspective, or what the authors called an "experience-weighted" approach where each year, instead of each spell, has a weight of one: "For the application of economic theory to the problems of unemployment, the less misleading statistic to our mind is not the length of the average spell of unemployment but, rather, the average length of spell in which time unemployed is spent. The existence of many short spells is of little consequence if the very shortness of these spells means that they do not contribute much to total unemployment." (Akerlof and Main 1981:1010). This, we believe, goes for poverty as well: While the ever-poor perspective gives a good image of the distribution of poverty durations *for someone who enters poverty*, it is misleading if it is understood as the distribution of poverty durations *for those who are in poverty*. If our interest is in the poor, and not only the newly poor, measures that are experience-weighted, such as concluded episodes among the point-in-time-poor, are more appropriate as they give the more intuitively correct picture of poverty length.

Although it is crucial to distinguish between the ever-poor and the point-in-time-poor perspectives, it is also important to keep in mind that the most relevant questions often go beyond both these perspectives and ask for the extent of long-term poverty in the population. The distribution of durations among the poor is not very informative without some reference to the entire population of poor and non-poor – the social policy relevance of the latter being obvious. We find that over 2 percent of the population in a given year have spent five years or more in poverty (poverty history), but if we take into account that many will continue in poverty after the year in question, we find that over 4 percent of the population in a given year is in a poverty episode of 5 years or more (poverty episodes). This is a modest-sized group, but as noted above, they stand for a very large proportion of all poverty years. From Figure 5, it is clear that the distribution of poverty is highly unequal, with 72 percent of the population not experiencing any poverty at all, and a very small fraction experiencing long periods of it. Poverty, just like wealth, is concentrated rather than widespread.

Our analyses tell us quite convincingly that persistence, not transience, is the dominating experience in the group of poor that a society faces in a particular year. Most poverty consists of relatively few persons who are poor for a long time. The fact that around half of those who ever enter poverty exit it within a year shows that many have been or will be touched by poverty briefly at some point, but the briefness of their experiences makes this group less relevant for policy purposes. It is also questionable whether this group is of much theoretical interest. It may be argued that if many people have experienced or believe that they may experience poverty, this may lead to increasing support for anti-poverty policies (Rank and Hirshl 1999) and possibly also increasing empathy with the poor. However, the persistently poor will have a very different situation of hardship than the temporarily poor, so it is unlikely that there would be a sense of shared experience.

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