Handbook on Research on Economic and Social Well-being

Poverty over time – Empirical findings

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Introduction

The modern analysis of poverty began more than a century ago by quantifying the extent of this phenomenon in a cross-section of individuals in a particular territory. Since the pioneering works by the turn of the 19th Century by Charles Booth and Seebohm Rowntree, referred to London (1889) and York (1901) respectively, many studies have extended the analysis of poverty all over the world. This literature boomed during the last decades mostly because there was an increasing concern on poverty, and its fight was included in the political agenda. Lyndon Johnson's War on Poverty in the United States (US), the Lisbon strategy and Europe 2020 agenda in the European Union (EU), or the UN Millennium and Sustainable Development Goals are outstanding examples of this. In any case, the rapidly growing literature on the analysis of poverty was possible thanks to the availability of more data, mostly cross-sectional, and the development of a more rigorous conceptual and methodological framework on poverty measurement.

Poverty was identified, from the very beginning, as a dynamic phenomenon and therefore its analysis over time became a priority. The way of introducing time in the measurement of poverty has been diverse, the most obvious and common one is to build a series of poverty indices that allow for the analysis of poverty trends in time based on two or more cross-sections of individuals. This simple approach allows tracking the relevance of poverty over time but, at the same time, conceals relevant issues regarding the dynamic nature of poverty as a time-varying state for each affected individual. Indeed, many people may fall into poverty at any time due to a variety of factors affecting her household, such as a change in their labor market outcomes (e.g. losing a job), in their composition (e.g. a divorce, a new born-child) or in their benefit eligibility (e.g. losing unemployment compensation). The likelihood of being in poverty varies across individuals, and also along the life cycle, something that was already suggested by Rowntree (1901). Consequently, a cross-sectional poverty rate does not provide us with any

information about the flows of individuals in and out of poverty. In fact, the change in the poverty rate between two given periods is just the net result of entries and exits of poverty. Thus, a stable poverty rate in time is compatible with a high and a low rotation of individuals in and out of poverty.

Given the dynamic nature of poverty, a relevant part of the literature has focused on developing an inter-temporal analysis of the phenomenon in a variety of different ways. In fact, in recent times there is clearly an increasing research interest in this particular field given the recent publication of various books, reports, and monographs in journals and the organization of some specialized conferences. The main research concern in this field is to discover the main causes of poverty and therefore identify which policies may be more effective in reducing it. There is a wide consensus in the literature on the heterogeneity of the poverty phenomenon in terms of the individual inter-temporal pattern leading to a fundamental distinction in the causes of poverty and, consequently, in the best alleviating policies. The main way the literature has dealt with this heterogeneity has been trying to distinguish between poverty that represents a temporary state (called transitory, temporary o transient poverty) from poverty representing a long-term or deep lack of wellbeing (persistent, permanent or chronic poverty). There are different reasons why making such a distinction is adequate. Both types of poverty are of a clear different nature, with different implications in terms of the wellbeing of the poor. While increasing human and physical assets (as well as the returns to those assets) would be a more effective policy in reducing chronic poverty, insurance and income-stabilization schemes would be more appropriate in order to deal with transitory poverty (e.g. Jalan and Ravallion, 1998).

The literature on poverty over time has been in constant development since the end of the seventies trying to find adequate answers to three main questions. The first one of them is to provide an adequate measure of total inter-temporal poverty observed along a given time span and give some dimension of the relevance of chronic and transitory poverty within it. In fact, in recent years the issue on how to actually measure total inter-temporal poverty has become most prominent in the research agenda and still remains an open question nowadays with an incipient and growing empirical literature. The second one is to identify the main characteristics associated with each inter-temporal poverty type and its major determinants and consequences on individual welfare. Finally, the key question is to identify which are the most effective policies in fighting against the poverty phenomenon by adequately focusing each alleviating policy on the individuals with a particular time poverty profile.

The analysis of poverty in a cross-section of individuals basically requires two stages (Sen, 1976). The first one is identification, when the researcher needs to choose in which dimensions individual wellbeing will be assessed based on the available data. This stage usually requires fixing a poverty line that allows separating the poor from the non-poor population. The second stage is aggregation, when the researcher must summarize the information collected at the individual level into an index of poverty for the whole society. In measuring poverty over time, the literature also needs to deal with these two stages, but in a more complex way than when only one single period is involved, due to the need of considering different possible inter-temporal well-being patterns. Indeed, there are at least three fundamental methodological issues involved in the analysis of dynamic poverty.

First, regarding the identification of the poor, in the same way as when approaching the measurement of static poverty, the most common choice is to use the information on needs-adjusted household income or consumption over a specific accounting period (a month, a year) and to identify the poor using the poverty line (either relative or absolute) that is most common in each geographical context, even if there is an observable increasing interest in exploring poverty in a multidimensional perspective. Note, however, that the implications of this choice in a dynamic framework are significantly larger than in a static one given that, in this inter-temporal context, the intrinsic variability of each variable in time and the existence of measurement error will imply changes in the value of the reference variable which do not really reflect any changes in wellbeing, thus leading to the risk of overestimating transitory poverty. In this line, Clark and Hulme (2010), for example, claim that wellbeing measures based on a more holistic concept, such as literacy, nutritional status or housing quality would produce a significantly different picture than when using income or consumption. Additionally, the identification process here may involve a two-fold strategy, because of the variability in wellbeing over time, apart from identifying the poor in each period, the researcher often wants to separate the chronic from the transitory poor, or even to compute an individual inter-temporal poverty index as the basis for a subsequent aggregation across society as a whole. Given the large number of possible different inter-temporal poverty trajectories, it is not straightforward which are the particular profiles that are to be considered as being part of chronic poverty, and that usually depends strongly on the approach followed and on the available data.

Second, the aggregation stage of poverty is also more complex in the dynamic framework than in the static one because one needs to summarize in a single index all poverty profiles over time. This implies dealing with fundamental questions such as the extent to which people are able to smooth their consumption along a time span, whether consecutive years in poverty should be treated differently to non-consecutive ones, or whether any discount factor should be used when aggregating poverty from different years. Most of the literature has overcome this lack of an appropriate conceptual framework by focusing on the incidence of poverty and poverty flows, or by averaging across individuals. Surprisingly, it was not until recently that the measurement of inter-temporal poverty has become a central issue in the discussion.

Finally, the need for inter-temporal individual information in a dynamic analysis is clearly more data demanding than in any conventional cross-sectional analysis. Hence, this strongly restricts the set of databases available for undertaking this type of studies. Most researchers use panel data with a variety of time spans, sample sizes and designs. The main problem here is the limited availability of this kind of data due to their high collection costs. In some cases, in order to reduce these high costs the length in time covered by the panel is short or the number of observations sampled is relatively small. Additionally, panels can be problematic due to sample bias arising from high attrition rates, an inherent difficulty of tracking households over time, or linked to migration flows during the observation period. Not surprisingly, the empirical expansion of this field has taken place in a parallel way to the increasing availability of appropriate data.

A few outstanding panels in some mostly developed countries have been tracking a significant number of households for long time spans and, therefore, have become the main source of empirical analysis of poverty dynamics in the world. The first of these was the Panel Study of

Income Dynamics (PSID) for the US collected by the University of Michigan since 1968.[1] In 1984, the Deutsche Institut für Wirtshaftsforschung (DIW) started collecting data for The German Socio-Economic Panel (SOEP) and, somewhat later, in 1991, a similar panel was initiated for the UK by the Institute for Social and Economic Research (ISER): the British Household Panel Survey (BHPS).[2] Further, in the beginning of 1990s the European Statistical Office, EUROSTAT, decided to launch the European Community Household Panel (ECHP), an eight-year multi-country panel survey including information on 15 European Union countries which provided extremely valuable information in order to analyze income dynamics in the European Union at that time. Unfortunately, EUROSTAT did not continue to collect this dataset (it only covers the 1994-2001 period) and in 2004 the ECHP was replaced by the European Union Survey on Income and Living Conditions (EU-SILC), a panel survey of a much more limited scope that consists of four-year rotating data. Yet this survey is larger than the ECHP given that it expanded its sample including information from the new EU and associated countries.

With the exception of ECHP and EU-SILC, panel surveys all over the world have been mostly used in poverty dynamics research for single-country studies so that there is a considerable lack of cross-national research in the field. Some projects that have tried to mitigate this problem by collecting comparable information from several heterogeneous panels are the Panel Comparability Project (PACO) at former CEPS/INSTEAD (now LISER) that was run only for a few years, and the Cross National Equivalent Files (CNEF) prepared since 1970 by Cornell University, first, and later by The Ohio State University[3]. Despite these difficulties, a few studies have been able to provide some cross-country comparative analyses.[4]

In the following sections of this chapter we are going to summarize the answers to the most relevant questions previously posed that have been provided by the literature on poverty over time based on a large variety of empirical findings.

1. The relevance of chronic and transitory poverty

Some theories popularized during the 1960s had spread out the idea of poverty as a permanent state in both developing and industrialized countries, and the poor as an isolated population living their own subculture.[5] Contrary to these ideas, a large empirical literature since the late 1970s has confirmed, in a variety of ways and for different geographical areas, the existence of significant flows into and out of poverty. Notwithstanding this continuous rotation within the poor, the literature has also identified that a significant subpopulation suffers poverty

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[1] Other panel data that have also been used in the US are the National Longitudinal Surveys (NLS, since 1979) or the Survey of Income and Program Participation (SIPP, since 1983 with varying panel durations).

[2] Since 2009 this panel has been incorporated in the new and large Understanding Society panel survey for the UK undertaken by the same institution.

[3] This project includes equivalently defined variables for the mentioned PSID, SOEP and BHPS plus the Household Income and Labour Dynamics in Australia (HILDA), the Canadian Survey of Labour and Income Dynamics (SLID), the Swiss Household Panel (SHP), the Korean Labor and Income Panel Study (KLIPS) and the Russian Longitudinal Monitoring Survey (RLMS-HSE).

[4] Alternatives to the use of panel data, which will not be discussed in this survey, are the use of retrospective information available in cross-sections, the construction of pseudo-panels that follow several cohorts of individuals over time, and the use of static proxies of chronic poverty (severe poverty, multiple deprivations in relative stable dimensions, etc.).

[5] Outstanding examples are Oscar Lewis' "Five Families: Mexican Case Studies in the Culture of Poverty" (1959) and Michael Harrington's "The Other America: Poverty in the United States" (1962).

persistently or recurrently. Thus the fact is that the poverty phenomenon can only be adequately understood analyzing its dynamics and it is crucial to be able to quantify these phenomena in order to identify different poverty profile determinants, consequences and, therefore, establish which policies are more likely to be most effective in each case. Let us highlight first the main findings regarding the quantification of these flows and then go into more detail regarding the causes and consequences of different poverty profiles in the next section.

1.1 Empirical evidence on poverty dynamics

Poverty flows into and out of poverty

The most striking results regarding poverty flows came from the analysis of the time spent in poverty applying survival analysis. In their classical paper, Bane and Ellwood (1986) showed that most poverty spells in the US are in fact quite short.[6] Using data from the PSID for the 1970s and the US official definition of poverty they estimated that almost 45% of new poverty spells are expected to end after one single year. Further, about 70% will end just after three years and no more than 12% of these new poverty spells are expected to last over nine years. Several studies have extended this kind of analysis to other countries.[7] For example, Jenkins and Rigg (2001) estimated that, using the 60% of the median poverty line and the BHPS during the 1990s, a 54% of new entrants to poverty manage to leave after one year in the United Kingdom (UK). This percentage of leavers grows to almost 80% after three years, while only about 8% of these new entrants remained poor after a seven-year period. Therefore, these authors results draw a very similar pattern of poverty persistence in the UK compared to that previously obtained for the US, "one of relatively short spells for the majority, but relatively long spells for a significant minority" (Jenkins and Rigg, 2001, p. 78).

A few studies have shown the actual variety in individual inter-temporal poverty patterns across countries, moreover due to data limitations unfortunately their results are generally based on short panels.[8] For example, according to Fouarge and Layte (2005), the proportion of new spells expected to be finished by the first year in western EU countries during 1995-98 (using the 60% of the national median as a poverty line) was found to vary between 45% of Portugal or the UK, and 55-56% in Belgium, Spain and Denmark. After three years, the proportion of spells that are expected to have ended ranges between 72% in France and 79% in Denmark according to the same paper.

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[6] A poverty spell is defined as "beginning in the first year that income was below the poverty line after having been above it, and as ending when income was above the poverty line after having been below" (Bane and Ellwood, 1986, p. 7). In order to overcome potential measurement error, these authors eliminated from their analysis one-year spells either into or out of poverty if they either began or ended with an income change that was less than one-half the needs standard.

[7] Examples of other specific country studies are Stevens (1994, 1999) for the US (see Cellini, McKernan and Ratcliffe, 2008, for a survey on research for this country), Devicenti (2001) and Jenkins (2000) for the UK (see Smith and Sue Middleton, 2007 and Jenkins, 2011 for reviews of research on this country), Addabo (2000) for Italy, Eberharter (2001) and Biewen (2006) for Germany, Finnie and Sweetman (2003) for Canada or Cantó (2002) and Bárcena and Cowell (2006) for Spain.

[8] Outstanding examples of cross-country comparative studies are the pioneering works by Duncan et al. (1993, 1995). More recently, other similar studies have been undertaken by Oxley, Dang and Antolín (2000), OECD (2001, 2008), Whelan, Layte and Maître (2002, 2003), Fouarge and Leyte (2005), and Valletta (2006) among others.

In general, high values of poverty entry and exit rates every year show that there is a large rotation within the poor in a particular country. For example, Valletta (2006) analyzing the CNEF for the 1990s based on equivalent disposable income reported during six years and a poverty line fixed at a conservative 50% of the median, shows that in Canada and the US, on average, 4.5% and 5.5% of the non-poor population falls into poverty from one year to the next. These percentages are slightly smaller in the UK and Germany (3.8% and 3.1% respectively). Similarly, a relatively large percentage of the poor are able to leave poverty the following year even if there are large differences between countries: 55% in the UK, 42% in Germany, 37% in the US and 32% in Canada. Mean spell duration over the whole period analyzed (a biased estimate of the true expected spell duration) is lowest in the UK (1.6 years) and largest in Canada (2.6 years), with intermediate values in Germany and the US, 1.9 and 2.1 respectively. Interestingly, poverty flows appear to be particularly sensitive to the business cycle but also show long-term trends. For example, Stevens (1994) showed this to be true for the US, finding that after conditioning on the business cycle, there was a declining trend in poverty exit rates for the period 1970-1987. In the same vein, Jenkins (2011) finds that the decline in poverty rates in the UK between 1991 and mid-2000s was driven by the rise in the poverty exit rate (that went from 30% in 1995 to 40% in 2003), although with fluctuations during the period, while the entry rate was largely stabilized around an 8-9%.

There are, thus, some country-specific profiles in terms of poverty dynamics. As Valletta (2006, p. 269) underlines: "In particular, individuals in Great Britain face relatively high entry and exit rates to and from poverty and a relatively low mean duration, while Canada has relatively low exit rates and high mean duration". Consequently, it is possible to assess the extent to which poverty is more or less persistent in each country. It turns out that poverty is more persistent in the US and Canada where the percentage of individuals who are poor all six observed years is 3.9% of the total population in the US and 3.5% in Canada which is in contrast with 1.4% in Germany and only 0.4% in the UK. However, it is important to note, as Bane and Ellwood (1986) did, that the long-term poor make a large part of the group of the poor at any given year.[9] This is the consequence of those in longer spells being more likely to be sampled as being in poverty in any given year. These authors estimated that more than a half of the cross-sectional poor in the US are in fact in a spell expected to last over nine years (and that about 26% of the poor had already been poor over nine years). As a consequence of this intense rotation within the poor each year, the proportion of population affected by poverty over a few years is much larger than the usual cross-sectional poverty rates indicate. For example, Valletta (2006) obtains that the proportion of ever poor individuals is approximately twice the average annual poverty rate in all four analyzed countries. This proportion of ever poor individuals ranges from 18% in Germany and 21% in the UK to 25% in Canada and 30% in the US. In the words of Rodgers and Rodgers (1993, p. 28) these findings using the Bane and Ellwood (1986) spells approach "reconciled the conflicting views of the 1960s (that poverty is mostly long term) and 1970s (that poverty is mostly short term) by demonstrating that a large percentage of those who are poor at a

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[9] In fact their approach was a criticism to earlier studies, such as Duncan (1984), Coe, Duncan and Hill (1982), Coe (1978), Rainwater (1981), that tabulate how many people were found to be poor for specific lengths over a fixed time frame (e.g. two out of ten years). Despite this limitation, this descriptive approach has also complemented the analysis of spell duration in more recent research.

particular point in time are in long-term poverty, but only a small percentage of the ever-poor population experience a long poverty spell".

This same type of cross-country exercise is undertaken in OECD (2008) for a larger group of countries (17 OECD countries) even if for a shorter time span (three years around the 2000s) based on income before taxes and after public transfers and using heterogeneous sources.[10] Placing the poverty threshold at the 50% of the median, this report found that the poverty exit rate was on average 40% (above 50% only in two countries: The Netherlands and Denmark and below 30% only in three countries: Canada, US and Ireland). The entry rate was on average about 5% (with the largest value in Australia and Spain: above 6%, and the lowest in Luxembourg, Germany and Austria: below 3%). The percentage of ever-poor population ranged from a 10% in Luxembourg to a 25% in Australia, and the proportion of persistent poor (all three-years-poor) was above a 7% in Australia, Greece, Ireland, Portugal and the US, but lower than a 2% in Denmark or The Netherlands.

Intense rotation within the poor has also been found in completely different economic contexts and also when absolute poverty lines are used. For example, Gustafsson and Sai (2009) estimated that in a sample of rural households in China during the early 2000s from the China Household Income Project (CHIP) data and according to the National Bureau of Statistics usual low income threshold, the poverty entry rate between two consecutive years is about 4% and the poverty exit rate is about 45-50%. Further, less than 4% of the rural Chinese sample was poor over three consecutive years, compared with a 16% of the sample that was ever poor. These numbers are similar to what has been obtained for developed countries using relative poverty thresholds. In contrast, Gaiha and Deolalikar (1993) using a panel survey of rural South India (from the International Crops Research Institute Semi-Arids Tropics, ICRISAT) obtained that 88% of the individuals in the sample were poor at least once during the nine years period between 1975/76-1983/84, with a high proportion (one out of four of them or 22% of the sample) being always below the poverty threshold. Indeed, in their literature review on poverty dynamics in the developing world based on 13 studies from 10 countries using heterogeneous data sources, periods and welfare measures, Baulch and Hoddinott (2000) show that the proportion of those ever poor over all considered consecutive years is generally lower than the proportion of those sometime poor, but they note that there is a high variability in this difference depending on the country considered.

The existence of intense flows out of poverty must not be misunderstood in the sense that it should not be perceived that poverty is no longer a problem. In fact, in most countries the quality of many poverty exits is very low and poverty recurrence is high. In the particular case of the US Stevens (1999) noticed that many exits out of poverty are only temporary, with people recurrently falling back into poverty after a short while: half of those leaving poverty return to it within the following four years. Jenkins and Rigg (2001) find a similar pattern in the UK and conclude that 30% of those leaving poverty fall back in poverty again within the following year, although they also notice that those who manage to stay out of poverty longer face a much

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[10] Previously, another two OECD studies analyzed a more restricted set of countries: OECD (2001) analyzes 12 EU countries (using the ECHP), the US (PSID) and Canada (SLID) over three years (1993-95), while Oxley, Dang and Antolín (2000) analyze six countries (Canada, Germany, the Netherlands, Sweden, the UK and the US) over a six-year period using various surveys and tax files.

lower risk of returning back to poverty (a re-entry rate of 7% after five years). Thus, these results underline the importance of considering a multiple-spell approach to the analysis of poverty dynamics, although it might be necessary to make some adjustments in order to deal with measurement error to prevent spurious interruptions of spells both in and out of poverty. Indeed, some studies have investigated in more detail how the length of spells in and out of poverty influence future poverty risk (e.g. Cantó, 2002, Fouarge and Layte, 2005, Biewen, 2006, Andriopoulou and Tsaglokou, 2011 or Arranz and Cantó, 2012).

Permanent income approach

In order to prevent considering as transitory poverty some small changes in income or consumption that are not economically relevant some studies use an alternative way of measuring chronic poverty. Rodgers and Rodgers (1993, p. 26, agreeing with Rainwater, 1981) claim that "longer income periods are better suited to understanding the nature of chronic poverty than shorter income periods" because permanent income (or the lack of it) is the principal influence on people's standard of living and style of life. Rodgers and Rodgers (1993, p. 31) define permanent income for *T* years as "the maximum sustainable annual consumption level that the agent could achieve with his or her actual income stream over the same *T* years, if the agent could save and borrow at prevailing interest rates". Thus inter-year income transfers are assumed to be feasible in order to smooth consumption (although there is evidence suggesting the existence of liquidity constrains among the poor, e.g. Jappelli, 1990). In practice in these papers, the interest rate is generally assumed to be constant and equal for borrowing and saving, and very often is fixed at a zero rate. In this setting, permanent income is commonly calculated as the mean income or consumption in the relevant period and then compared with average needs over that same period.[11]

The proportion of chronic poor based on permanent income, by construction, must be larger than when considering only those who are always poor, given that we are now including as chronic poor also those individuals whose income or consumption when out of poverty does not compensate the poverty gap when in poverty.[12] According to Valletta (2006) the proportion of chronic poor in the US and Canada increases using this new criterion from 3.9% and 3.5% (always poor) to 10.6% and 9.1% while in the case of Germany and the UK it increases from 1.4% and 0.4% to 4.4% and 2.9%. Interestingly, the differences between countries using this other measure become even wider.

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[11] Although permanent income is usually measured using the mean of the individual stream of income or consumption, such as in Duncan and Rodgers (1991), Rodgers and Rodgers (1993), or Jalan and Ravallion (1998), the literature provides a bunch of other similar approaches. For example, Duclos, Araar and Giles (2010) follow a normative approach using the equally-distributed equivalent (EDE) poverty gap. Others such as Duncan and Rodgers (1991) interpret permanent income as the individual-specific effect estimated using a fixed-effect regression of income-to-needs ratio on households' characteristics, while the error term captures the transitory component. Other studies have followed similar model-based approaches estimating permanent income, such as Gaiha and Deolalikar (1993), Stampini and Davis (2006) or Hasegawa and Ueda (2007).

[12] OECD (2001) denominates this chronic poverty as "permanent-income poverty". Alternatively, other studies extend chronic poverty based on duration relaxing the measure and classifying also as chronic poor individuals those who spend most, but not all, of the observation time below the poverty line. An outstanding example of this is the persistent-at-risk-of-poverty rate that Eurostat usually calculates and which is defined as the share of persons with an equivalized disposable income below the national risk-of-poverty threshold (60% of the contemporary median) in the current year and in at least two of the preceding three years.

The idea of permanent income in order to approach the measurement of individual wellbeing has inspired a whole branch of the poverty dynamics literature (the so-called *components approach*), especially fruitful in country-specific studies for developing countries, as another way to measure the relevance of chronic and transitory poverty.[13] In this approach the main focus is to decompose total poverty in its permanent and transitory components. Thus, transient poverty is what results from the variability of wellbeing in time while chronic poverty is what remains when this variability is eliminated. Chronic poverty is then the level of poverty one obtains when substituting, for each individual, the value of yearly income or consumption by that of the permanent income. The poverty index most commonly used in order to obtain total poverty is the mean for all years and all individuals of $(1 - y_{it})^2$, where y_{it} is the income/consumption for individual i at moment t, normalized for differences in demographics and prices, and relative to the poverty gap, thus y_{it} takes the value one for someone at the poverty line. This index is based on the squared poverty gap index, the Foster-Greer-Thorbecke index with parameter equal to 2, *FGT*(2), that apart from considering incidence also incorporates intensity and inequality to the measurement of total poverty. In a similar way chronic poverty is then measured by substituting y_{it} by the mean income or consumption for the whole time span and then transitory poverty is obtained as the difference between total and chronic poverty (Jalan and Ravallion, 1998).[14] Using this method, Jalan and Ravallion (1998) obtain for the 1985-1990 period that half of total poverty in rural China is chronic while the other half is transitory. Further, out of the total cross-sectional poor every year the percentage of chronically poor is over a 50% and was continuously increasing over the period.[15]

The method of this study has been largely replicated for a long list of mostly developing countries. For example, Mills and Mykerezi (2009) using Russian Longitudinal Monitoring Survey (RLMS) for the period 1994-2003 find a significantly lower percentage of chronic poverty: a 14% (37% when focusing only on 2000-03). However, Nega et al. (2010) or Haddad and Ahmed (2003), although based on very small samples, find chronic poverty to account for about two thirds of total poverty in four rural communities in northern Ethiopia (2004-06) and Egypt (1997-99).

1.2 Measuring aggregate inter-temporal poverty

All previous empirical studies on poverty dynamics reveal that there has been an increasing interest in the literature in summarizing the information provided by a panel of individuals and consequently in constructing consistent aggregate poverty measures that take into account individual income/consumption profiles across time. The main advantage of these measures is that they will allow for ranking different distributions in terms of poverty accounting for many relevant dynamic features at the same time. Despite this being a promising line of research

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[13] In a much earlier and different approach, Lillard and Willis (1978) estimated components-of-variance models to describe the evolution of earnings and income over time. Stevens (1999) and Devicienti (2001) conclude that, in comparison with other approaches, these components-of-variance models perform worse in fitting observed patterns of poverty in the US and the UK respectively.

[14] Rodgers and Rodgers (1993), however, compute the transitory component for each year and then average over all the periods.

[15] Duclos, Araar and Giles (2010) obtain, however, somewhat lower estimates for the transitory poverty component in rural China (around 23%), their calculations are based on the use of EDE poverty gaps and after correcting for the bias coming from using short panels.

(Jäntti and Jenkins, 2015), no consensus has been yet achieved regarding which characteristics should this inter-temporal poverty measure have, and thus the empirical evidence is still scarce and is mostly devoted to test different methodological points while the results are quite sensitive to the underlying assumptions made by researchers.

Following a *components approach* provides a family of measures that allow for the possibility of fully compensating low and high income periods, thus underlying the relevance of permanent income in poverty analyses. Moreover, the use of a permanent income concept summarizing individual inter-temporal profiles makes it particularly easy to construct a chronic poverty measure with similar properties as those usually required in cross-sectional poverty analysis, such as incidence, intensity and inequality among the poor. In this case, however, the corresponding chronic poverty measure is insensitive to the number of periods that individuals spend below the poverty line, and thus prevents researchers from identifying the role of poverty duration.

In contrast, most of the literature discussed in the previous section, that is usually referred to as the *spells approach* (e.g. Yaqub, 2000), emphasizes the duration of poverty in time, thus defining chronic poverty as that part of the phenomenon that lasts for all (or most) of the observation time span. The transitory poor are then all other shorter poverty experiences including those who suffer poverty only occasionally and those that experience it recurrently. However within this approach, most poverty analysis only accounts for either the incidence of poverty with different time patterns or the mean poverty spell duration. Thus, it does not consider either per-period poverty intensity or inter-temporal variability (inequality of per-period individual poverty gaps along time) in a composite measure of persistent poverty. This gap has been recently filled by a number of contributions aimed at integrating other dimensions of poverty such as intensity and inequality and even the possibility of income compensation within this duration-based approach. Nevertheless, this has been revealing itself as a quite difficult task, since the introduction of the time dimension in poverty analysis necessarily involves various value judgments which remain controversial: Is persistent poverty more severe than recurrent poverty? How should persistence in poverty be defined? When in lifetime is a poverty spell more harmful for wellbeing? To what extent incomes from non-poverty periods may mitigate the effects of poverty gaps? Is there a social preference for equality among individuals or among per-period individual poverty gaps?

Using an extension of the *FGT* index that allows incorporating per-period poverty gap intensity and inequality, Foster (2007, 2009) shows that chronic poverty in Argentina in early 2000s is about 91% of total poverty, a percentage that is higher than the usual results obtained by earlier approaches. The chronic poor account for 64% of the ever poor, while the percentage of poverty periods that belong to chronically poor account for 79% of the total. All of this suggests that income deficits are larger for the chronically poor. This group is identified by using a double cutoff, that is, those who spend a minimum number of periods below the poverty line (e.g. three out of four). Total poverty is defined to be the average of per-period normalized poverty gaps across all the poor, while chronic poverty is this average only across those identified as chronically poor. Taking advantage of the decomposability properties of these measures, the contribution of six Argentinian regions to overall chronic poverty is quantified. For example, the

Northeast of the country registers a high chronic poverty incidence given that even if only 15% of the population lives there it accounts for 26-28% of total chronic poverty.

Individual poverty trajectories

Foster's approach incorporates a duration cutoff and a preference for equality in an aggregate measure of chronic poverty in an easy and intuitive manner. However, poverty periods are treated equally regardless of whether they are in a longer or shorter spell given that once individuals are identified as chronically poor, all their per-period observations are assumed to be independent from each other. However, as mentioned above, the literature on poverty duration suggests that the longer a person has been poor; the lower is her likelihood of escaping poverty and the larger the lack of wellbeing. Not surprisingly, several papers have recently incorporated, in a variety of ways, the sensitivity of inter-temporal poverty to poverty persistence and have showed its empirical relevance.

Bossert, Chackravarty and D'Ambrosio (2012) use a similar extended *FGT* index to analyze inter-temporal poverty in the EU (ECHP, 1994-2001). Their approach introduces the sensitivity to spells duration in the aggregate measure by weighting each per-period poverty gap by the length of the spell to which that period belongs. Portugal and Greece turn out to be the countries with more inter-temporal poverty regardless of whether longer spells are penalized or not, while Denmark and Finland are among those with the lowest poverty. However, Austria and, particularly, Spain with a high level of temporary poverty, show less severe poverty once persistency is taking into account, precisely the opposite of what happens in Germany.

Gradín, Del Río and Cantó (2012) extend this approach, considering different degrees of sensitivity to duration, as well as incorporating a social preference for equality among individual poverty profiles rather than among per-period individual poverty gaps, used in the two previous approaches. This last feature is introduced in order to reconcile the way poverty is measured in a static and a dynamic framework, following Sen's ideas on the dimensions of poverty. The empirical results show that Portugal presents not only a higher proportion of population ever poor and a higher average duration and persistency, but also a higher inequality of poverty experiences among individuals, accumulating in one country all features that negatively impact on inter-temporal poverty. Denmark is the opposite case to Portugal because it accumulates all poverty-reducing features. However, again, it is not necessarily true that countries with high (low) levels of inter-temporal poverty will always increase (decrease) their index when inequality among individuals is considered: inter-temporal poverty is relatively less severe in Spain (due to a high rotation in poverty) while it remains roughly invariant at low levels in Germany.[16] Aaron and Ray (2012) have extended this approach to analyze intertemporal multidimensional deprivation in Australia.

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[16] Note that the last two inter-temporal poverty measures may be considered as generalizations of Foster's chronic poverty index, despite the fact that they do not explicitly use a time threshold to define who is chronically poor, they can be easily adapted accordingly. Furthermore, spells duration-based approaches may be affected by spurious income fluctuations around the poverty line due to measurement error. In the context of aggregate measurement of inter-temporal poverty, Porter and Yalonetzky (2012) show with data from rural Ethiopia that the use of fuzzy poverty lines makes Foster's (2009) and Gradín, del Río and Cantó's (2012) measures more robust.

Hoy and Zheng (2011) analyze lifetime poverty instead of inter-temporal poverty of a population over a number of years. In this context, poverty is assumed to be aggravated with poverty spells experienced at earlier stages of life based on evidence showing that it "not only affects consumption in later periods but also leaves an inherently deeper mark on lifetime deprivation" (Hoy and Zheng, 2011, p. 2545). Duration is also considered as the accumulation of (not necessarily consecutive) poverty periods in time.[17] In an empirical analysis using these and some of the previous approaches, Hoy, Thomson and Zheng (2012) analyze lifetime poverty in the US using the PSID from 1967 to 1992, showing the extent to which non-whites robustly suffer more chronic poverty than whites.

Finally, the role of spell duration on inter-temporal poverty measurement has been considered in a variety of other ways. Mendola and Busetta (2012), unlike Hoy and Zheng's view, consider that more recent spells are the most relevant and non-poverty spells have a particularly relevant role so they measure longitudinal poverty taking into account the distance between poverty periods. Calvo and Dercon (2009) instead introduced sequence-sensitivity by weighting each year's poverty gap by the gap in the previous year and used discounting factors to handle poverty gaps in different periods.

Income compensation over time

As noted in the previous section, duration-sensitive longitudinal poverty approaches generally assume that households cannot compensate (not even partially) the income deficit during poverty spells with income from other periods spent out of poverty. This is precisely the opposite idea to that of the *components* approach that does not consider duration assuming that a full compensation is actually possible. Different studies have proposed a variety of methodologies in order to introduce more flexibility in income compensation and have assessed the empirical relevance that different views about the role of compensation have on ranking inter-temporal poverty across households. This point is relevant from an empirical point of view as Calvo and Dercon (2009) show, using data from rural Ethiopia, that there are high correlations among inter-temporal measures but with considerable differences in ranking households by poverty depending on the different views on the role of compensation.

The previously discussed Hoy and Zheng's approach is a clear case of how duration and (partial) compensation can be integrated in the same setting. Their lifetime poverty measure is a weighted-average of two terms, one reflecting sensitivity to duration, and the other one being a measure of permanent poverty (when the mean consumption is below the poverty line). Foster and Santos (2012) analyze urban chronic poverty in Argentina between 2001 and 2003 using a measure that penalizes inequality in income distribution over time while allowing for several degrees of income substitutability across periods. As expected, they show that chronic poverty increases as lower income substitutability across periods is allowed for. This is because the higher costs of transferring income between periods aggravate the difficulties of some of the initially considered as being in transitory poverty. However, under all considered assumptions the percentage of chronically poor is always high (53-58%) and chronic poverty represents most of total poverty (89-98%). Furthermore, they are able to provide a measure of

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[17] This measure, in a similar way to others, involves a weighted average of per-period poverty levels. Here, weights depend on lifetime poverty profiles and are increasing with "closeness" of poverty spells in time.

the different contribution of different periods to total inter-temporal poverty. For example, the crisis period from December 2001 onwards (75% of the sample) accounts for 85-87% chronic poverty in Argentina.

Finally, another relevant feature of inter-temporal income compensation that has attracted the attention of researchers in recent times is the fact that compensation may be more difficult in periods of extreme poverty given the long-term consequences of extreme deficits (e.g. severe malnutrition) and because "fluctuations in wellbeing have a greater negative impact, the poorer the individual" (Porter and Quinn, 2008, page 27).

2. Determinants of poverty dynamics

The empirical work on poverty dynamics has mostly identified two distinct types of poverty: chronic and transitory (which may be recurrent). We have already seen that the available empirical research has quantified the relevance of these two types of poverty as well as the magnitude of flows into and out of poverty. In this section we show that many research papers have also identified the main demographic and socioeconomic characteristics associated to chronic and transitory poverty, as well as the mechanisms through which poverty transitions occur and the long-term consequences of persistent poverty, especially during childhood. These issues are especially important for policy design.

Characterization of poverty by type

A first main result of the empirical literature is to highlight the fact that the chronic or persistent poor are actually different from the transitory poor. This is a consistent conclusion regardless of the particular approach used.

For instance, the approaches based on the duration of poverty, such the pioneering work undertaken by Duncan (1984) for the US, show that the characteristics of the persistently poor differ markedly from those of individuals who have just experienced one year in poverty.[18] In fact, the characteristics of the temporarily poor are not very different from those of the rest of the population while two thirds of the chronic poor in the US are either elderly or black females with low chances to escape poverty through work or marriage. Other studies using a similar method such as Oxley, Dang and Antolín (2000), OECD (2001, 2008) and Valletta (2006) have also obtained that female headship is steadily associated with persistent poverty in most of the countries analyzed. In fact this seems to be the case in all of the 18 countries studied by the OECD (2008) and most strongly in Austria, Belgium, Denmark and Finland. In general, this result reflects the situation of two different demographic groups: single elderly women without children and young women with children. Indeed, in most of the countries studied, chronic poverty risk is higher for single adult households with children who face a risk of persistent poverty that is twice as high as that of the whole population, particularly in Japan, the Netherlands and Denmark. Additionally, a high persistent poverty risk is also associated with either low educational attainment of the household head (except in Germany) or head aged 65 or over, particularly in Australia, Italy and Japan. Finally, individuals belonging to workless households have a chronic poverty risk that is almost five times higher than that of the whole

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[18] Individual and household characteristics are generally defined at the beginning of the period.

population especially in Canada, Denmark and the Netherlands. In a quite different context: rural China, Gustafsson and Sai (2009) show that a large household size or the low education of the household head are stronger determinants of persistent poverty than of temporary poverty. Interestingly, they also stress that some particular characteristics of the village are more associated with persistent poverty such as being situated up in the mountains or to having a low average household income.

Similar households' characteristics are shown to be associated with the chronic component of poverty in various developing countries. As Jalan and Ravallion (1998) note, referring to China, household size, presence of children and education are more important to determine chronic poverty than they are to determine transient poverty. Temporary poverty is more the consequence of the exposure of households to uninsured income risk (lack of physical assets). Indeed, as Yaqub (2000) asserts it appears as if both in developing and affluent countries the poor manage their few assets against welfare fluctuations, however the transitory poor are able to dominate such smoothing transactions while the chronic poor cannot. Muller (2003) highlights the largest association of main inputs (land and labor) with the chronic component of poverty in Rwanda. In a more general way, the report by the Chronic Poverty Research Centre (Shepherd, 2011) concludes that the main determinants of chronic poverty are insecurity, limited citizenship, spatial disadvantage, social discrimination and poor-quality work opportunities.

Characterizing flows into or out of poverty

A second main set of results of the empirical literature on poverty dynamics identifies the characteristics and events that are most associated with poverty transitions (entries and exits). For this purpose, many studies have estimated individual transition probabilities into and out of poverty as functions of individual or household demographic and socioeconomic characteristics (e.g. age, gender, household structure, education, labor status) and demographic or labor market events (e.g. beginning a job, having a wage rise). If a certain factor promotes (or deters) a poverty exit, people with that characteristic will experience shorter (longer) poverty spells and thus the factor should be associated with transitory (chronic) poverty. The models used in these studies, pioneered in the US by Levy (1977) and Hill (1981), are referred to in the literature as *first-order Markov chains* and assume that the probability of a transition is independent of the individual's situation in previous periods of time different from the current one.

Comparing a variety of developed countries Duncan *et al.* (1993) show that the income starting position (i.e. the distance to the poverty line or poverty gap) is an important determinant of the probability of a transition out of poverty. Their results show that transitions rates among families with incomes close to the poverty line are very similar among a group of European countries and the US and Canada. However, given that poor individuals in Germany, Ireland, Luxembourg, The Netherlands and Sweden have a level of income that is closer to the median in comparison with the US or Canada, there are large differences between these two groups of countries regarding the relevance of persistent poverty. Regarding other determinant characteristics, in an EU cross-country comparison using the ECHP between 1994 and 2000, Fouarge and Layte (2005) conclude that single parents are more likely to be persistently poor and have a lower probability of leaving

poverty. Also joblessness and a low educational level (even when employment status is controlled for) are associated with a high risk of persistent poverty.

There is evidence also for developing countries. For example, Gaiha (1988) find that the access to cultivable land combined with modern agricultural inputs play a decisive role in poverty transitions in rural India. Similarly, Stampini and Davis (2006) conclude for rural households in Nicaragua that agricultural activities serve as a poverty exit strategy as long as they are associated with a certain accumulation of assets. In a more comparative approach, Khrishna (2007) highlights that ill health and the costs of healthcare are one of the most important reasons pushing households into poverty in Asia, sub-Saharan Africa and Latin America. Also, this author underlines that poverty escapes are associated with income diversification, access to employment and social networks even if through informal employment.

Trigger events

Bane and Ellwood (1986) had underlined the need for not only describing the characteristics of those who transit into and out of poverty but to identify which events are most associated with these transitions. As noted by Jenkins (2000) a change in equivalized income that triggers a transition is reflecting a change in income (income events) or/and in household composition (demographic events). Therefore, trigger events can be related to changes in either one or both of these variables. The comparative analyses undertaken by Duncan *et al.* (1993), Oxley, Dand and Antolín. (2000), Layte and Whelan (2003) and OECD (2008) suggest that finding a job, getting married or starting to receive a social insurance or assistance benefit increases the probability of moving out of poverty, while becoming unemployed, getting divorced or losing a social benefit increases the likelihood of falling into it.[19] However, in general, most poverty transitions are concomitant with income events related to changes in employment and earnings (e.g. finding or losing a job, more or less hours of work, changes in head's earnings, etc.) while fewer of them are associated to demographic events (e.g. childbirth, marriage, divorce, children leaving home, etc.).[20] Indeed, Duncan *et al.* (1993) conclude that in all the six countries they study employment events are the most frequent cause of both poverty entries and exits. In contrast, marriage accounts only for one tenth of all poverty exits in three out of the six countries. Finally, social insurance events appear to play a significant role only in some particular countries.

As a consequence, Layte and Whelan (2003) underline the importance of country institutions and welfare regimes given that they find that social welfare and market incomes play different roles in poverty transitions across countries, and that Southern European welfare regimes focus poverty risks on the experience of the household's primary earner to a far greater extent than Northern European welfare states do. Not surprisingly, the OECD (2001) report concludes that a more extensive welfare state and higher share of social spending to low income households

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[19] Some of these comparative analyses take into account that small changes in income for individuals near the poverty threshold may lead to transitions that have no significance in terms of individual welfare.

[20] Similar results are obtained in single country studies (e.g. Muffels, Fouarge and Dekker, 1999, Jenkins, 2000, Jenkins and Rigg, 2001 or Cantó, 2003).

clearly contribute to decrease poverty persistence and, in contrast, a higher share of low-paid employment contributes to increase it.

True state dependence

The wide evidence about poverty persistence shows that experiencing poverty during a specific time period increases the probability of undergoing poverty in subsequent periods. Thus, one of the possible causes of poverty persistence that has attracted more attention in the literature is poverty itself. In the words of Cappellari and Jenkins (2004, p. 598) this happens because "the experience of poverty itself might induce a loss of motivation, lowering the chances that individuals with given attributes escape poverty in the future". This effect is identified in the literature as "True or Genuine State Dependence (GSD)".[21] The adjectives "True" or "Genuine" refer to the fact that this effect should not be confounded with other adverse attributes (such as low human capital, poor assets, etc.) that characterize the poor population and make them less likely to escape from poverty. If GSD is an important determinant of poverty persistency, it calls for policies aiming to break the vicious circle of poverty given that past poverty experiences may alter the individual's chances of experiencing it again through changes in the individual's preferences or set of opportunities.

Pioneering work on the matter was undertaken by Hill (1981) for the US, but the introduction of modern panel data econometrics allows for a better identification of GSD. As Cappellari and Jenkins (2004) explain the estimation of GSD in the first-order markovian models of transition probabilities can be biased in different ways. A first important bias is related to the fact that individuals are not randomly distributed within the initially poor (initial conditions bias). For example, low educated individuals are more likely to be in poverty when sampled so the estimated coefficient on education in the transition probability will be biased because its effect will be including its role in determining initial poverty and not just to its influence on a poverty transition. A second bias is generated by the fact that between the initial and final period attrition occurs and some individuals are not effectively observed in a second moment in time. If attrition is not random in terms of individual characteristics, obtained results will be biased. Furthermore in these models it is necessary to take into account not only observed characteristics (e.g. education or labor status) but also other individual specific unobserved attributes (e.g. motivation or ability). Cappellari and Jenkins (2004) estimate a substantial value of GSD for the UK: if the probability of being poor one year is 53 percentage points higher for those who were poor in the previous year, the gap remains at 31 percentage points after controlling for individual heterogeneity (both observed and unobserved). GSD is shown to be also relevant in other countries such as Germany (Biewen, 2009), Australia (Buddlemeyer and Verick, 2008) or Spain (Ayllón, 2013).

Long-term consequences of chronic poverty

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[21] More specifically, GSD reflects the 'scarring' effect promoting persistence that may affect the ability of poor household members to keep or take up an adequate job. Biewen (2009) mentions five of such mechanisms: (i) adverse incentives associated with the poverty trap, (ii) a process of demoralization, loss of motivation or depreciation of human capital, (iii) health problems such as abuse of alcohol or other drugs, (iv) a reduction of one's social network due to a change in the living milieu and an increase in 'bad' contacts, and (v) strain marriages or cohabitative relationships and possibly an increase in the probability of a household split.

The importance of analyzing and designing sound policies to fight chronic or persistent poverty is reinforced by new evidence that highlights the long-term consequences of experiencing severe and persistent poverty, especially during childhood. Several studies such as Hoelscher (2004) and Magnuson and Votruba-Drzal (2009) have surveyed abundant evidence confirming that children who experience persistent poverty are at risk of suffering poor outcomes across important domains later in life, even if, in some cases, the causality is complex to determine. However, a large body of literature underlines that the consequences of poverty spells in childhood are likely to persist for long (Machin, 1998; Engle and Black, 2008) so that experiencing childhood poverty affects one's life chances by increasing family stress and reducing parental investments. More specifically, empirical evidence shows that deep and early poverty, holding other characteristics constant, is related to lower levels of children's achievement and educational attainment and to child and young adult antisocial and problematic behavior. Indeed, Hirsch (2006) identifies a variety of long-term consequences of not ending child poverty in the UK: greater chance of material hardship in adulthood, linked to continuing economic disadvantage, knock-on effects on health, psychological well-being and ability to achieve life goals and future consequences for the child's own children in the far future.

Similarly, Gregg, Harkness and Machin (1999) and Ermish, Francesconi and Pevalin (2001) conclude that young adults who as children suffered from financial hardship have higher changes to earning low wages, being unemployed, spending time in prison (in the case of men) and becoming a lone parent (in the case of women). In general, these authors find that education is an important "transmission mechanism" and poverty was found to be, by far, the most important force linking childhood development with subsequent social and economic outcomes. Indeed, the study demonstrated an intergenerational link in the cycle of family disadvantage looking at the tested cognitive ability, at an early age, of the children whose parents had themselves grown up in socially disadvantaged situations and the average cognitive ability them was lower. This suggests a potentially important cross-generational link that may well spill over to affect the subsequent economic fortunes of the children of disadvantaged individuals. Results for developing countries in a report by Suryadarma, Pakpahan and Suryahadi (2009) also conclude that, for instance, in Indonesia chronically poor children have worse health and education outcomes than other children, reducing their future opportunities. As a consequence, several papers have investigated poverty dynamics focusing on households with children, such as Jenkins and Schluter (2003) in the UK and Germany or Gradín and Cantó (2012) in Spain.

Some other studies have focused on the distinctive long-term effects of poverty depending on its inter-temporal type. In the context of developing countries, Bhatta and Sharma (2006) indicate that poverty in Nepal has a negative impact on individual asset accumulation so that there is a significant difference in the level of human capital accumulation between transient and chronically poor individuals. Indeed, even if household wealth and human capital are related to both poverty profiles the relationship is more strongly related to chronic poverty. The chronically poor have a lower level of human capital and the gap with the transient poor can be largely explained by the differences in the characteristics of the two groups. Another study on Pakistan by Arif and Bilquees (2007) concludes that the chronically poor are more likely to depend on debt than the non-poor while this is not the case of the transient poor. In this same line of argument, Baulch and Hoddinott (2000) conclude from the information of a variety of studies that being in poverty reflects the interlinked factors of low endowments, low returns to

those endowments and vulnerability to shocks. These authors note that in one direction this means that households with larger endowments and greater returns to them are less vulnerable to shocks but also, in the other direction, it means that vulnerability to shocks may have grave consequences on endowments and consequently will also increase the likelihood of experiencing persistent poverty.

Final remarks

Since the late 1970s the literature on poverty dynamics has helped to shape our understanding of poverty. Some features have contributed in this process. There is an increasing availability of panel data in a variety of countries, although the lack of long panel data in most countries and comparability issues are still probably the main obstacles that the literature faces. This explains why most research focuses on short-term dynamics instead of on a more comprehensive lifetime perspective. The literature has also taken advantage of the availability of increasingly sophisticated statistical and econometric tools designed for panel data analysis, in parallel to what happened with another dynamic phenomenon such as unemployment in labor economics. These techniques, compared with more descriptive approaches, have allowed tackling several potential biases and cleaning spurious effects. A third crucial element was the progressive construction of a conceptual framework. This work is still unfinished and different views cohabit. Examples of this are the spells versus components approaches to the measurement of chronic poverty, and the difficulties to include in a single measure the level of inter-temporal poverty in a panel of individuals. However, there are also significant efforts in order to reconcile these different views, and to provide a common framework for the measurement of both static and longitudinal poverty. Similarly, the literature on poverty dynamics could take advantage of further coordination with that of income mobility but so far, as Jenkins (2011) has noted, they have evolved with little overlapping, with the latter much more focused on measurement issues and the former being more policy-oriented.

A few lessons can be taken from this empirical literature so far. We now know that there are significant inflows and outflows in poverty even in a short time interval, and, at the same time we also know that there is a high inertia to stay in poverty or to fall back again after a short time out of it. Therefore, despite the large poverty rotation observed, chronic poverty remains a significant portion of the poverty phenomenon and therefore its very negative long-term consequences should be a matter for political concern. We now also have some idea about the distinctive characteristics of the persistent and transient poor, and about the main mechanisms that push people in and out of poverty and therefore effective poverty alleviating policies are more clearly determined. We also know that there is a great variety of inter-temporal poverty across countries strongly dependent on the prevailing welfare regime, even if the actual country ranking may depend on what we consider important in the analysis of the poverty phenomenon.

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