

The working poor

Limits of the EU indicator “in-work poverty risk”, limits of the statistical category “working poor”, and exploration of a notion of “poverty in earned income”

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Abstract:

In 2003, a new indicator named “in-work poverty risk” was added to the list of social indicators agreed at the Laeken European Council; it stands now among the 13 overarching indicators defined in line with the objectives of social inclusion agreed in 2006 (EPSCO Council). This paper proposes a discussion of the limits of this European indicator, then a more general discussion of the problems in the implementation of the notion of working poor, and advocates for a complementary indicator.

In the first part of the paper, we apply three alternative definitions of “a worker”: that implemented by the American Bureau of Labor Statistics, that used by the French national institute of statistics, and that adopted for the European indicator. We measure the differences in the size of the populations identified as “working”, then in the workers’ poverty rates. The impact of changes in the definition of workers is compared between 7 EU countries (Germany, Spain, France, Greece, Italy, Portugal and U-K). This comparison shows that the impact of a change in the definition varies between countries according to the relative size of the sub-populations excluded by the definition. Such variations suggest that cross-country differences as well as variations across time of the European indicator could be difficult to interpret.

The second part of the paper addresses a more general weakness of the statistical category “working poor”: whatever the definition of a “worker” one difficulty is that a (statistical) working poor is defined by a combination of the workers’ individual characteristics (labor market) and their household characteristics. In the analysis of the relationship from work to poverty, this double level of definition makes things rather difficult to disentangle, since with given labor market characteristics, some individuals will be poor and some other not, depending firstly on their household composition. This results in a general difficulty in cross-country comparisons, since differences in the incidence of working poverty can result from labor market factors as well as from the households’ structure which have no reason to be the same in all countries. This is why another indicator, of “poverty in earned income” is explored. We define “poverty in earned income” at the individual level as a yearly earned income below the (usual) poverty threshold; it can be taken as a measure of the population who would be poor if they could rely only on their own earnings. The interest of such an indicator is to be easily interpretable and its level directly comparable across countries.

The analysis developed in this paper is that of the author, and does not necessarily reflect the views of INSEE.

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Introduction

In 2003, the EU adopted a new indicator named “in-work poverty risk”¹, which was added to the set of social indicators aimed at the monitoring and comparison of national performances in tackling employment problems and social exclusion. The definition of this indicator is not the result of a process of harmonization on the basis of member States (MS) national traditions, since in most MS there was no such tradition. Moreover, until the late 1990s, the working poor were barely an issue in Europe whether at country or European level, and the question had not emerged as a major research topic or lead to specific measurement efforts - except in France (Concialdi & Ponthieux, 2000; Hourriez, 2000) -. In a review of the indicators proposed in the National Action Plans on Social Inclusion in 2001, Atkinson *et al.* (2002) find only 5 in the 15 MS (at this time) including some indicator of the type “working poor” in it: Belgium and Ireland measured it as the poverty rate of wage and salary workers, Portugal as the proportion of low income workers, Spain the poverty rate by labor market status, and France the share of “working poor” following the definition adopted at INSEE. This variety only reflects the absence of a general consensus about what is, statistically speaking, a “(poor) worker”; Peña-Casas & Latta (2004), in a review of the notion and its implementation, inventory almost one way of defining “a worker” by study. At this step, it appears that if the notion may appear rather easy - a working poor is a person who is a worker and who is poor - its statistical implementation does not go as easily. In particular, if there is some kind of a consensus over the statistical approach to “being poor” (or “at risk of poverty”), it’s not the case with “being a worker”.

In the first part of the paper, we apply three alternative definitions of “a worker”: that implemented by the American Bureau of Labor Statistics (BLS) following the definition given by Klein & Rones (1989), that used by the French NSI (INSEE) - itself derived from that of the BLS, and that adopted for the European indicator (EU). These three approaches differentiate by the strictness of the criteria used to identify “a worker”, the EU definition being the narrowest, the BLS one being the more inclusive. We examine first the differences in the size of the populations identified as “working”, then in the poverty rate of these populations. Obviously, it can be expected that the narrowest definition will result in a smaller size of the population of “workers”, and, since the criterion to qualify as a worker varies essentially in the number of months spent in employment, it can be expected also that the poverty rate of the workers defined with the narrowest definition will be the lowest. But there is *a priori* no reason why the impact of setting more or less severe criteria should be of a same magnitude in all the countries. This is confirmed by a comparison of this impact between 7 EU countries (Germany, Spain, France, Greece, Italy, Portugal and U-K). Such variations suggest that cross-country differences in the level of “in-work poverty” as well as variations across time could be difficult to interpret.

The second part of the paper is centered on a more general problem: independently from the strictness of the definition of a “worker”, one difficulty is that while “a worker” is identified by its individual characteristics on the labor market, the identification of “a poor” is based on variables measured not at the individual level but at the household level. In the analysis of the relationship from

¹ According to the terminology recommended by the European Commission, « poverty risk » stands for what is usually referred to as « poverty » (in a monetary approach), *i.e.* living in a household whose equivalent income is below the poverty threshold.

work to poverty, this makes things rather difficult to disentangle, because the same individual labor market characteristics sometimes lead to poverty and sometimes not, depending firstly on the worker's household composition. The bias can be more or less systematic, as can be illustrated by a gendered analysis of working poverty: while women's employment structures and jobs characteristics and earnings are -on average- always less favorable than that of men, women are not especially overrepresented in working poverty. In the end, since "working poverty" is taken as an individual feature, the household dimension acts like a screen in the analysis of the role of the labor market and employment on poverty. Taking stock of this weakness due to the double level of construction of the statistical category, the last part of the paper consists in the exploration of another indicator, of "poverty in earned income" (PEI). Defined at the individual level only, the indicator is meant as a measure of the population who would be poor if they were living only on their own work income, *i.e.* their yearly earned income is below the (usual) poverty threshold. At the difference of any "working poor" indicator, the indicator of poverty in earned income is easily interpretable and its level is directly comparable across countries.

The data set used for the empirical illustrations is the 8th (and last) wave of the ECHP (2001)². Seven countries have been retained (Germany, Spain, France, Greece, Italy, Portugal and U-K) following two constraints: firstly, the availability of the variables needed to identify the "workers" (calendar of activities); secondly, a sufficient size of the sample³ of "working poor" obtained at national levels with the narrowest criteria for defining the workers. The first condition lead to turn down The Netherlands and Sweden, for which there is no calendar of activities in the ECHP, and the second condition to turn down all the others not in the list above - which leaves us, unfortunately, with no Nordic country. Nevertheless, the remaining countries are sufficiently different in terms of institutional features, employment structures and systems of social protection for the comparison to be interesting in a methodological perspective.

² These data are no longer collected, the ECHP being replaced by SILC. The UDB-SILC available at the moment (wave 2004) is limited to a few countries, this is why we have used the "old" ECHP rather than the new SILC, but we intend to update the results as soon as the data from wave 2005 are released.

³ We have set it at 300 observations.

1. Alternative definitions of the workers and impact of a change of definition on the incidence of working poverty

At the difference of the statistical approach to monetary poverty, there is no obvious consensus on how to define and identify the workers in the analysis of working poverty. There is nevertheless a common denominator in the different definitions, in that they all base the identification of workers not on the instant activity status, as in the usual labor market and employment statistics, but on the activity status observed during a longer period of time, usually the year.

Why this longitudinal approach of the activity status in the case of working poverty? One reason can be that the statistical approach to poverty being based on the yearly income, it is consistent to adopt the same horizon for the measurement of the activity. But more broadly, it can also reflect the implicit assumption behind the question of working poverty that a person who is normally working should not be poor. Considering the activity not only at a given instant but over a longer period of time can then be the means of identifying those whose “normal” or “regular” situation is to participate in the labor market and/or to be at work. In this perspective, the instant activity status of an individual can be misleading, because at a given time, being observed at work can be an exceptional situation (for instance, in the case of students who work only during their summer vacations), and being observed out of work can be exceptional too (for instance, a short spell of unemployment). Widening the “window” of observation allows a better appreciation of what the “normal” - or at least the most frequent - situation is. But it says nothing of the number of months in the labor market or at work necessary to sort out a “worker” from a “non worker”. In what follows, we will first stop on the change of perspective when shifting from the usual labor market statistics to statistics based on a longitudinal approach, then apply alternatively the criteria employed to define a worker by the American BLS, the French INSEE and the European statistics, in order to study the impact of a change on the size and composition of the population of workers, then their poverty rate, and compare it across countries.

1.1. From “instant” to “longitudinal” labor market status: a change of perspective

The usual statistics on labor market and employment are based on surveys, most often obtained from the individuals self declared activity and employment status at the date of interview or during the month preceding the survey. With any of the three definitions of workers compared here, it is not one but all the months of the year preceding the interview which are taken into account.

Concretely, the identification of the workers depends on a retrospective calendar of activities which allows, at least, to determine a dominant activity status (employment / unemployment / inactivity) month by month. In the data used here, the information allows also to distinguish between salaried and self-employed work - but not to know whether the workers hold a full-time or part-time job⁴. The identification of the workers results from the addition of the number of months spent in the labor market and/or at work (depending on the definition - *infra*) during the previous year. In fact, for some

⁴ This will be possible with SILC, but from what is visible in the UDB variables list, the distinction between salaried and self-employment is lost.

observations, the calendar of activities does not count 12 months⁵; obviously, these observations should be excluded of the count, in order to have a consistent population of reference. In this paper, we want to have a constant basis for the comparison of the definitions of workers, so we have applied the rule implemented for the European indicator and statistics on the activity status (“most frequent activity status”), which is to keep all the observations when there is at least 7 months observed. We will refer after indifferently to “*the year*” or “*the reference period*” to speak of the period (which can then go from 7 to 12 months) used to determine an individual’s “longitudinal” status.

Apart from the question of the calendars being complete or not, another question is that of the population of reference in general, within which we’ll sort out the workers from the non worker. The most obvious option is to keep only the population of working age (aged 16 – 64). We have nevertheless added two restrictions: the students under 25 and the retired have been removed— even though they can be observed at work, we have considered that these situations are different from what is dealt with under the question of working poverty. When we refer after to the “*population of reference*”, we then mean the individuals aged from 16 to 64, who are neither student (aged under 25) nor retired, and whose calendars are completed over at least 7 months.

Using “longitudinal” rather than instant information makes things more interesting, but at the same time more complicated: at a given time, a person is either active, whether at work or out of work, or not active; over several months of observation, a person can be all the months in the same situation, but she can also have alternated between different states. When a binary classification allows to describe the instant status (active vs. inactive; employed vs. unemployed), the shift to a longitudinal perspective leads to the necessity to take into account the persons alternating between activity and inactivity, and to take into account those alternating, in the labor market, between employment and unemployment. One way for summarizing the information is to classify the individuals according to their “most frequent activity status” (MFAS) – as is done for the European social inclusion statistics – defined as the status in which a person has been more than half the period of reference. The inconvenient of this approach is that the MFAS may discard individuals alternating between “working” and “not working”: take for example a person who has worked 5 months, been 3 months unemployed and spent the remaining 4 months out of the labor market; she will be classified as “inactive” even though she has spent 8 months in the labor market (she would appear as “unemployed” if all the months out of work were months of unemployment). Such complex cases are likely to represent only a small proportion of the “inactive”, but this proportion could be very dependent on national employment policies and the conditions of unemployment registration and benefits. This is why we have not used the MFAS, but categories which better take into account, from our point of view, the continuum of situations. We first distinguish three broad categories: full year activity, full year inactivity, and alternating activity (in which spells of employment are distinguished); full year activity is broken down into 3 categories: full year employment, full year unemployment, and alternating spells of employment and unemployment (we’ll speak of “spells” after). This change of perspective is illustrated in table 1.

⁵ These incomplete calendars concern firstly Germany (11 % of the observations among individuals of working age) and France (8.5 %), then -in smaller proportions- Greece and United-Kingdom (resp. 3 % and 2 %). In the case of Germany, 4 % of the observations have completely empty calendars, the others missing from 1 to 11 months; for France, the most part of the incomplete calendars are completed only for 3 months.

[Table 1 here] – *Instant and longitudinal labor market statistics*

The interesting result is that the change from instant to longitudinal states does not result in a dramatic change in the relative positions of the countries. Nevertheless, once the unstable situations in activity or employment are made visible - which cannot appear in the “instant” approach -, national performances appear much closer than what instant statistics suggest. For instance, UK, which is “the best” if we look at the instant share of unemployed, is also “the worst” once we look at the longitudinal share of people alternating between activity and inactivity. This indicates that measuring only unemployment might result in the under-estimation of the population who wish to work - and who could be considered as the population of workers.

These alternating situations, between activity and inactivity, employment and inactivity, and between employment and unemployment, will be, of course, the main factors of variation of the population of workers between the definitions.

1.3. *Three definitions of the workers*

The first statistical implementation of the working poor as a statistical category was done by the American BLS at the end of the 1980s; it defines workers as persons who have “devoted at least one half of the year to labor market efforts, being either employed or in search of a job during that period (...)” (Klein & Rones, 1989, p.4). The authors underline that the threshold of half a year⁶ is purely arbitrary, and meant for distinguishing regular workers from persons who are only marginally active.

The implementation of the notion at INSEE is based on this first definition, but with an adaptation in order to take into account long term unemployment - a category of unemployment almost absent in the American statistics⁷. Two options were studied for this adaptation: the first one consisted in shifting from a participation criterion to an employment criterion; the second one consisted in keeping the basis of a participation criterion, and adding a condition of a minimum number of months of employment - 1 month - which allowed to distinguish long term unemployment. This second option was eventually retained, the first one having been considered less satisfying because it would have excluded those who wished to work but could not find a minimum of employment (*cf.* Hourriez, 2000). In the end, INSEE considers that the American definition defines an “active”(poor) population which is itself composed of two groups: the “unemployed”(poor), who have spent at least 6 months in the labor market looking for a job and found none, and the “working”(poor), who have spent at least 6 months in the labor market and actually worked at least 1 month.

The European definition of the workers implemented for the indicator “in-work poverty risk” is quite different, in that it does not at all refer to labor market participation: the only criterion is that of the

⁶ It is interesting to remark that there is another formulation of this definition, in which ‘at least half the year’ has become ‘more than half a year’ (Gardner & Hertz, 1992). Since the American measure the employment in weeks and not in months, the difference between the two formulations represents almost the same number of weeks - more or less on. Transposed to the European statistics, where we count in months, it makes a more substantial difference.

⁷ The same “participation” criteria results in selecting almost only individuals who are either in stable employment or alternating employment and short spells of unemployment when applied to the USA, while it also selects individuals who have never been at work (but always been in search of work) when applied to France (or other European countries)

number of months at work. With this definition, a worker is an individual whose most frequent activity status is “employed”, the “most frequent activity status” being the status in which the person has spent more than half the period of reference⁸ - keeping in mind that this period can go from 7 to 12 months. This definition is not exactly the same as it was in a first formulation: initially, a report on social inclusion indicators (Atkinson *et al.*, 2002, pp. 147-49) recommended the adoption of criteria which were a mix of participation in the labor market (6 months at least), employment (most frequent status), and instant status (at work at the time of the survey). The Social Protection Committee, which has adopted the current definition, considered that this definition was too difficult to implement, and preferred a more direct approach, leaving aside the criterion of participation (*cf.* Lelièvre *et al.*, 2004). In fact, the European definition differs also in the fact that the longitudinal status (summarized in MFAS) is used to select “workers” among individuals who are employed at the time of the survey (see for instance the tables presented either in the “Joint report on social inclusion in 2003”, EC 2004, or Bardone & Guio, 2005)⁹. We have not respected this condition (which results in a double selection) for the comparison of the definitions.

The three definitions can be ordered as follows: one “loose” definition, closer to the notion of economic activity than to the notion of employment, an intermediary definition, which demands a minimum of employment, and a narrower definition, in which only those who are mostly at work qualify as “workers”. These definitions will be referred to as D1, D2 and D3 after; the criteria they apply are summarized below:

<i>Definition</i>	<i>Criteria :</i>	
	participation in the labor market	employment
D1 (<i>BLS</i>)	at least half the period of reference	none
D2 (<i>Insee</i>)	at least half the period of reference	at least one month
D3 (<i>EU</i>)	none	more than half the period of reference

We have indicated above that the rule adopted for the computation of the European indicator (D3) was to take into account only individuals whose calendar of activity is at least of 7 months. For those who are between 7 and 12 months of observation, the criterion of employment is proportionnal to the number of months in the calendar; this means that to qualify as “working”, an individual must have been at work during 7 months in 12, 6 months in 11 or 10, 5 in 9 or 8, and 4 months in 7 observed in the calendar. In order to keep a consistent population of reference, we have selected only individuals having at least 7 months observed, but the proportionality has not been applied in the other definitions: the participation criteria in D1 has been kept at 6 months for all the cases, and anyway, the criteria of 1 month in employment in D2 is not “proportionable”.

As could be expected, applying one or the other of these definitions results in variations of the number of “workers” which are far from negligible (see table 2); in order to be able to compare between the definitions and across the countries, we have compared not the number of workers, but the “rate of workers” (workers / population of reference), and the differences between two definitions are given as

⁸ The same definition is applied to compute the household “work intensity”, one of the other indicators of social inclusion.

⁹ This rather strange approach, mixing instant and longitudinal status, is perhaps due to the fact that it’s the only way to analyze the job characteristics of the working poor – characteristics which are known only for the job held at the time of the survey.

a percentage of the population of reference (e.g. $D1 - D2 / \text{pop. of reference}$), rather than the difference between two definitions, because it gives a better idea of the incidence of the population excluded by a change in the definition. Not surprisingly, it is with D1 that the rate of workers is the higher, and with D3 that it's the smaller; for example in the case of Spain, the gap is about 10 points of percentage, the "workers" representing about 71 % of the population of reference when D1 is applied, and only 61 % with D3.

[Table 2 here] – *Size of the populations of workers with three definitions*

The comparison between countries shows also that they are not all equally sensitive to the criteria of participation and/or employment: for example, using D1 rather than D2 makes a difference which represents 2 % of the population of reference in UK, but more than 7 % in Italy; the difference in the number of workers between D2 and D3 represents about 2 % of the population of reference in Portugal, UK or Italy, but about 6 % in Spain.

Changing the criteria does not only change the number of workers selected, it changes the composition, in terms of participation and employment, of the population of workers (table 3).

[Table 3 here] – *Composition of the populations of workers with three definitions*

Firstly, there is a construction effect: mechanically, selecting individuals who have a greater number of months at work, as with D3, reduces the probability to observe employment instability - because it selects those in the more stable jobs. This may create a distortion between the real population and the selection of "workers", more or less serious depending on the labor market condition and employment structures of the countries: in UK, the proportion of "workers" who work full year goes from 87 % among "D1-workers" to 91 % among "D3-workers" (+ 4 percentage points), while in Spain it goes from 77 % to 90 % (+13 percentage points). The remaining population of workers is much more different in this case than in the case of UK. This just reflects that the labor market structures and institutions being different, the choice of a definition is crucial, not only because of the situations it includes, but also because of those which are excluded. A structural effect comes in addition, due mostly to the differences in the shares of salaried workers and self-employed between the countries. One noticeable difference between the two types of employment is that at the difference of salaried workers, whose months out of work appear as months of unemployment (or inactivity), self-employment tend to appear more stable, because slow or non existing activity doesn't always show by a change of status (the self-employed tend to declare themselves as "self-employed" whether they actually work or not); consequently, a criteria for selecting the workers by the number of months in employment will result in the over-representation of the self-employed.

The addition of the these two effects may cause various problems in the analysis of the variations in the incidence of working poverty, not to say to interpret cross-country differences; this suggests the

necessity of comparing not only the incidence of in-work poverty, but firstly the incidence of “work”, and the composition, in terms of employment structures, of the population selected as “workers” even before measuring and comparing their poverty rate. This “detour” would be useful too because of the radical difference between the usual labor market and employment statistics used most often in international comparisons (based on ILO definitions) which are profoundly different from the longitudinal perspective basis of the identification of the workers in the “working poor” approach.

More generally, the high norm of employment adopted for the European definition is rather surprising, because it results in an approach of work mostly as full year employment, at a time when flexibility and mobility are promoted as the future of work. It seems that this promotion should be associated with a greater attention to “flexible” situations rather than to focus on the more stable ones, because it is very likely that they result in higher poverty rates. With the indicator as it is currently defined, a decrease in the workers’ poverty rate could very well result from an increase in unemployment or in the proportion of jobs offered on a short term basis, which could result in a smaller size of the population able to find more than half a year of employment – put in other words, if those who are more at risk of not being selected in “good jobs” are excluded from the labor market, it is a way to solve the problem of working poverty. This can be misleading if the indicator is meant at indicating the relationship between the functioning of the labor market and the poverty rate.

1.4. Working and poor

The second word in “working poor” is poor. To identify the poor, we have used the standard European approach to monetary poverty, which sets the poverty threshold at 60 % of the median equivalent disposable income. The equivalent income is obtained by applying a weighting to the members of an household in order to take into account the economies of scale within a household (the standard is the so-called “modified Oecd scale”¹⁰). The median is calculated on the basis of the distribution of equivalent incomes at the individual level. We won’t go here into a detailed discussion of the usual conventions adopted for the identification of poverty, but it is important to keep in mind at least that this approach is based upon the major assumption of income pooling within the household – *i.e.* all the individuals of a given household have the same equivalent income, and within a given household, all the members are poor or not poor. This is why the notions of “working poor” and of “low wage workers” are radically different, even though the two are not completely unconnected (low wage workers are more likely to be poor than the other workers, but all the low wage workers are not poor, and all the working poor are not low wage workers).

The poverty rate of workers is very different according to the definition of the workers applied, and not surprisingly, it is with the European definition (D3) that it is the lowest (table 4). And with any definition of the workers, their poverty rate is smaller than on average within the population of reference.

[Table 4 here] – *Poverty rate of the workers*

¹⁰ Which gives a weight of 1 to a first adult in the household, 0.5 to any additional adult and 0.3 to any children (under 14 years old).

There again, significant differences between the countries can be observed in the variations due to a change of definition: the poverty rate of the D1-workers is only 12 % higher than that of the D3-workers in Portugal, but it is 22 % higher in France, and 56 % higher in Germany. The magnitude of these variations between countries suggests that changing the definition leads to very important changes in the composition of the working poor population, in terms of activity status (table 5).

[Table 5 here] – *Composition of the populations of working poor*

Not surprisingly (again) the higher the number of months required to qualify as a worker, the higher the share of working poor who are at work on a full-year basis; but the impact of a change in this criteria result in much more dramatic distortions than those observed at the level of the whole population of workers (poor + non poor): for example, if we look at Germany, Spain, and Italy only 48 % (resp. 53 % and 52 %) of the working poor are working full year with D1, and this proportion goes up to 83 % (resp. 84 % and 91 %) with D3. If we assume that not being able to work on a full year basis is a factor of poverty, there is a serious problem with the use of the European indicator (D3) as a basis for the analysis of the factors of working poverty. With even more pronounced country specificity, the same can be said of the proportion of alternating situations: it remains almost unchanged in the case of Portugal, but is divided by about one half in Spain, the other countries ranging from changes of about 30 % to 60 % of difference between D1 and D3.

The choice of a definition has obviously a direct impact on the analysis of the factors of in-work poverty, and the comparison of workers' poverty rates across countries (or time) may be difficult to interpret, because differences (or variations) may result either from differences or changes in the situation of the same workers (wages, or jobs stability) or from variations or differences in the composition of the population of workers (*i.e.* more or less potential workers excluded from the population taken as a population of workers). The European indicator has been defined the way it is in order to obtain homogeneous populations of "workers"; but when labor market and employment structures are very different, this results in comparing virtual, not actual populations, and to focus on situations that can represent very different proportions in the actual populations. If the ambition is, as presented in Bardone & Guio (2005), to understand better the origin of working poverty – and one can imagine, find the levers for preventing or reducing it -, a definition taking into account most of the labor market and of the employment situations should be more efficient than a definition starting with discarding some of them. The norm of "more than 7 months at work" has the weakness of putting aside into "non employment" indifferently inactivity, job precariousness and long term unemployment, and it generates a serious gap between on the one hand, policy objectives which want to see the labor market as a tool in fighting social exclusion and poverty, and on the other hand, an indicator which erases some parts of this labor market.

Another factor which makes comparisons difficult to interpret is the double level of definition of the working poor, which makes working poverty depending not only on labor market and employment structures, but also on the households structures – which has no reason to be the same in all countries. But this is a general weakness in the notion of “working poor”, not only a weakness of the European indicator; this is the starting point of the next part of the paper.

2. From “in-work poverty” to “poverty in earned income”

Independently from the criteria implemented to select a population of workers, a more general problem comes from the double level of definition of the “working poor”, which combines an individual and a household dimension. This results in an asymmetry, since in a given household, all the individuals are poor or not, while some can be workers and the others not. It is not a problem if the question behind is that of the activity behavior of the poor. It is a problem if the question behind is that of the risk of poverty generated by the individuals employment characteristics: it is then necessary to “deconstruct” the category in order to be able to sort out the relative role of “labor market factors” and “family factors”, but the level at which “working poverty” is to be studied is nevertheless unclear. After having discussed of the limits it poses, we propose to explore the implementation of an indicator which could express the risk of poverty associated with the earnings an individual is able to get from his participation in the workforce.

2.1. The unclear level of analysis of in-work poverty

If we follow Lelièvre *et al.* (2004, p 158), “in-work poverty” is clearly a notion to be understood at the individual level: “The new indicator combines an approach of the relationship between the worker and the labor market at the individual level, and an approach of the income at the household level (...) This definition puts then in focus the individual (...) even though the household composition plays a role (often a crucial one)”.

For Bardone & Guio (2005), the two approaches are to be considered together: “ When focusing on individuals (...) the main concern is to understand why their earnings are not sufficient to lift them and their households above the poverty threshold, with particular attention to labour market problems like low pay, precarious employment and inability to find full-time work. The household is taken into account insofar as it affects the individual risk of being in working poverty – and since poverty incidences are strongly influenced by household structures and household employment patterns, working poverty must be analysed not only through personal and occupational characteristics but also through household characteristics”.

Although correct, these statements are not of much help: the statistical unit is the individual, but being a working poor individual is not separable from the individual’s household composition. Of course, it would be very difficult to implement a notion of “working household” – even though its contrary, a “jobless household” is very easy to measure.

The main result is that the analysis focuses on working poverty as an individual feature, which, with the European definition resulting in populations of workers who are, for the most part of them, employed full year, results in the identification of “family factors”, not “labor market factors”, as the main factor of their poverty. The actual role of these family factors is in turn poorly taken into account, since the analysis being done at the individual level of the workers, the non working members of their households are out of the picture. In the end, the approach is doubly unsatisfying, because on the one hand, “labor market factors” appear only when they are not counterbalanced within the household, while on the second hand the probability of being a worker, which is not equal among all the household members, is not taken into account.

This limitation plays as a screen in the comprehension of two dimensions of the relationship between work and poverty: selection into employment, which determines the probability of earning one’s own income, and bad jobs when they don’t result in poverty. This appears very neatly in the gender composition of the working poor, which paradoxically, doesn’t show women as especially over-represented, because they often live with men who earn enough to compensate for their low earnings, while men live more often with women who have no earnings at all. This is why, when the majority of low wage workers are women, the working poor are mostly men (with the exception of Germany and UK, where the proportion of part-time work among women is much higher than in the other countries, and the proportion of poor households counting only one person is also higher than in the other countries).

2.2. The approach to poverty in earned income

Rather than developing a complicated analysis of the indicator “according to personal, job and household characteristics” as it is recommended in the definition of the indicator (European Commission, 2006, p. 12) in order to sort out between several interpretations, it seems more straightforward to start with a simple indicator, linking directly an individual’s activity and the earnings she gets from this activity. This is the motivation for the exploration of an approach focusing on the individuals earning capacity, and an indicator of “poverty in earned income”. Poverty in earned income is conceptually different from low wage or low earnings; in most implementations, low wages are defined as wages below a threshold determined relatively to the distribution of wages. Poverty in earned income will be defined by reference to the poverty threshold; it allows to identify directly those who would be poor if they could count only on their own earnings, and to link this directly to their labor market characteristics. This indicator is meaningful in itself, but it can also be implemented in complement of an indicator of working poverty.

We measure an individual’s earned income as the sum of all the earnings from work, including unemployment benefits, received during a period of reference:

Earned income = wages + income from self employment + unemployment benefits

Poverty in earned income (PEI) is identified simply by: earned income < poverty threshold.

The main question is that of the population for which this indicator has to be calculated; this leads back to the question of defining “a worker”. For the illustration proposed after, we have chosen to adopt the largest definition (D1), because it is the approach which takes into account the variety of situations in the labor market, and it is consistent with the inclusion of unemployment benefits in the earnings. But the approach does not necessarily require a definition of the workers: it is meaningful also within the population of working age, as a measure of this population who is not able to live above the poverty threshold on their own earnings. This measure is briefly presented and commented below; we’ll come back after to a more restricted approach.

[Table 6 here] – *Poverty in earned income in the population of working age*

[Table 7 here] – *Participation in the labor market by gender*

Among the population of working age, the rate of PEI goes from 32-36 % in France, Germany, Portugal and UK up to 42-46 % in Italy, Greece and Spain. This means that, in these countries, from one on three to almost one half of the individuals of working age earn less than the poverty threshold, i.e. people who would be poor if they were living on their income. But this rate includes also those who earn no income at all; once they are removed, the rate of PEI drops within a range that goes from 19 % (Greece, Italy, Portugal) to 23 % (UK).

There are two interesting results here: first, the small difference between countries (more or less 4 percentage points); secondly, the neat difference between Northern countries (including Portugal) and Southern countries in the relative proportions of poor in earned income who actually earn an income and those who earn nothing. In the Northern countries and Portugal, a large majority of them earn an income from work, while the poor in earned income are composed of roughly the same proportions of earners and non earners in Greece, Italy and Spain. This grouping of countries strictly reflects the difference in women’s participation in the labor market between the two groups of countries (table 7), the individuals of working age who have no earned income being everywhere women in an overwhelming majority.

When restricted to the workers (in the meaning of D1), the rate of PEI appears rather close between countries, going from a minimum of 20 % to a maximum of 25 % (table 8), much less spread than the poverty rate of workers, which goes from 6 % up to 14 % (*cf.* table 4, D1). The comparison of the two indicators is very informative, because it indicates the impact of the households structure and social transfers in correcting the distribution of income which results from the labor market. This compensation appears very different by country: relatively small in Greece or Italy, where the poverty rate of the workers is barely one half of their rate of PEI, less than one half in Portugal and France, about one third in UK, and 4 times smaller in Germany.

[Table 8 here] – *Poverty in earned income and poverty in the population of workers*

2.3. Interest and limits of an indicator of "poverty in earned income"

The main interest of the indicator is that it allows to establish a direct relationship between what happens in the labor market and the risk of being poor, allowing to avoid the difficult step of disentangling the combination of labor market factors and family factors inherent to the statistical category "working poor". Going "upward" from the indicator, the analysis of the factors of poverty in earned income is straightforward: the type of employment, the quantity of employment and the quality of employment are the three obvious possible factors in the explanation of the level of earned income. Analyzing their relative influence would be particularly relevant in a system of "flexicurity".

The indicator needs also to be analyzed downward: poverty in earned income is not actual poverty (in this case, 100 % of the poor in earned income would be poor). The analysis downward should allow to better understand the interplay between labor market, households structures and transfers. This should lead to a more direct identification of levers for public policies to fight poverty.

The main limit of this approach is to consider the earnings independently from the individuals' choices of activity, while they are probably at least partly determined by family structures and social-fiscal system, and the PEI approach is rooted in the identification of those individuals whose activity is such that they could not live above the poverty threshold if this income were their only resource. This bias is nevertheless not sufficient to reject the approach if one consider that the level of earnings from work not only as the result of an individual's choice, but as the result of the distribution of employment and income by the labor market. This is the perspective which has been retained here.

Table 1 – Instant and longitudinal labor market statistics (%)

	GR	IT	SP	PO	FR	GE	UK
Statuts courants							
In the workforce	73.6	74.6	71.2	85.0	85.2	86.8	82.6
- <i>employed</i>	65.8	65.0	61.5	80.4	78.5	79.2	79.1
- <i>unemployed</i>	7.8	9.7	9.7	4.7	6.7	7.7	3.5
Not economically active	26.4	25.4	28.8	15.0	14.8	13.2	17.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Statuts longitudinaux							
<i>At least 1 month in the workforce</i>	75.1	75.9	73.2	86.4	87.7	88.7	86.6
- Full year activity (*)	72.4	72.9	69.4	83.0	81.9	84.1	76.9
- <i>full year employment</i>	62.5	62.2	54.7	76.2	72.8	73.1	72.4
- <i>full year unemployment</i>	4.1	7.4	4.5	2.9	3.3	4.0	1.0
- <i>spells of unemployment</i>	5.8	3.3	10.2	3.9	5.8	7.0	3.6
- Alternating activity/inactivity	2.7	2.9	3.8	3.4	5.8	4.5	9.6
- <i>alternating employment/inactivity</i>	2.3	2.6	3.4	2.9	4.6	3.7	8.1
- Full year inactivity	24.9	24.1	26.8	13.6	12.3	11.3	13.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source : ECHP 2001.

Population of reference : individuals aged 16-64, students and retired excluded, and whose calendars are completed at least over 7 months.

(*) The « year » represents from 7 to 12 months.

Table 2 – Size of the populations of workers with three definitions

	GR	IT	SP	PO	FR	GE	UK
Workers in % of the population of reference :							
D1	74	75	71	85	85	87	83
D2	70	67	67	82	81	82	81
D3	66	65	61	80	79	79	79
Difference between definitions, in % of the population of reference :							
D1 – D2	4	8	5	3	4	4	2
D2 – D3	3	2	6	2	3	3	2
D1 – D3	8	10	10	5	7	8	4

Source : ECHP 2001.

Population of reference : individuals aged 16-64, students and retired excluded, and whose calendars are completed at least over 7 months.

Table 3 – Composition of the populations of workers with three definitions (%)

	GR	IT	SP	PO	FR	GE	UK
D1							
Full year employment	85	83	77	90	85	84	87
Long term unemployment	5	10	6	3	4	5	1
Alternating	10	7	17	7	11	11	12
<i>spells out of the workforce</i>	2	3	3	2	4	3	7
Total	100	100	100	100	100	100	100
% wage workers	59	67	74	75	86	86	87
D2							
Full year employment	90	92	82	93	89	89	89
Long term unemployment	0	0	0	0	0	0	0
Alternating	10	7	18	7	11	11	11
<i>spells out of the workforce</i>	2	3	3	2	3	3	7
Total	100	100	100	100	100	100	100
% wage workers	63	74	80	77	90	90	89
D3							
Full year employment	94	96	90	95	93	92	91
Long term unemployment	0	0	0	0	0	0	0
Alternating	6	4	10	5	7	8	9
<i>spells out of the workforce</i>	1	2	2	2	3	2	6
Total	100	100	100	100	100	100	100
% wage workers	62	74	79	77	90	90	88

Source : ECHP 2001.
Workers following three definitions.

Table 4 – Poverty rate of the workers (%)

	GR	IT	SP	PO	FR	GE	UK
Definition:							
D1	14	14	13	11	9	6	7
D2	13	10	12	9	8	4	6
D3	12	9	10	9	7	4	6
<i>Poverty rate in the population of reference</i>	17.0	17.9	16.2	13.2	11.6	7.6	11.2

Source : ECHP 2001.
Workers following three definitions.

Table 5 – Composition of the populations of working poor

	GR	IT	SP	PO	FR	GE	UK
D1							
Full year employment	73	52	53	78	68	48	60
<i>self employed</i>	55	26	25	43	24	6	19
Long term unemployment	16	35	18	13	14	26	10
Alternating	11	13	29	9	18	25	30
<i>spells out of the workforce</i>	2	3	4	5	5	12	17
total	100	100	100	100	100	100	100
D2							
Full year employment	88	81	65	91	80	69	70
<i>self employed</i>	66	41	30	51	28	9	22
Long term unemployment	0	0	0	0	0	0	0
Alternating	12	19	35	9	20	31	30
<i>spells out of the workforce</i>	2	3	5	4	4	12	16
total	100	100	100	100	100	100	100
D3							
Full year employment	96	91	84	93	87	83	78
<i>self employed</i>	72	46	39	52	31	10	25
Long term unemployment	0	0	0	0	0	0	0
Alternating	4	9	16	7	11	16	22
<i>spells out of the workforce</i>	1	3	3	4	3	8	15
total	100	100	100	100	100	100	100

Source : ECHP 2001.
Workers following three definitions.

Table 6 – Rate of poverty in earned income in the population of working age (%)

	GR	IT	SP	PO	FR	GE	UK
Total	43	42	46	32	32	33	36
Composition :							
Earned income = 0	24	23	25	13	12	11	13
<i>% of women</i>	94	90	82	79	85	87	79
Earned income > 0	19	19	21	19	20	22	23
<i>% of women</i>	59	50	59	67	68	64	74

Source : ECHP 2001.
Population of référence

Table 7 – Participation in the labor market by gender (%)

	GR	IT	SP	PO	FR	GE	UK
Women	54	57	54	77	77	77	74
Men	95	93	89	93	94	96	92
Gender gap in participation (W/M)	0.6	0.6	0.6	0.8	0.8	0.8	0.8

Source : ECHP 2001.
Population of référence

Table 8 – Poverty in earned income and poverty rates in the population of workers (%)

	GR	IT	SP	PO	FR	GE	UK
Rate of Poverty in earned income (1)	23	23	25	20	20	23	24
Poverty rate (2)	14	14	13	11	9	6	7
(2) / (1)	0.6	0.6	0.5	0.5	0.4	0.3	0.3

Source : ECHP 2001.
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