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LES TRAVAILLEURS PAUVRES COMME CATÉGORIE STATISTIQUE
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THE WORKING POOR AS A STATISTICAL CATEGORY
Methodological difficulties and exploration of a notion of poverty in earned income

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METHODOLOGICAL DIFFICULTIES AND EXPLORATION OF A NOTION OF POVERTY IN EARNED INCOME

LES TRAVAILLEURS PAUVRES COMME CATEGORIE STATISTIQUE

DIFFICULTES METHODOLOGIQUES ET EXPLORATION D'UNE NOTION DE PAUVRETE EN REVENU D'ACTIVITE

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Abstract

The concept of working poor may seem easy to grasp, but its statistical implementation doesn't go without difficulties, one of them being that it requires a specific approach to workers. In addition, given that being a worker is an individual feature while poverty is defined on the basis of variables measured at the household level, the category is defined at the intersection of two statistical units, the individual and the household. The first part of this working paper proposes a comparison of the main definitions of workers used in the statistical approach to the working poor. The objective is to analyse the impact of a change in the criteria used to identify workers on the size and characteristics of the population of working poor, as well as on the analysis that can be done of the causes of their poverty. The second part of the paper focuses on the specificity of the statistical construction "individual/worker poor/household", which results in many difficulties in the analysis of the phenomenon, since it obliges to disentangle the role of the individual and the household factors. In order to avoid this difficulty, we propose an approach which goes from the individual to the household, based on an indicator of "poverty in market income" defined at the individual level, then by studying whether this "poverty" is counterbalanced by the other private incomes at the household level and by social transfers. The whole study is based on data from EU-SILC 2006 and compares 10 countries of the European union.

Résumé

La notion de travailleur pauvre peut sembler au premier abord assez évidente, mais sa mise en œuvre comme catégorie statistique ne va pas de soi, en particulier parce qu'elle demande une définition spécifique pour identifier les travailleurs. En outre, comme travailler est une situation individuelle tandis que la pauvreté s'apprécie sur la base de variables mesurées au niveau du ménage, la catégorie se trouve définie à l'intersection de deux unités statistiques, l'individu et le ménage. Ce document propose dans sa première partie une comparaison des principales définitions des travailleurs mises en œuvre pour élaborer des statistiques sur les travailleurs pauvres. On cherche en particulier à évaluer l'impact d'un changement des critères employés pour identifier les travailleurs sur la taille et les caractéristiques de la population des travailleurs pauvres, et sur l'analyse que l'on peut porter sur les causes de leur pauvreté. La seconde partie est consacrée au problème spécifique de la construction statistique « individu/travailleur ménage/pauvre », qui rend l'analyse du phénomène particulièrement complexe, puisque la construction oblige en effet à démêler en aval le rôle des facteurs individuels et des facteurs familiaux. Face à cette difficulté, on propose une approche qui procède en prenant comme point de départ un indicateur de « pauvreté en revenu d'activité » défini au niveau individuel, puis en examinant si cette « pauvreté » est compensée par les autres revenus privés au niveau des ménages et par les transferts sociaux. L'ensemble de l'étude est basée sur les données EU-SILC de l'année 2006 et compare 10 pays de l'Union européenne.

Table

Introduction

Since 2003, an indicator of "in-work poverty risk"[1] is included in the set of indicators used by the European Union (EU) to assess and compare member states performance in the areas of employment and the fight against poverty and exclusion[2].

The definition of this indicator does not result from the harmonisation of prior national practices: before the 2000s, none of the 15 EU member states was using this type of indicator and, in Europe, the working poor were not the focus of detailed studies, except in France[3].

Moreover, existing studies may use very different statistical approaches to the notion[4], especially with regard to the criteria used as a basis for the identification of "workers": in a review of European, American, Canadian and Australian studies, Pena-Casa *et al.* (2004, p. 7) inventory no less than ten ways of defining workers. For example, the Swiss Federal Office for Statistics counts as workers all those who are at work in the meaning of the ILO definition (1 hour of work in the week of reference), while in studies by the French Insee workers are those who have spent at least half the previous year in the labor market and been actually working at least 1 month. With the European indicator "in-work poverty risk" the workers are those who are at work at the time of the survey and who have been employed more than half of the previous year. As these examples show, there is no consensual approach.

The notion of "working poor" may at first glance seem quite intuitive - a working poor is someone who works and is poor – but, as the above suggests[5], going from the notion to a statistical category is not straightforward.

This working paper is aimed at discussing the significance and limits of a "working poor" type statistical category.

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[1] The term "risk" is used, according to the terminology adopted by the Council of Europe and the Commission, to indicate that a disposable income below the poverty threshold is not sufficient to characterise a state of poverty. In this paper, we will for convenience refer to "poverty" and not poverty risk.

[2] The indicator "in-work poverty risk", adopted by the Social Protection Committee, was added to the "Laeken" indicators designed to monitor national performances in the fight against poverty and exclusion, then by the Employment Committee, as one of the indicators aimed at analysing the performances of labour markets in the area of inclusion ; this list has been revised since, and the portfolio of indicators has been divided into transversal indicators (among which we find the "in-work poverty" indicator) and thematic indicators (European Commission, 2006a). The indicator appears also among the indicators of employment performance (European Commission, 2006b). These lists of indicators are detailed in Appendix 3.

[3] See : Houriez, 2000 ; Concialdi & Ponthieux, 2000 ; Breuil *et al*., 2001; Lagarenne & Legendre, 2001.

[4] Some even reduce it to that of low wage workers (*eg*. Lucifora, 1997; Valkenberg & Coenen, 2000), which covers only one side of the phenomenon. The two notions, while of course not completely unconnected, are nevertheless not the same: firstly because not all the workers are wage workers - even if wage workers are the majority; secondly, even though the poverty rate of low wage workers is on average higher than that of other wage workers, a large proportion of low wage workers are not poor, and some workers whose wage is not low are poor (Concialdi & Ponthieux, 2000; Concialdi, 2001). This results from the fact that wages are individual while poverty is identified at the household level. This will be precisely the point of the second part of this working paper.

[5] In addition, poverty also can be approached in different ways. This side of the definition will not be discussed here.

The discussion focuses on two issues:

The first one is that of the criteria on which the identification of workers is based, which are neither harmonized conventions nor internationally agreed practices. On one side, the European indicator uses criteria which can appear very strict – to be at work at the time of the survey and to have been mostly at work during the previous calendar year, while the definition used by the American Bureau of Labor Statistics is based on labor market participation, an approach that is used also in many French studies (with an additional criterion aimed at excluding long term unemployment). This is a decisive issue, because the criteria applied to identify workers determine not only the "size" of the problem but also, when they are very selective as with the European approach, excluding *a priori* certain types of situations as not relevant, its analysis.

In a comparative perspective, it is then essential to study the sensitivity of the measure and subsequent analysis to the choice of a definition of workers; especially, one may wonder whether a very strict definition of workers allows to take into account the variety of national contexts, and whether it is consistent with the "flexicurity" promoted these last years by the European Commission, especially with regard to flexibility which could very well result in an increase in the share of workers alternating between employment, unemployment and inactivity[6].

The second issue addressed here is that of the "hybrid" level of the statistical category which results directly from the fact that while workers are identified on the basis of their individual characteristics of activity, the same is not true of the identification of poor individuals, as members of poor households, and based on variables measured at household level. The "working poor" are then statistically a combination of "working-individuals" / "poor-households". This would not be a difficulty if the population of interest was the poor, and the question was to measure their participation in employment or in the labor market; but the population of interest is that of workers, and the aim is to analyze the relationship between their economic activity and their poverty.

The double-level construction of the category makes it quite difficult to analyze, since the same individual economic activity may or may not result in poverty, depending on family configurations – which moreover determine many social transfers. As a consequence, working poor individuals' poverty cannot be directly linked to their individual economic activity, and a significant proportion of individuals in unfavorable situations of activity, women in majority, do not appear as working poor. The link between work and poverty, blurred by the household effect, becomes difficult to interpret from an individual perspective, this complexity having from a long time been acknowledged as a specific constraint for the analysis of the phenomenon (*cf.* Dantziger & Gottschalk, 1986; Klein & Rones, 1989). In the end, comparisons across time or countries are not immediately meaningful, since

[6] See European Commission (2006b; 2006c); for a critical review, see Keune & Jepsen (2007).

the same poverty rate of workers can result from labor market condition and employment structures as well as from households' structure.

The paper is organized as follows:

Part 1 addresses the question of the statistical implementation of the notion of "worker" in statistics on the working poor. It starts with a reminder of the specificity of this implementation compared to statistical categories which are usual in the description and international comparison of activity and employment. Then three definitions of workers are implemented – the American definition used by the Bureau of Labor Statistics since 1989, the definition used in studies by Insee since 2000, and the European definition – and the size and characteristics of the resulting populations of workers and working poor are compared.

Part 2 is centred on the construction of the statistical category "working poor" based on a combination of individual and household characteristics, and the necessity to "deconstruct" the category in order to analyze it. In order to go beyond this difficulty, a complementary approach is proposed, based on a notion of "poverty in earned income"; poverty in earned income is identified at the individual level by a yearly activity income below the poverty threshold. This indicator is easily interpretable and its level directly comparable across time or countries. On this basis, we go by step from individuals' market income to households' market income then households' disposable income and poverty.

Using EU-SILC UDB2006[7], we compare 10 UE countries[8] : Germany (DE), Spain (SP), France (FR), Greece (GR), Italy (IT), Portugal (PT), United-Kingdom (UK), Luxemburg (LU), Finland (FI) and Sweden (SE).

[7] European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Eurostat has no responsibility for the results, analyses and conclusions presented in this paper, which are those of the author.

[8] The range of countries has voluntarily been limited to those among the former EU-15; due to sample sizes, only 10 of them could be taken into account. On the data and sample, see Appendix 1.

I – The working poor: a specific approach to "workers"

The construction of working poor statistics results from combining two major sets of conventions: one to identify the poor, the other to identify the workers. Those used to identify the poor can be said to be standard, especially when restricted, as it is the case here, to monetary poverty. The word "standard" does not mean that it raises no problems, but these are known problems, on which one can find a large quantity of literature[9], and there is a certain degree of consensus on the notion and on the scope and limits of the measure. This side of the construction of the statistical category will not be addressed in this document, and we will use without discussing it the European approach to monetary poverty, according to which a poor individual is a person living in a household that the equivalized income is below a poverty threshold defined as 60% of the median equivalized income at national level[10].

On the contrary, there are no "standard" conventions to identify workers, as illustrated by the variety of approaches that can be found between studies on the working poor (*cf.* Peña-Casa *et al.*, 2004). This diversity may reflect conceptual differences, especially about the relevant level of measurement and analysis of the phenomenon: for example, in Canadian or Swiss approaches the working poor are considered as households – we will come back to this issue in the second part of this document. But it results also from the difficulty of implementing workers in a way that is consistent with the statistical approach to poverty; hence the need to depart from the usual approach based on current activity statuses. There are not many elements that can be used for this: on the side of statistics, there are no statistics on "workers" in general – whether poor or not – because "worker" is not an existing statistiscal category; on the side of economic literature, contemporary labor economics does not offer a straightforward definition[11]. Yet while the measurement of poverty is almost always discussed, the question "what is a worker" is seldom addressed in the literature on working poor.

This first part of the paper is precisely aimed at looking more thoroughly into the statistical approach to "workers" used in the statistics on the working poor. We will compare three main definitions: the one used by the American Bureau of Labor Statistics, the one used in studies by the French statistical institute, and the one implemented by Eurostat for the indicator "in-work poverty risk". With the first one, a (poor) worker is a person who has spent at least 27 weeks in a year of reference in the labor market, either working or looking for a job (Klein & Rones, 1989); with the second one, a worker is a person who has spent at least 6 months in a year of reference in the labor market and 1 month of actual employment (Hourriez, 2000); with the third one, it is a person who is actually working at the time of a survey and who has spent at least 7 months in employment during the previous year (EC, 2006a; Lelièvre *et al.*, 2004; Bardone & Guio, 2005). Obviously, these three approaches differ in the time

[9] *Cf.* Insee, 1997; Atkinson *et al*., 2002; Verger, 2005; Fall & Verger, 2005.
[10] Poverty thresholds are computed separately for each country. Appendix 2 provides a presentation of the major conventions used to compute the poverty threshold and poverty rate.
[11] In this framework, the workers would most likely be those on the supply side of labor.

required in employment. But beyond this difference, the three of them have in common that they do not refer to the usual statistical categories constructed following ILO norms to describe the labor force (working / unemployed / economically inactive); these latter are based on the activity during a week of reference[12] while the identification of (poor) workers is based on a number of months spent in the labor market or in employment during a longer period of reference. It is a noticeable change of perspective[13].

We will then start with an examination of the difference between the usual statistical categories as defined by the current individual situations and the approach to the (poor) workers. We will compare after the three definitions of workers mentioned above and the impact of the adoption of one or the other of them on the size and composition of the populations of workers and working poor.

I.1 – Current *vs*. longitudinal activity status: a change of perspective

Statistics on the working poor are specific in that they are not based on ILO or current occupation statuses observed at a given time, as is usual in comparative approaches to economic activity and employment, but on situations observed over a longer observation period – most often the previous calendar year.

Why this particular approach to workers when the subjects are working poor individuals? For a part, it has to do with the fact that monetary poverty is computed using annual incomes; it is then necessary to take into account the activity statuses during the same period of reference, and not the activity status observed at a given time in this period or at a date of interview. Beside this "chronological" justification, one can assume that the idea is to select individuals whose "normal" situation is to be working and that their current activity status may vary in its representativeness of this normal situation: on a given date, some people may unusually be in employment (for example, students who only work during the summer), while others may be occasionally be out of work. By enlarging the "window" of observation, individuals' regular situation can better appreciated.

Specifically, the information is then based not on an activity status declared at a date of interview (the basis of usual categories) or during a week of reference (the basis of ILO activity status), but on a retrospective calendar, generally calendar year *N-1* with *N* the year of survey, in which people indicate

[12] A person is said to be in employment if stating she is currently working for pay or profit for at least one hour ; she is said unemployed if currently not working (i.e. 0 hours) and available to start work within the next two weeks and actively seeking a job ; those neither at work nor unemployed are said economically inactive.

[13] The 'statistical' working poor are also rather different from the popular view of them; in France for example, they are most often presented by the media as either lone mothers working part-time or working homeless individuals. Yet if these two types of situations exist and are indisputably unfair, they are far from representative of the statistical working poor because on the one hand, a significant share of working lone mothers are not poor, and a significant share of those who are poor do not work, and on the other hand, the surveys at the basis of statistics on the working poor take into account only the "ordinary households", based on the population living in identified private accommodations *i.e.* neither the homeless nor people living in hotels, institutions or any type of collective accommodation.

month by month what their dominant activity status was: employment, unemployment or economic inactivity. In comparison with the commonly used descriptions based on acticity status at a given moment, extending the observation period makes describing an individual's situation more interesting, but at the same time quite complex: at a given date, a person is either economically active, and thus at work or unemployed, or inactive, while over several months, a person may have always been in the same situation, but may also have alternated periods in various statuses.

To the three commonly used categories (in work, unemployed, inactive) we must therefore add a fourth modality, which obviously cannot appear in a description based on current situations, corresponding to alternations. In contrast to current statuses, we refer to this classification as "longitudinal statuses"; we distinguish 4 longitudinal statuses: full-year employment, full-year unemployment, alternations, and full-year inactivity.

To illustrate the changed perspective, the next tables show how individuals of working age are distributed according to current statuses defined following ILO norms (Table 1) and according to longitudinal statuses based on the information contained in the calendars (Table 2)[14] [15].

Table 1 – ILO activity statuses (%)

	DE	**ES**	**FR**	**GR**	**IT**	**PT**	**UK**	**LU**	**FI**	**SE**
1. Working	66.0	63.3	63.9	60.1	57.6	67.5	71.7	63.6	68.4	72.5
2. Unemployed	8.3	6.4	6.2	6.7	4.9	5.9	3.7	3.0	6.3	6.2
Subtotal Economically active (1+2)	*74.3*	*69.7*	*70.1*	*66.8*	*62.5*	*73.4*	*75.4*	*66.6*	*74.7*	*78.7*
3. Inactive	25.7	30.3	29.9	33.2	37.5	26.6	24.6	33.4	25.3	21.3
Subtotal Not working (2+3)	*34.0*	*36.7*	*36.1*	*39.9*	*42.4*	*32.5*	*28.3*	*36.4*	*31.6*	*27.5*
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Eurostat, LFS 2005.
Population: individuals aged 15-64.

Table 2 – Longitudinal activity statuses (%)

	DE	**ES**	**FR**	**GR**	**IT**	**PT**	**UK**	**LU**	**FI**	**SE**
1. Full year employment(*)	61.1	60.0	61.2	56.6	54.7	63.5	70.9	64.1	59.4	72.2
2. Full year unemployment	7.7	6.4	5.9	5.8	8.0	5.9	1.7	2.1	5.6	3.2
Subtotal Full year activity (1+2)	*68.8*	*66.4*	*67.1*	*62.4*	*62.7*	*69.4*	*72.7*	*66.2*	*65.0*	*75.4*
3. Alternations	7.7	9.6	9.3	8.8	7.2	8.4	5.7	7.0	18.8	11.9
Of which mostly in employment	*6.4*	*6.9*	*7.3*	*7.0*	*5.8*	*6.5*	*4.9*	*5.8*	*16.6*	*10.4*
4. Full year inactivity	23.5	24.0	23.5	28.9	30.1	22.2	21.6	26.9	16.2	12.7
Subtotal Full year not working (2+4)	*31.3*	*30.5*	*29.5*	*34.7*	*38.1*	*28.1*	*23.3*	*29.0*	*21.8*	*15.9*
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: individuals aged 15-64 with a complete retrospective calendar.
(*) "year" corresponds to the reference period, *i.e.* the calendar year N-1 for a survey in N. This is why statistics in Table 1 refer to 2005.

[14] The information given by each perspective does not correspond to the same year: current statuses are those at a given date in year *N*, longitudinal statuses are computed on the basis of the information for year *N-1*.
[15] Only the observations with a complete retrospective calendar (12 months filled) are taken into account, in order to have a homogenous observed period for all the individuals. The incomplete calendars concern mainly the United-Kingdom (11% of observations among individuals of working age) and, in lower proportions, Sweden (2,3%) and France (1,3%). For Germany, Finland, Greece and Sweden, the EU-SILC UDB-2006 does not provide detailed calendars but only variables indicating the number of months spent in various statuses. We will see below that it poses a specific problem to characterize the workers' longitudinal situations.

In each country of course, the proportion of individuals in any "full year" status is smaller than that of the same current status; this is due to the fact that while all the individuals in a full year status are necessarily in this status at any time of this year, this is not always true the other way[16]. The gap between the proportions in current and longitudinal statuses corresponds to alternations.

In the country comparison, the changed perspective does not fundamentally alter relative positions: countries where the proportion of currently employed people is the highest are also those where the proportion of those "active all year" or "employed all year" is the highest. Nevertheless, it results in a slightly different perception of national performances: for example, in Sweden and United-Kingdom, the proportions of individuals at work are very close and the highest of the group of countries compared when measured according to ILO norms (Table 1), but they appear on the contrary rather different when we shift to longitudinal statuses (Table 2). The same goes on if we look at the proportions of currently inactive and full year inactivity, not very different in the case of United-Kingdom, while the share of full year inactive is about half the share of currently inactive in Sweden. The balance appears in the share of alternations: in United-Kingdom, it is the smallest of the 10 countries, suggesting a strong separation between those who are in the labor market and those who are out of it, when it is one of the highest of the group in Sweden (with Finland). All in all, the share of the population of working age durably not working (subtotal "Full year not working" in Table 2) is 8 percentage points higher in United-Kingdom than in Sweden.

This example shows that the change of perspective is far from neutral on the description of economic activity, and that an analysis of national performances based on ILO statistics or on longitudinal statistics will not necessarily result in the same conclusions. It suggests also that statistics on the working poor, based on longitudinal statuses, could prove difficult to reconcile with the statistical categories consensually used for international comparisons based on ILO norms.

The interest of the longitudinal approach is above all that it highlights alternations, which obviously cannot appear in the current status approach. Alternations are, as we will see below, the main source of difference between the various definitions of workers implemented for working poor statistics.

[16] One noticeable exception is Luxemburg, where the proportion of individuals working full year is higher than that at work in the meaning of ILO. This "anomaly", observable also but at a lower level in Sweden and United-Kingdom where the two proportions are almost equal (or in the case of the unemployed in Italy), results from the difference between the ILO status and the monthly status declared in the calendars: for a given month, it is actually the "dominant" status, and it may differ from the status measured in the week of reference on which the ILO statistic is based.

I.2 – Three definitions of workers

As we have just seen, workers in the statistics on working poor are defined on the basis of statuses of an entire year. But how many months in which status are required to count an individual as a worker? It is easy – given that we are only interested in market work – to exclude those who are "inactive all year", but what next? Unlike categories based on ILO norms, there are no widely recognized criteria or generally agreed ways to implement the notion. The definitions which we are going to compare use alternatively two principles: a labor market participation norm or an employment norm.

1. The American approach and its adaptation at Insee[17]: a labor market participation norm

The first statistical implementation of the notion of working poor was proposed in the United States by the Bureau of Labor Statistics (BLS) at the end of the 1980s. It followed many studies on the poor and whether they are willing to work – a recurring issue in the United States, with that of the risk of discouraging them from working, or helping the wrong ones, those who do deserve it because they do not try hard enough[18]- and not, it is worth to underline, studies on workers poverty, a significant difference of perspective. In the statistics and analysis published by the BLS on the working poor, workers are defined as individuals who have participated in the labor market for at least half of a reference period of one year, either employed or unemployed (*cf.* Klein and Rones, 1989). It is not a "positive" definition; as the authors make clear, this threshold of half a year[19] is arbitrary, used only to discard those who are only marginally active.

In the most part of French studies, the implementation of the notion was firstly based on the BLS definition. In studies by INSEE, it was adapted in order to take into account long-term unemployment, a question that the BLS statisticians had not had to deal with since this category of unemployment is virtually inexistent in American labor market statistics[20]. Thus the labor market participation criterion applied to the United States selects people who are either in stable employment or alternate periods of employment and unemployment, while applied to countries where there is long-term unemployment it

[17] This approach is used by Insee in many studies since the end of the 1990s, but there is not, strictly speaking, a "French approach"; for example, the French Observatoire National de la Pauvreté et de l'Exclusion Sociale uses the European definition.

[18] Fear related to the idea that laziness is a major cause of poverty: « *The popular view that anyone who works hard can get ahead in America is still so widely held that it fosters the myth that most who remain poor or do not get ahead must be personally responsible for their plight* » (Danziger & Gottschalk, 1995, p.12 ; see also Appendix 4).

[19] By referring to "the" BLS definition, we find two formulations of this threshold: "at least" half the year, and "more than" half the year. This variation comes from the second report on the working poor published by the BLS (Gardner and Hertz, 1992), in which the authors refer to the initial definition (Klein & Rones, 1989) but change it slightly: "at *least half the year*" in the initial version became "*more than half the year"*. Since American statistics measure the duration of work in weeks this does not result in a major difference between the two formulations (only one week); in European definitions, which count in months, the difference between "at least" and "more than" would result in the use of 6 or 7-month thresholds.

[20] A significant proportion of the long-term unemployed observed in some European countries would, in the United States, be categorized as inactive. A similar type of discrepancy can exist as soon as long-term unemployment is treated as "disablement", as is the case in some European countries.

selects also people who have not occupy a job during the reference period. In order not to amalgamate long-term unemployment with alternating employment and unemployment, one possibility was to switch from a labor market presence criterion to an employment criterion; the other possibility was to use, in addition to the labor market participation criterion, a minimum condition of one month in employment, making it possible to identify the long-term unemployed. The first solution was judged to be unsatisfactory since it would have excluded people who would like to work but cannot find any work (see Hourriez, 2000), and the second option was preferred. In studies by INSEE it is then the BLS definition which is used to define "active" (poor) individuals, and within this category the "unemployed" (no month in work) are distinguished from "workers" (at least one month in work).

2. The European approach: an employment norm

The definition used by the EU for the "in-work poverty risk" indicator, meanwhile, does not make any reference to activity: only an employment criterion is used. A (poor) worker is an individual whose most frequent activity status is "employed"; the most frequent activity status is the one in which an individual has spent more than half of a reference period - in principle the previous calendar year[21]. But this definition is applied only to those actually in work at the date of interview (*cf.* EC 2006a); workers are then in fact individuals in work at the date of interview in year *N*, whose most frequent activity status (computed on the basis of *N-1* calendar) is employment, which results in a double selection. Such a principle could be acceptable if the date of interview in *N* was very close to the end of *N-1*, or if the reference period was not the previous calendar year but the 12 months preceding the interview. But this is not so: on the one hand, the actual date of interview can be any time of year N (*cf.* Table 3), and on the other hand, if the retrospective calendar was covering the 12 months just preceding the date of interview, it could be that it does not correspond to the income reference period, which is the calendar year. The problem then appears mostly unsolvable.

Table 3 – Date of interview in 2006 (%)

Quarter	**DE**	**ES**	**FR**	**GR**	**IT**	**PT**	**UK**	**LU**	**FI**	**SE**
1.	0.0	0.0	72.6	0.0	0.0	2.9	41.8	0.0	0.0	26.3
2.	100.0	98.6	27.4	99.7	100.0	0.0	53.3	69.6	0.0	25.4
3.	0.1	1.4	0.0	0.3	0.0	0.0	4.9	30.4	0.0	25.2
4.	0.0	0.0	0.0	0.0	0.0	97.0	0.0	0.0	100.0	23.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.

This double filter, one of them referring to the current situation at the time of a survey, the other referring to the individual situation over the preceding calendar year, makes the European approach

[21] Given the possibility of incomplete retrospective calendars, Eurostat implements the reference period, which in principle should count 12 months, as the actual number of months logged and retains observations with a minimum of 7 logged months; the employment threshold is then proportioned (7 months if 12 logged months, 6 if 10 and 11, etc., down to 4 if only 7 months are logged). For cross country comparisons, this method may result in a bias if the survey quality is unequal between countries. This is why we have not applied this rule here, and simply discarded the observations with incomplete calendars.

even more different from the two other ones than the change from a norm of participation to a norm of employment. Besides, the dissonance is obvious between the notion of "most frequent activity status" (we will come back to this notion below) and the use of a criterion based on the current situation. This specificity of the European statistical approach results partly from the fact that various points of views have been combined in the definition of the indicator "in-work poverty" (*cf.* Apendix 4).

As for the notion of "most frequent activity status" (MFAS) used in European statistics, it is defined as the status in which an individual has spent more than half a year; in a way, it is some kind of a summary of longitudinal status, but in the operation, the main interest of the longitudinal approach to activity statuses is lost. The MFAS is defined as the status in which an individual has spent more than half of the year of reference (*i.e.* at least 7 months) and can be either employment or unemployment or retirement or other inactivity (*cf.* Eurostat 2008). It is obvious that it leaves no room for alternations, and also that, since a MFAS is defined by a threshold of 7 months in a given status, some configurations will necessarily disappear (*i.e*. the individual has no MFAS) even though the person has been mostly active: for example, a person who has spent 5 months employed, 4 months unemployed and 3 months out of the labor market has no MFAS despite having 9 nine months in the labor market. Such a person would be a worker in the meaning of the BLS or INSEE approaches, but using the MFAS, she has not accumulated the required number of months either in employment to be classified as working, or in unemployment to be classified as unemployed. Such slightly complex examples do account for a low proportion of "non-workers", but they are likely to be influenced by national unemployment processing mechanisms and short-term economic circumstances.

3. Comparison of the subpopulations of workers

We therefore have three definitions of workers: the BLS definition, the broadest, in which workers are regularly active individuals; the definition used in INSEE studies, an intermediate definition, which includes regularly active people but requires at least one episode of employment; and the European definition, the narrowest, in which workers must be currently working and have spent most of the previous year in work. Note that in none of these definitions is reference made to continuity: it is the accumulated number of months (of participation in the labor market or in employment) which is taken into account, whether or not they are contiguous.

The following table summarizes these definitions. In the following discussion, we will refer to these definitions as D1, D2 and D3. We will also apply an intermediary definition, D3a, by not applying the current employment criterion to the European definition, in order to measure the impact of this part of the definition. Given the definitions, the population obtained with each definition starting with D2 is necessarily a sub-sample of the population obtained with the former definition.

Table 4 – Three definitions of worker (plus one)

Definition (user)	Criteria:	
	Participation in the labor market	Employment
D1 (BLS)	At least half the year of reference	No
D2 (Insee)	At least half the year of reference	At least one month
D3a	No	*More than half the year of reference*
D3 (Eurostat)		More than half the year of reference and in employment at the date of interview

A last thing to do before applying the definitions and comparing the outcomes is to delimit a population of reference, in which we will distinguish workers from non-workers. The most natural choice is to use the population of working age (16-64 years); as above (and in all the paper), we exclude the observations for which we do not have a complete calendar. Independently from the issue of calendars, we have also excluded students and retired people[22] – members of either category may of course work and be poor, but we consider that these situations are linked to specific issues[23]. We refer therefore to this population as the population of "*potential workers"*. Due to the exclusion of students and retired, the distribution of this population by longitudinal status (Table 5) is slightly different from that of the population of working age (cf. Table 2)

Table 5 – Longitudinal statuses of the reference population (%)

	DE	**ES**	**FR**	**GR**	**IT**	**PT**	**UK**	**LU**	**FI**	**SE**
1. Full year employment	71.5	66.9	74.0	65.5	64.1	73.6	78.7	73.4	72.3	87.3
2. Full year unemployment	8.8	7.1	6.6	6.5	8.5	6.4	1.8	2.1	6.1	2.7
3. Alternations	7.8	9.5	9.4	9.5	7.7	8.7	5.1	6.5	17.6	8.5
Of which mostly in employment	*6.2*	*6.5*	*7.1*	*7.4*	*6.0*	*6.6*	*4.2*	*5.3*	*15.0*	*7.0*
4. Full year inactivity	12.0	16.5	10.0	18.6	19.7	11.2	14.4	18.0	4.0	1.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: potential workers.

For those who are in employment full year, we have detailed the description by distinguishing whether they were employees or self employed and working full time or part time. With EU-SILC UDB2006, a problem arises in the case of some countries (Germany, Finland, Greece and Sweden) for which the detailed retrospective calendar is not provided but only variables giving the number of months spent in various statuses; these variables allow to distinguish between full time and part time work, but not to isolate self employment[24]. For these four countries, we have used a simple sorting criterion: the type of income; on this basis, we classify a worker as self employed if there were no wages among his/her earned income. We then distribute those who are active on a full year basis between full-time wage

[22] In a longitudinal sense, we have considered as students or retired any observation having declared at least half the reference year in education or in retirement.
[23] Anyway, the retrospective calendar mentions only the main situation; on a given month, an individual can then have only one status, which does not allow distinguishing students (or retired persons) who are working at the same time.
[24] *Cf.* variables PL070 to PL090 in EU-SILC - UDB2006.

employment, part-time wage employment, and self employment (Table 6); for the self employed, we have not detailed full-time or part-time work, because this distinction does not make much sense[25].

The detailed statuses show that there are marked differences between the 10 countries compared, with a neat partition between those where the share of part-time is relatively high (Northern countries, with the exception of Finland) and those where the share of self employment is relatively high (Southern countries).

Table 6 – Type of employment among full year employed population (%)

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
Full time wage earners	48.8	50.5	55.9	39.7	44.7	56.3	55.1	56.8	60.3	66.0
Part time wage earners	17.5	5.6	11.0	3.0	4.6	3.0	14.5	12.1	6.2	15.5
Self employed	5.3	10.9	7.1	22.9	14.9	14.4	9.2	4.5	5.8	5.8
Total	71.5	66.9	74.0	65.5	64.1	73.6	78.7	73.4	72.3	87.3

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: potential workers.

It is within this population of "potential workers" that we are going to compare the sub populations of workers resulting from the implementation of the definitions presented above. Firstly, we measure the "rate of workers" as the percentage of workers with each definition in the reference population (Table 7).

Table 7 – Rates of workers and differences between the definitions (%)

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
Workers in % of potential workers										
Workers-D1	87.1	82.9	89.0	80.4	77.3	88.0	85.3	80.5	93.3	98.0
Workers -D2	78.6	75.8	82.6	74.1	70.2	81.6	83.6	78.6	87.8	95.4
Workers -D3a	76.1	71.6	79.4	70.6	67.8	78.5	82.3	77.0	82.8	93.2
Workers -D3	73.5	67.7	74.9	67.9	64.7	75.0	80.6	74.4	78.4	89.3
Diffferences, in % of the population of potential workers										
D1 – D2	8.5	7.1	6.4	6.3	7.0	6.3	1.7	1.9	5.5	2.6
D2 – D3a	2.5	4.2	3.2	3.4	2.4	3.1	1.2	1.6	5.0	2.1
D3a – D3	2.6	4.0	4.5	2.7	3.1	3.5	1.8	2.6	4.4	4.0
D2 – D3	5.1	8.1	7.7	6.1	5.5	6.6	3.0	4.2	9.4	6.1
D1 – D3	13.6	15.2	14.1	12.5	12.6	12.9	4.7	6.1	14.9	8.7

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: potential workers.

Not surprisingly, definition D1 gives the highest rate of workers and D3 the lowest. Broadly speaking, the proportion of workers obtained with definition D1 is conceptually close to a proportion of currently active individuals, and definition D3 gives a proportion which is conceptually similar to that of in work individuals, with the difference between the two approximating the unemployment rate. The difference between D1 and D2 may be interpreted as long-term unemployment; the difference between D2 and D3a indicates the proportion of the reference population who was in employment from one to six months (this corresponding to no identifiable notion).

[25] It could be interesting if it was possible to identify multi-employment (for example, someone working part-time as employee and part-time self employed); but the source provides only one situation per month (the dominant situation).

The difference between D3a and D3, which corresponds to the proportion of those who have cumulated 7 months in work over *N-1* but are not in work at the date of interview in *N*, shows the impact of the second criterion used in the European definition. It is worth to notice that this proportion is not insignificant: except in Greece, the gap between D3a and D3 is in the same order of magnitude as that between D2 and D3a, illustrating neatly the impact of the "chronological" inconsistency introduced by the criterion of employment at the date of interview.

While the differences between rates of workers obtained with the various definitions are not negligible, the result to underline is also that they are very unequal from one country to the other. The smallest differences are observed for United-Kingdom, Luxemburg and Sweden. For the other countries, the main impact is that resulting from the exclusion of long-term unemployment when shifting from D1 to D2. All in all, using D1 rather than D3 results in differences ranging from a minimum of less than 5% of the population of potential workers (United-Kingdom) to a maximum of about 15% (Spain and Finland).

Such differences reflect obviously differences in national labor markets conditions and employment structures. In the end with D3, the resulting population of workers is undisputably more homogenous than that obtained with D1, but is it better? It depends on the point of view: on one side, it can be said that it is preferable since homogeneity is a quality for an indicator[26]; but on the other side, these homogenous populations of workers, which result from the exclusion of very different proportions of observations in the different countries, may be too different from the "true" populations, then of lesser interest for analysis and cross country comparisons.

In addition to the impact of the definition on the number of workers, the adoption of more or less restrictive criteria has also an impact on the composition of the population of workers. This impact is almost automatic: raising the number of months of employment required reduces the probability that the individuals selected were out of work during a given month, and increases the proportion of those who were in work all year. The proportion of workers therefore decreases as the proportion of workers employed all year increases. Thus, using definition D3, the proportion of workers who were working full year varies from 91% to 97% (Table 8), compared with proportions ranging from 65% to 77% in the populations of potential workers (cf. Table 6). Of course, the number of workers employed full year remains the same whatever the definition, but since the total number of workers decreases, it results in a change in the proportions of each status; in the 10 countries, the proportion of full year–full time wage workers with D3 is higher by about 10 percentage points than its level with D1, and by 16 to 22 percentage points than its level in the population of potential workers.

[26] "*An indicator should provide a sufficient level of cross countries comparability, as far as practicable with the use of internationally applied definitions and data collection standards*", European Commission (2006a).

From D2 to D3a, raising the number of months of employment required results also in the exclusion of those whose jobs were too precarious to reach seven months: the proportion of alternations is reduced, and at the same time, there remain only those alternations with a majority of months in employment. This effect is reinforced when shifting from D3a to D3, which is perfectly logical since the risk of being observed unemployed at any moment in *N* is higher among those whose employment was precarious in N-1 than among those who were in stable employment.

Table 8 – Composition of the populations of workers by activity status (%)

	DE	**ES**	**FR**	**GR**	**IT**	**PT**	**UK**	**LU**	**FI**	**SE**
Workers-D1										
Full year employment	82.1	80.7	83.2	81.4	83.0	83.7	92.3	91.2	77.5	89.0
Full time wage earners	*56.1*	*60.9*	*62.8*	*49.3*	*57.8*	*64.0*	*64.5*	*70.5*	*64.6*	*67.4*
Part time wage earners	*20.0*	*6.7*	*12.4*	*3.7*	*5.9*	*3.4*	*16.9*	*15.0*	*6.7*	*15.8*
Self employed	*6.0*	*13.1*	*8.0*	*28.4*	*19.3*	*16.4*	*10.8*	*5.6*	*6.3*	*5.9*
Long term unemployment	9.8	8.5	7.2	7.9	9.1	7.2	2.1	2.4	5.9	2.7
Alternations	8.1	10.8	9.6	10.7	7.9	9.1	5.7	6.5	16.5	8.3
Of which mostly in employment	*6.3*	*7.1*	*7.1*	*8.2*	*6.0*	*6.6*	*4.7*	*5.0*	*13.8*	*6.7*
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Workers -D2										
Full year employment	91.0	88.2	89.6	88.4	91.3	90.2	94.2	93.3	82.4	91.5
Full time wage earners	*62.1*	*66.5*	*67.7*	*53.6*	*63.6*	*68.9*	*65.9*	*72.2*	*68.7*	*69.2*
Part time wage earners	*22.2*	*7.4*	*13.4*	*4.0*	*6.5*	*3.6*	*17.3*	*15.4*	*7.1*	*16.2*
Self employed	*6.7*	*14.4*	*8.6*	*30.9*	*21.2*	*17.7*	*11.1*	*5.8*	*6.7*	*6.1*
Long term unemployment	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Alternations	9.0	11.8	10.4	11.6	8.7	9.8	5.8	6.7	17.6	8.5
Of which mostly in employment	*7.0*	*7.8*	*7.6*	*8.9*	*6.6*	*7.1*	*4.8*	*5.2*	*14.7*	*6.9*
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Workers -D3a										
Full year employment	94.0	93.4	93.3	92.7	94.6	93.8	95.6	95.3	87.4	93.6
Full time wage earners	*64.2*	*70.4*	*70.4*	*56.2*	*65.9*	*71.7*	*66.9*	*73.7*	*72.8*	*70.8*
Part time wage earners	*22.9*	*7.8*	*13.9*	*4.2*	*6.7*	*3.8*	*17.6*	*15.7*	*7.5*	*16.6*
Self employed	*6.9*	*15.2*	*8.9*	*32.4*	*22.0*	*18.4*	*11.2*	*5.9*	*7.1*	*6.2*
Long term unemployment	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Alternations	6.0	6.6	6.7	7.3	5.4	6.2	4.4	4.7	12.7	6.4
Of which mostly in employment	*6.0*	*6.6*	*6.7*	*7.3*	*5.4*	*6.2*	*4.4*	*4.7*	*12.7*	*6.4*
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Workers -D3										
Full year employment	95.5	95.3	95.9	93.9	96.1	96.0	97.3	97.4	91.3	96.7
Full time wage earners	*65.3*	*71.9*	*72.5*	*56.8*	*66.8*	*73.4*	*68.1*	*75.4*	*76.4*	*73.4*
Part time wage earners	*23.2*	*7.6*	*14.2*	*4.1*	*6.8*	*3.8*	*17.8*	*15.9*	*7.6*	*17.0*
Self employed	*7.0*	*15.8*	*9.2*	*33.1*	*22.5*	*18.8*	*11.4*	*6.1*	*7.3*	*6.3*
Long term unemployment	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Alternations	4.5	4.7	4.1	6.1	3.9	4.0	2.7	2.6	8.7	3.3
Of which mostly in employment	*4.5*	*4.7*	*4.1*	*6.1*	*3.9*	*4.0*	*2.7*	*2.6*	*8.7*	*3.3*
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: workers.

The definitions of "workers" examined above therefore select populations which differ markedly from the population of potential workers in the proportion of people who are in work full year, which we can consider to be the desired effect: if we do not refer to current statuses, it is precisely because they do not make it possible to distinguish between regular and occasional workers. The difference is however significant between a method which aims to count people in a regular situation in the labour

market, whether they are in work or looking for work, and a method which selects on the basis of a high employment duration[27] (in this case seven months plus at the time of interview). Using the relatively high employment norm adopted for the European indicator[28], we can ask questions about the coherence of an approach to "workers" which is so restrictive that it essentially entails taking into account people in continuous employment, while at the same time deploying a discourse which insists on flexibility and mobility in the labour market, which should on the contrary mean paying increased attention to insecure situations. If employment becomes more flexible, to the point that people alternate more often between work and “non work”, it would be consistent to use a definition of workers which allows taking alternations into account as far as possible, because they are – as we shall see – together with unemployment, associated with the highest rates of poverty. Yet on the contrary, the European definition results in a selected population of workers who are, in a large majority, working full year.

Finally, more generally, given the discrepancy between the commonly used statistics on the labour market according to ILO norms (which are based on activity at a given moment, during a reference week) and the notion of a “worker” used to study the working poor, it seems essential to combine statistics on poor workers with statistics on “workers” wether poor or not. Actually, the basis of the identification of workers is the number of months in employment; but part-time work and self employment represent neither the same quantity of work nor the same earnings potential as full-time wage employment. In the case of part-time work, the reason is self evident. The case of self employment is even more different: firstly, while for salaried employees the absence of work manifests itself formally in unemployment (or inactivity), this is not generally the case for self employed workers, who remain “in work” even though they may experience significant variations in their actual activity; secondly, some self employed (family workers) work without any pay; thirdly, self employed incomes are generally less well measured than those of wage workers.

[27] According to Lelièvre *et al*. (2004, p.160), this would result from the principles of validation of an indicator adopted at the Laeken Council; especially the choice of having employment and unemployment in separate indicators resulted from the principle that an indicator “should be responsive to policy interventions but not subject to manipulation”.
[28] This same norm applies to calculate the household “work intensity” indicator.

I.2 - Impact of the definition of workers on the size and characteristics of the population of working poor[29]

Defining workers one way or the other will obviously result in variations in the number of working poor, firstly because the number of workers varies, secondly because this number varies as a result of a selection among activity statuses to which the risk of poverty associated is not the same (Table 9).

Table 9 – Poverty rate(*) of potential workers by longitudinal status (%)

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
1. Full year employment	5.2	9.6	5.6	13.4	9.1	10.3	6.6	9.5	3.9	6.5
2. Full year unemployment	46.5	41.6	35.7	34.9	45.5	34.2	65.6	49.3	44.7	26.3
3. Alternations	13.0	17.8	14.0	21.0	23.1	15.6	30.8	29.7	12.7	22.3
Of which mostly in employment	10.6	13.8	12.8	19.4	21.0	13.4	29.0	26.3	9.6	21.9
4. Full year inactivity	19.3	28.3	27.5	28.4	32.0	35.8	41.8	20.4	24.5	33.5
Total	11.1	15.7	10.6	18.3	17.8	15.1	13.9	13.6	8.7	8.8

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: potential workers.
(*) The poverty rate gives the percentage of individuals living in a household whose equivalized disposable income is below 60% of the median equivalized disposable income computed for the whole population.

But there is no reason why the variation due to changes to one or other of these criteria should be of the same magnitude in all countries, because various differences between countries may influence the size of the overlap between the sub-population of workers and that of the poor. In addition, changes in the definition change also the characteristics of the population of working poor, there again not in a uniform way in all countries. These various consequences of adopting one or the other definition of workers are examined in the next sections.

1. Impact on the size of the problem

It is clear that the number working poor will vary for all countries in the same way according to the criteria implemented to define workers; it automatically decreases if more selective criteria are used to define workers. The change in the number of working poor not being directly comparable between countries, we rather compare a "rate of working poor", measured as the number of working poor divided by the number of potential workers (Table 10).

Table 10 – Rate of working poor by definition of workers (%)

Definition	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
D1	8.7	10.9	7.6	12.7	10.4	11.0	7.9	9.6	7.4	8.1
D2	4.7	8.0	5.3	10.5	7.3	8.8	6.7	8.6	4.9	7.4
D3	3.9	6.5	4.3	9.4	6.1	7.8	5.4	7.5	3.2	6.2

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: potential workers.

[29] We consider only the impact of variations in the definition of workers. Variations in the definition of the poverty threshold would of course result also in significant differences in the number and composition of working poor. Using another approach to poverty than the monetary approach has also an impact – see for example Airio (2008).

In all countries, the rate of working poor decreases when we shift from definition D1 to D2, then from D2 to D3, illustrating how the size of the problem is sensitive to the definition, but also how this sensitivity is unequal between countries[30]. Shifting from D1 to D2 exludes the « unemployed poor », category for which we have seen that the poverty rate is the highest (*cf.* Table 9). The impact of this shift is especially marked in the case of Germany (the number of working poor is almost divided by one half), and on the contrary very light in Luxemburg, United-Kingdom and Sweden. The second shift from D2 to D3, excludes another category, that of alternations with a majority in unemployment, in general associated with a smaller but nevertheless high poverty rate. Finland appears to be the most sensistive to this change.

By excluding categories of potential workers, going from a rather broad to a rather strict approach to workers also changes the poverty rate of workers (Table 11). There again, countries are unequally reactive to a change.

Table 11 – Poverty rate of workers by definition of workers (%)

Definition	**DE**	**ES**	**FR**	**GR**	**IT**	**PT**	**UK**	**LU**	**FI**	**SE**
D1	10.0	13.2	8.6	15.9	13.5	12.5	9.2	11.9	7.9	8.2
D2	5.9	10.5	6.5	14.2	10.4	10.8	8.0	11.0	5.5	7.8
D3	5.3	9.6	5.8	13.8	9.5	10.4	6.7	10.0	4.1	7.0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: workers.

These differences in sensitivity suggest that it could be difficult to interpret variations in the number of working poor when using a very selective definition of workers, because these variations can result mostly from selection effects (the exclusion of categories who are more at risk of poverty), and that in order to be meaningful, statistics on the poverty rate of workers should be associated to statistics on the proportion of working poor in a broadest population.

2. Impact on the characteristics of the working poor

Adopting one definition or another of workers does not only change the numbers of working poor or the workers' poverty rate; the composition of the population is also altered, and to varying degrees depending on the country, more specifically: how labour market institutions operate (incidence, duration and compensation for unemployment), employment structures, poverty structures (and the varying concentration of poor people in some situations of economic activity), household structures (particularly the proportion of people living alone, and the proportion of other households with only one active member) and the distribution of equivalent incomes at the lower end of the distribution (which itself depends in part on the system of social protection). As a result, the population of working

[30] With D1, Finland has the smallest rate of working poor. With D2, it is Germany (while Germany is on the 5th place with D1), Italy gains the 5th place (vs. the 8th with D1), Sweden and Luxembourg fall back by two ranks. With D3 Finland gets its 1st rank back, other position remaining unchanged compared to D2.

poor will include more or less young (or old) individuals, more or less women, which can in turn shape the composition of working poor households. The definition adopted to select "workers" has then a direct impact on the working poor employment characteristics, and an indirect impact on their individual and family characteristics. Since studying these characteristics is the first step in an analysis of the causes for their being poor, it is useful to understand whether and to what extent the definition of workers conditions the diagnostic, and the reflexion on the cure.

2.1. Impact on the activity and employment characteristics

As we saw for all workers, the more restrictive the definition, the higher the proportion of workers employed all year, and that of unsalaried workers. But the distortion with regard to the broadest definition is even more pronounced in the population of working poor than on average (Table 12).

Table 12 - Longitudinal activity status of the working poor (%)

	DE	**ES**	**FR**	**GR**	**IT**	**PT**	**UK**	**LU**	**FI**	**SE**
Workers -D1										
Full year employment	42.7	58.6	54.7	68.6	56.2	68.9	65.8	72.6	37.8	69.9
Full time wage earners	*20.0*	*26.0*	*26.0*	*15.9*	*25.8*	*26.3*	*21.4*	*52.1*	*14.0*	*29.3*
Part time wage earners	*16.9*	*5.6*	*13.1*	*5.3*	*5.8*	*5.8*	*20.9*	*16.3*	*8.1*	*14.1*
Self employed	*5.8*	*27.0*	*15.6*	*47.4*	*24.6*	*36.8*	*23.5*	*4.2*	*15.8*	*26.5*
Long term unemployment	46.4	26.9	30.1	17.4	30.3	19.7	14.8	10.2	34.3	8.1
Alternations	10.9	14.5	15.2	14.0	13.5	11.4	19.4	17.2	27.9	22.0
Of which mostly in employment	*6.8*	*7.2*	*9.9*	*9.7*	*8.8*	*6.9*	*15.2*	*11.7*	*17.4*	*17.5*
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Workers -D2										
Full year employment	79.7	80.2	78.2	83.1	80.6	85.8	77.2	80.8	57.5	76.0
Full time wage earners	*37.3*	*35.6*	*37.2*	*19.3*	*37.0*	*32.7*	*25.1*	*58.0*	*21.3*	*31.9*
Part time wage earners	*31.5*	*7.7*	*18.7*	*6.4*	*8.3*	*7.2*	*24.6*	*18.2*	*12.3*	*15.3*
Self employed	*10.9*	*37.0*	*22.3*	*57.4*	*35.3*	*45.8*	*27.6*	*4.6*	*24.0*	*28.9*
Long term unemployment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternations	20.3	19.8	21.8	16.9	19.4	14.2	22.8	19.2	42.5	24.0
Of which mostly in employment	*12.8*	*9.9*	*14.1*	*11.8*	*12.7*	*8.6*	*17.8*	*13.1*	*26.5*	*19.1*
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Workers -D3a										
Full year employment	88.9	91.4	88.0	90.2	89.6	92.3	83.7	87.9	76.2	82.0
Full time wage earners	*41.7*	*40.5*	*41.8*	*20.9*	*41.1*	*35.2*	*27.2*	*63.1*	*28.1*	*34.4*
Part time wage earners	*35.1*	*8.7*	*21.0*	*6.9*	*9.3*	*7.8*	*26.6*	*19.8*	*16.3*	*16.5*
Self employed	*12.1*	*42.1*	*25.1*	*62.3*	*39.3*	*49.3*	*29.9*	*5.0*	*31.8*	*31.1*
Long term unemployment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternations	11.1	8.7	12.0	9.8	10.4	7.7	16.3	12.1	23.8	18.0
Of which mostly in employment	*11.1*	*8.7*	*12.0*	*9.8*	*10.4*	*7.7*	*16.3*	*12.1*	*23.8*	*18.0*
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Workers -D3										
Full year employment	91.7	94.3	93.1	91.3	91.9	94.9	93.6	91.7	83.3	87.8
Full time wage earners	*43.1*	*41.6*	*44.4*	*21.2*	*41.6*	*36.3*	*29.9*	*66.2*	*31.4*	*37.4*
Part time wage earners	*36.5*	*8.3*	*22.1*	*6.7*	*9.3*	*7.8*	*29.8*	*20.2*	*16.7*	*17.1*
Self employed	*12.1*	*44.4*	*26.6*	*63.4*	*41.0*	*50.8*	*33.9*	*5.3*	*35.2*	*33.2*
Long term unemployment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternations	8.3	5.7	6.9	8.7	8.1	5.1	6.4	8.3	16.7	12.2
Of which mostly in employment	*8.3*	*5.7*	*6.9*	*8.7*	*8.1*	*5.1*	*6.4*	*8.3*	*16.7*	*12.2*
Total	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: working poor.

More specifically, the increase in the share of those employed full year is spectacular, since starting with a population in which at least 30% (in Sweden) are in long-term unemployment or alternations

with D1, we end with D3 with a population in which more than 90% (except in Finland and Sweden) are in full year employment.

Shifting from D1 to D2 (exclusion of long term unemployment) results in an increase of the share of full year employment and alternations. Going from D2 to D3a (exclusion of alternations with a majority of unemployment) lowers the share of alternations to a percentage which is smaller than that observed with D1, and which goes on decreasing when we shift from D3a to D3. At the same time, the share of self employment reaches – except in the case of Germany and Luxemburg – impressive levels, from a minimum of 25% (France) to more than 60% (Greece). On the contrary, the share of part-time work remains rather stable, and even, with D3, close to that observed for the whole population of workers (cf. Table 8). The definition then seems likely to have an impact on the identification of the causes of the working poor's poverty. In order to investigate how it could influence the analysis, we use a small set of indicators of "labor market problems", *i.e*. statuses which are likely to be associated with low earnings: unemployment (including long term unemployment –if allowed by the definition– and alternations); full year part-time wage employment; full-time low wage employment[31]; self employment (a "problem" since it may correspond to a very low actual level of activity).

For all countries, unemployment is identified as the main cause when using D1 or at least among the main causes with D2, while with D3, it appears as the less frequent cause of the working poor's poverty (Table 13).

Table 13 – Labor market problems of the working poor (%)

Definition	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
Spells of unemployment										
D1	57.3	41.4	45.3	31.4	43.8	31.1	34.2	27.4	62.2	30.1
D2	20.3	19.8	21.8	16.9	19.4	14.2	22.8	19.2	42.5	24.0
D3a	11.1	8.7	12.0	9.8	10.4	7.7	16.3	12.1	23.8	18.0
D3	8.3	5.7	6.9	8.7	8.1	5.1	6.4	8.3	16.7	12.2
Part-time in full year wage employment										
D1	16.9	5.6	13.1	5.3	5.8	5.8	20.9	16.3	8.1	14.1
D2	31.5	7.7	18.7	6.4	8.3	7.2	24.6	18.2	12.3	15.3
D3	36.5	8.3	22.1	6.7	9.3	7.8	29.8	20.1	16.6	17.1
Low wage in full time employment										
D1	18.7	13.4	14.4	9.7	11.9	9.3	7.6	26.6	25.9	29.5
D2	34.9	18.3	20.7	11.8	17.1	11.5	8.9	29.7	39.5	32.1
D3	29.4	10.9	15.3	9.28	14.0	8.8	10.8	25.9	32.0	30.8
Full year self employment										
D1	5.8	27.0	15.6	47.4	24.6	36.8	23.5	4.2	15.8	26.5
D2	10.9	37.0	22.3	57.4	35.3	45.8	27.6	4.6	24.0	28.9
D3	12.1	44.4	26.6	63.4	41.0	50.8	33.8	5.3	35.2	33.2

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: working poor
Note: the total obtained for each definition of workers can be greater than 100% because unemployment and low wage employment are not exclusive.

[31] Defined by an average monthly wage below 60 % of the median average monthly wages in full-time salaried employment.

The specific impact of the additional criterion between D3a (7 months in work in the reference period) and D3 (working at the date of interview), appears especially neatly in the case of United-Kingdom, resulting in a decrease by 10 percentage points in the proportion of working poor facing a problem of unemployment.

Once long term unemployment is excluded (shift from D1 to D2), the proportions of other "labor market problems" are less impacted by a change of definition: between D2 and D3, the shares of part-time work and self employment increase slightly while that of low wage employment rises, but this does not change fundamentally the picture, which highlights mostly the contrast between Northern countries (where the most frequent problem is full-time low wage employment) and Southern countries (where the most frequent problem is self employment).

It is also interesting to notice that a significant proportion of the working poor seem to encounter none of these labor market problems, especially with definition D3 (Table 14).

Table 14 – Working poor with no employment problem (%)

Definition	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
D1	9.3	20.6	16.4	10.9	18.6	21.5	13.3	35.3	4.5	9.9
D2	17.4	28.1	23.4	13.2	26.7	26.7	15.6	39.3	6.9	10.7
D3	20.4	33.4	28.3	14.7	30.2	29.7	19.4	45.3	10.5	12.6

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: working poor

2.2. Impact on the individual characteristics of the working poor

As metionned above, changing the definition of workers could in turn, because of composition effects, result in variations in their individual characteristics. To what extent?

In terms of their demographic characteristics, the impact is rather limited: on average, the working poor are slightly older with D3 than with D1, except in Germany where they are younger (indicating that it is mostly older workers which are exposed to long term unemployment) and in Finland and Luxemburg where it is unchanged (Table 15,a). In these two countries, the effect of excluding long term unemployment (D1 to D2) is counterbalanced by the exclusion of precarious employment (D2 to D3).

Table 15 – Age and gender of the working poor

Definition	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
a. Age (mean)										
D1	40.3	38.9	39.3	39.6	37.2	40.8	39.4	37.1	39.1	34.4
D2	37.7	38.9	39.3	41.0	38.8	41.6	39.8	36.7	37.4	34.4
D3	37.9	39.7	40.1	41.5	38.9	42.5	40.6	37.4	39.5	35.9
b. Women (%)										
D1	49.0	40.5	45.9	38.7	34.1	44.3	41.9	42.3	42.4	42.1
D2	50.7	34.0	45.3	35.2	28.5	43.4	44.0	42.6	46.7	42.0
D3	51.2	30.1	43.8	34.4	26.0	43.9	45.6	41.9	45.0	41.4

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: working poor.

In terms of gender (Table 15,b), a majority of working poor are men, except in Germany with D2 and D3. In most countries, the proportion of women tends to diminish as the definition becomes stricter, this effect being more pronouced in Spain and Italy than in the other countries. In Germany on the contrary, where the share of women among the working poor is the highest of the 10 countries, and in Unite-Kingdom and Finland, it increases when the definition of workers goes from the broadest to the narrowest. This singularity, partly resulting in the case of Germany and Finland from long term unemployment concentrating on men, goes together with higher gender wage gaps in these countries than in the others.

2.3. Impact on working poor's households composition

Given the statistical construction, which combines individual activity characteristics and households disposable incomes, household characteristics are analyzed as a factor of the working poor's poverty. This dimension of the phenomenon can be illustrated by the fact that significant proportions of working poor do not seem to be poor because of labor market problems (cf. Table 14), suggesting that their poverty is rather due to their household's composition and characteristics.

Households' poverty can be thought of, in the simplest approach, as the result of an inadequation between an amount of resources and a number of dependent individuals. In the case of single households, the link between poverty and activity is direct (but being poor indicates also that social transfers do not make up for it); but when households count several members, it points also to a possible gap between the number of earners and the number of dependent members. Actually, in most countries, large shares of working poor individuals are the only worker in their household (Table 16).

Table 16 – Share of the working poor who are the only "worker" in their household (%)

		DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
D1	All	62.2	37.8	54.0	33.3	53.4	34.1	60.2	50.5	69.5	60.8
	1 person household	36.2	5.2	17.2	3.4	12.4	4.1	20.0	19.6	46.1	33.2
	Other type of household	25.9	32.6	36.8	29.8	41.0	30.0	40.1	30.9	23.4	27.5
D2	All	71.7	54.5	63.3	43.6	74.3	46.5	61.0	54.1	70.3	65.5
	1 person household	32.3	4.4	14.5	3.4	13.2	3.7	17.7	17.6	40.5	34.2
	Other type of household	39.5	50.1	48.9	40.1	61.1	42.9	43.3	36.5	29.8	31.3
D3	All	74.5	63.0	64.2	48.5	80.9	52.1	63.7	60.5	69.4	69.5
	1 person household	31.1	3.9	13.0	2.6	12.7	3.6	15.2	17.0	33.9	31.0
	Other type of household	43.4	59.1	51.2	45.9	68.2	48.5	48.5	43.5	35.5	38.5

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: working poor
Note: the number of workers in a household is computed according to each definition.

There again, the definition of workers is not neutral: the more selective it is, the smaller the number of workers by household, and the higher the share of one-worker households. The rise in the proportion of workers who are the only worker in their household results entirely from the share of workers who live in several-members households; it is the most pronounced in Southern countries, with the exception of Greece, and in Germany.

To examine whether working poor's household composition is influenced by the definition of workers, we have distributed the individuals by household type and, where it was possible[32], by gender and, in the case of households with children, distinguishing their family status: father, mother, child (Table 17).

Table 17 – Household type and family status of working poor individuals (%)

		DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
D1											
Single households	All	36.2	5.2	17.2	3.4	12.4	4.1	20.0	19.6	46.1	33.2
	Men	*18.7*	*3.4*	*8.9*	*ns*	*6.4*	*ns*	*13.8*	*10.7*	*26.2*	*23.6*
	Women	*17.5*	*1.8*	*8.4*	*ns*	*6.0*	*ns*	*6.3*	*8.8*	*19.9*	*9.6*
Couples no children	All	20.3	7.6	11.3	8.9	5.7	12.9	14.9	9.5	16.5	14.9
	Men	*10.6*	*4.4*	*6.2*	*5.6*	*3.7*	*7.3*	*7.4*	*5.5*	*8.7*	*7.8*
	Women	*9.7*	*3.1*	*5.2*	*3.3*	*2.0*	*5.6*	*7.5*	*4.0*	*7.8*	*7.2*
Couples with chil(dren)(*)	All	25.7	52.8	43.6	49.7	52.4	47.1	37.7	52.4	22.5	29.5
	Fathers	*14.5*	*31.6*	*26.9*	*28.7*	*35.5*	*26.1*	*23.0*	*32.2*	*13.7*	*16.2*
	Mothers	*9.5*	*16.5*	*14.2*	*15.2*	*10.9*	*18.3*	*11.1*	*16.3*	*8.2*	*12.4*
	Children	*1.8*	*4.6*	*2.5*	*5.8*	*6.0*	*2.8*	*3.7*	*3.9*	*ns*	*ns*
Single-parent households		11.3	4.4	12.4	2.2	4.9	6.9	11.0	9.4	7.7	15.4
Other households		6.5	30.1	15.4	35.8	24.6	29.1	16.4	9.2	7.3	7.0
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
D2											
Single households	All	32.3	4.4	14.5	3.4	13.2	3.7	17.7	17.6	40.5	34.2
	Men	*13.9*	*2.6*	*7.0*	*ns*	*6.7*	*ns*	*11.3*	*9.1*	*19.6*	*24.1*
	Women	*18.4*	*1.8*	*7.4*	*ns*	*6.5*	*ns*	*6.4*	*8.5*	*20.9*	*10.2*
Couples no child	All	17.0	7.1	12.6	9.4	6.2	14.5	15.8	9.7	17.4	15.4
	Men	*9.3*	*4.7*	*6.5*	*6.3*	*4.6*	*8.0*	*7.8*	*5.6*	*8.8*	*7.7*
	Women	*7.7*	*2.4*	*6.1*	*3.1*	*1.6*	*6.5*	*8.0*	*4.1*	*8.6*	*7.7*
Couples with child(ren)(*)	All	29.5	57.3	48.9	51.7	58.4	48.6	40.9	54.4	28.4	27.1
	Fathers	*16.8*	*40.1*	*29.8*	*32.7*	*45.2*	*29.0*	*24.4*	*34.3*	*17.5*	*15.9*
	Mothers	*10.4*	*13.3*	*17.1*	*15.3*	*9.9*	*17.1*	*12.7*	*16.6*	*10.2*	*10.5*
	Children	*ns*	*3.9*	*ns*	*3.7*	*3.2*	*2.5*	*3.8*	*3.4*	*ns*	*ns*
Single-parent households		12.5	4.2	10.3	2.0	5.4	6.2	10.6	9.7	8.1	16.1
Other households		8.7	26.9	13.8	33.4	16.9	27.0	15.0	8.7	5.5	7.2
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
D3											
Single households	All	31.1	3.9	13.0	2.6	12.7	3.6	15.2	17.0	33.9	31.0
	Men	*12.6*	*ns*	*6.1*	*ns*	*6.6*	*ns*	*8.9*	*8.1*	*16.3*	*22.0*
	Women	*18.4*	*ns*	*6.9*	*ns*	*6.1*	*ns*	*6.3*	*8.8*	*17.6*	*9.1*
Couples no child	All	17.0	7.1	13.8	9.8	6.2	14.3	14.9	9.1	17.6	15.0
	Men	*8.6*	*4.9*	*7.0*	*6.5*	*4.8*	*7.5*	*7.3*	*5.6*	*8.9*	*7.6*
	Women	*8.4*	*2.2*	*6.9*	*3.3*	*1.4*	*6.8*	*7.6*	*3.5*	*8.7*	*7.4*
Couples with child(ren)(*)	All	29.7	59.5	50.5	52.8	59.5	49.2	44.9	57.0	34.5	28.4
	Fathers	*17.0*	*44.9*	*31.3*	*34.3*	*47.6*	*30.2*	*26.0*	*37.1*	*21.4*	*18.0*
	Mothers	*10.2*	*11.7*	*17.4*	*15.5*	*8.9*	*17.1*	*14.9*	*17.2*	*12.2*	*9.9*
	Children	*ns*	*2.9*	*ns*	*2.9*	*3.0*	*ns*	*ns*	*ns*	*ns*	*ns*
Single-parent households		12.5	3.6	8.5	1.8	5.0	6.0	10.2	8.8	7.4	18.0
Other households		9.8	25.9	14.2	33.0	16.6	26.9	14.8	8.2	6.7	7.6
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: working poor
(*) Children aged less than 25.

The main impact of a change in the definition of workers is observed in the share of working poor living in a family with children, always higher with D3 than with more inclusive definitions of workers. The general counterpart is in a slightly lower share of any other situation, except in the share

[32] Depending on sample sizes.

of workers living in single-parent families in Sweden. More in detail, when the definition becomes more selective, it is the share of "fathers" which accounts for the increase in the share of families with children; the share of « mothers » remains broadly the same, except in United-Kingdom and Finland where it is higher with D3 than with D1. But broadly speaking, the impact of changing the definition of workers remains rather small, in the sense that with any definition the most represented categories remain the same. Actually, working poor's household composition reflects firstly that of the poor, whether working or not (Table 18).

Table 18 – Poor individuals by household type (%)

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
Single households	35.3	5.7	15.6	3.5	11.6	5.0	19.4	18.9	43.5	32.1
Couples no child	21.6	9.5	13.5	11.5	7.9	15.3	14.4	11.1	15.5	15.4
Couples with child(ren) (*)	25.1	49.9	45.4	47.2	51.0	42.6	36.7	51.6	26.2	30.2
Single-parent households	11.0	3.8	11.7	3.4	4.6	6.1	14.6	8.8	8.5	14.5
Other households	7.1	31.0	13.8	34.5	24.9	31.0	14.9	9.7	6.4	7.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: poor individuals
(*)Children aged less than 25.

Conclusion Part I

This first part was aimed at examining the impact of the definition of workers implemented for statistics on the working poor on the measure and profile of this population, in a comparative perspective taking into account 10 EU countries.

- The first section focuses on the specificity of the approach to activity statuses in the statistical implementation of the notion: at the difference of usual statistics on employment and activity, which are based on current statuses, the approach to the working poor adopts a longitudinal perspective, taking into account the statuses over a reference period of one calendar year. This change of perspective presents the interest of making alternations visible, while they are not observable among current activity statuses. In consequence, statistics on longitudinal activity statuses can differ significantly from the usual statistics defined following ILO norms, and it would be interesting that statistics on the working poor were complemented by contextual statistics on these longitudinal statuses.

- The second section develops the comparison between three main definitions of workers used in statistics on the working poor, and studies the impact of using one or the other on the number and characteristics of the working poor. The three definitions are the one used by the American BLS, the one used in various French studies at Insee, and the one implemented by Eurostat for the Eurpoean indicator “in-work poverty risk”. The American and French approach use mostly a norm of participation in the labor market, while the European approach uses a stricter norm of employment, not only during the reference period but also at the time of interview. This particularity raises a question, since it introduces a discrepancy between the period of reference for the measurement of income (year *N-1*) and the condition of being in employment at the date of survey (which can be any time in year *N*), condition which can be affected by national current economic situations or seasonal variations, which can bias cross country comparisons.

- The comparison of the proportions and profiles of workers (whether poor or not) shows significant differences between the definitions: as could be expected, the more selective it is, the less the number of workers; “mechanically”, the reduction in the number of workers goes together with a growth in the proportion of workers employed all the time during the reference period, and conversely, a drop (almost to the point of disappearence) in the proportion of unemployment and alternations. Beyond this general trend, not all countries appear equally “reactive” to a change of definition.

- The effects of the selectivity of the definition of workers become acute when we examine the resulting populations of working poor: the variations in the “size” of the problem are spectacular, as well as in the characteristics of the working poor – there again with an unequal sensitivity between countries. Between the broadest and the intermediate definitions, long term unemployment disappears;

then between the intermediate and the strictest definitions, alternations almost disappear also; in the end, with the strictest definition, about 90% of the working poor appear to be in stable employment – a much higher proportion than in "real" populations. The analysis of the link between individuals' activity and poverty cannot but be largely depending on the definition of workers. On the contrary, the impact of the definition of workers, even though it influences the demographic and household structures of the population of working poor, does not seem to be determinant: with any definition, the distribution of the working poor by household type remains mostly the same, and reflects above all that of the poor of working age, whether workers or not.

As a conclusion, we would like to emphasize that the definition adopted for the European indicator could lead to several problems. Firstly, there is the inconsistency mentioned above due to the criterion of employment at the date of survey. In addition, since by construction more selective employment criteria result in selecting individual who are mostly in stable employment, it necessarily draws attention in the analysis to the household situation of workers as the main risk factor of poverty.

In favour of a selective definition, strictness allows to select homogeneous subpopulations; but the counterpart is that the scope of the phenomenon is reduced by the same way, because of the exclusion of situations that proportions are very different from one country to the other. If the aim is actually to link employment characteristics and poverty in order to understand better which factors are causing workers poverty, it could be more efficient to adopt a definition of workers which allows considering all the individual situations that can be found in real labor markets. From this starting point, it would always be possible to distinguish between various statuses without having discarded some of them in the first place. The strict definition adopted for the European indicator, based on an employment norm which does not reflect economic and social reality, leads to the risk of limiting, by construction, the investigation on the causes of working poverty, the interest of cross-country comparisons and to biase the policy debate about the means to fight workers poverty. It is also questionable whether the approach adopted for the European indicator is appropriate at a time when "flexicurity" is promoted as the privileged means of the employment strategy, while the employment "flexibility" can take the form of more alternations which are precisely almost excluded by the European definition of workers. This is even more a problem that those situations which the indicator "in-work poverty risk" does not take into account are not taken into account by other European indicators.

A same type of problem could happen if Europe was to fall into an employment crisis; in this case, the indicator could evolve in a paradoxical way: with workers defined as individuals in work and having cumulated 7 months in-work in the previous year, a rise in unemployment or precarious jobs would possibly result in a decrease of the number of "workers" (more or less depending on national employment and unemployment policies), a rise in the poverty rate, and a fall in the number of in-work poor. This is certainly a limit to the exploration of the link between activity status and the risk of poverty.

II - Limits of the double-level construction and exploration of a complementary approach in terms of "poverty in earned income"

Independently of the precise criteria used to identify workers, the "working poor" statistic is particularly difficult to interpret, since it is constructed by combining activity characteristics, which are individual, and a measure of income, in theory common to all individuals living in a household, computed at the household level. As a result, the individuals in a given household are all poor, or not poor; but not all are workers. This asymmetry does not raise any problem if the aim is to analyse the activity characteristics of poor people. But it does complicate the analysis of factors which might make workers poor when the aim is to draw lessons concerning the link between work and poverty. Any working poor statistic is then difficult to interpret, because this link is blurred by the household dimension. A consequence of this construction is that on the one hand, working poor's poverty is not always the result of their individual activity status, while on the other hand unfavorable situations of activity leading to low earnings escape the category, as soon as they are offset at household level. The entanglement of individual and household, which makes the statistic difficult to interpret, raises also a problem in the analysis of its evolutions or in cross country comparisons, either at the individual level – since the same individual activity may or may not result in poverty – or at national level – since the same poverty rate of workers may result from various factors to be found in the labor market as well as in households structure and social transfers.

This part of the paper proposes firstly a short discussion of these limits; then a complementary approach aimed at linking individual activity and its economic outcome at the individual level is presented. The core notion of this approach is that of "economic poverty", identified at the individual level by a market income below the poverty threshold. At the difference of the usual approach to poverty, which refers to the household's income, "economic poverty" refers only to the individual's earnings: a person is said "economically poor" or "poor in earned income" if the income she gets from her market activity is below the poverty threshold; put in other words, economic poverty means that a person would not escape poverty if she was living alone and could count only on her earnings. Economic poverty only constitutes a poverty risk; afterwards, by contrasting poverty in earned income and poverty, we can assess to what extent transfers, between household members on the one hand, and arising from redistribution on the other hand, offset or fail to offset this risk.

For this part of the paper, we use the Insee definition of workers (D2 above).

II.1 – Disentangling individual activity and household poverty

With the construction “worker-individual / poor-household”, a worker can be poor because of an unfavorable labor market situation (unemployment, low pay, part-time, low income self employment), or because of the characteristics of his/her household (which determine the resources he/she can access, assuming sharing of resources within the household), or both. In this entanglement of dimensions, a question as simple as “what are the characteristics of activity required for a worker to escape poverty?” would be difficult to answer, because the risk of being poor is not only a question of individual activity[33]. To answer such a question, the category must somehow be "deconstructed" to be able to interpret it. In studies on working poor, this deconstruction results in an analysis in terms of “individual factors”, in other words individuals' activity or employment characteristics, and "family factors", in other words the characteristics of the households in which people live[34]. But this deconstruction does not solve the problem, because with given labor market characteristics, some workers are poor and others not, depending on their household composition and the activity characteristics of the household members. This explains why, paradoxically, the gender composition of the working poor doesn’t show women as especially over-represented[35], and when the majority of low wage workers are women, the working poor are mostly men – because women 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.

1. Poverty without employment problems and employment problems without poverty

The crucial role of the household can be highlighted by looking more closely at “labor market problems”. As we have seen above, non negligible shares of working poor have no employment problem, *i.e*. they are not self employed, they work full year, in full-time jobs, and are not low paid (*cf.* Table 14). For these workers, the cause of poverty stays clearly in their households’ characteristics (including the activity characteristics of the other household members). But conversely, non negligible shares of workers who do have an employment problem are not poor (Table 19). The reason why these workers avoid poverty stays also clearly in their households’ characteristics, either directly when the market incomes of the other household’s members make up for their own low earnings (assuming again equal sharing within the household), or indirectly, because of the role of household’s composition in various social transfers.

[33] On the link between family structure and income, *cf.* Bruniaux (1997).
[34] Often limited in descriptive statistics because of the small size of samples.
[35] On this paradox, see Maruani (2003)

Table 19 – Employment problems and poverty among workers (%)

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
No employment problem and poor	17.4	28.1	23.4	13.2	26.7	26.7	15.6	39.3	6.9	10.7
Of which % men	*76.8*	*86.2*	*78.4*	*88.3*	*88.0*	*66.2*	*74.3*	*86.9*	*64.1*	*54.1*
At least one employment problem and not poor	43.7	33.7	33.7	44.6	36.2	29.0	34.8	32.8	34.0	35.1
Of which % women	*64.5*	*54.7*	*61.8*	*43.7*	*45.6*	*51.2*	*64.5*	*68.7*	*53.5*	*65.4*
All	61.1	61.9	57.1	57.8	62.9	55.8	50.4	72.1	40.9	45.8
All workers by gender (%)										
Women	55.1	59.5	53.0	60.6	60.6	53.8	52.5	58.3	51.7	51.9
Men	44.9	40.5	47.1	39.4	39.4	46.2	47.5	41.7	48.3	48.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: workers (Insee definition).

The double-level approach is then doubly unsatisfactory, because it reveals problems linked to the labor market only if they are not offset at household level, while it eludes them, invisible as soon as they are offset at household level. In the case of revealed problems, men are overrepresented in all countries; in the case of eluded problems, women are overrepresented in all countries. Adding the proportion of workers who have no employment problems but who are poor and that of workers who have an employment problem but are not poor gives at total which goes from 41% of workers (Finland) to 72% (Luxemburg) who are poor or not poor firstly because of their household's characteristics, not because of the characteristics of their individual activity.

2. Are the working poor individuals or households?

Since the working poor are actually working individuals in poor households, are they to be studied at the individual level or at the household level? 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 [in-work poverty risk] 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 defintion puts then in focus the individual (...) even though the household composition plays a role (often a crucial one)". But according to Bardone & Guio (2005, p.1), 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 end household

employment patterns, working poverty must be analysed not only through personal and occupational characteristics but also through household characteristics"[36].

However, the analysis, at the individual level, of workers' poverty risk factors is then quite inextricable: with given worker activity, it is the composition of their households which determines their poverty risk, i.e. the presence of other people and these people's activity characteristics. We finish then by highlighting the fact that the household is a determining factor in working poverty (what can be expected as soon as poverty is identified on the basis of household level variables), without really managing to understand the interactions between household composition and the activity characteristics of the household members since the analysis is undertaken at the individual level and not at the level of the household.

With poverty identified at the household level, the "working poor" construction would actually be more consistent with a norm of activity defined at the household level. Would it be better, then, to change the perspective and study working poor households rather than working poor individuals?[37]

From a methodological point of view, consistency would be gained in that individuals' economic activity and their household's characteristics are linked, and contribute together in determining their disposable income. Defining the working poor as individuals results then in neglecting intra-household interactions and how they shape labor supply behaviours, and the fact that households' characteristics determine various social transfers and in many countries the tax on income.

But while consistency would be gained on one hand, on the other hand, that of activity, considering working poor as households would lead to serious inconsistency, because it is individuals, not households, who are in the labor market, in work or unemployed. A change in the unit of observation would then only change the side of the problem which is that if we do not know how to approach poverty at the individual level, we would not know better how to approach the household as a worker; at the household level, "work" could indeed be measured as the addition of all the months of activity of all the household members, but what would be the relevance of such an addition?[38]

Rather than shifting to a household approach, we propose in what follows to shift to a stritly individual approach based on individual activity and the individual earnings they generate.

[36] Current indicators on labor market problems do not include any indicator of low pay, and the definition of workers eliminates a large share of precarious employment.
[37] Shifting to the household level would also allow highlighting employment polarization (*cf.* Gregg & Wadsworth, 2005).
[38] This discussion was developed in Ponthieux (2004)

II.2 – A complementary indicator of poverty in earned income

This final part aims to explore an indicator of market income poverty which links, at the individual level, work and poverty risk, and allows for a twofold analysis, firstly by evaluating poverty risk on the individual level, then by examining whether it leads to actual poverty or not. After specifying the notion of poverty in earned income (or economic poverty) and the outline of the approach we are taking, we propose a very preliminary illustration of it for the sample of countries we have studied.

1. Identifiation of economic poverty at the individual level

The proposed indicator is based on the comparison of individuals' earnings and the poverty threshold. To construct the indicator, we take into account all the individual earnings from work made over the same reference period as that over which we are measuring poverty and activity (concretely year *N-1*). Individual earnings from work include the sum of yearly income from work (salaries and self-employed income) and replacement income linked to work (unemployment and sickness[39] benefits). This sum is what we call earned income or market income. It can be thought of as an extension of the notion of "salary income" implemented these last years at Insee (*cf.* Aeberhardt *et al*., 2007); a similar basis was also adopted in a study by N. Laïb (2006).

We refer to "poverty in earned income" or "economic poverty" when the total amount of this income is below the poverty threshold (using the European standard of 60% of median equivalent income[40]):

Market income = (wages and salaries + self-employed income + unemployment and sickness benefits)

Poverty in earned income = market income < poverty threshold

Poverty in earned income is conceptually different from low wage or low earnings, because it is not defined relatively to the wage distribution but by reference to the poverty threshold. A similar perspective is adopted by Marx & Verbist (1998) or by Strengman-Kuhn (2002).

As income from activity may be zero, earned income poverty has two components: the absence of eraned income, and earned income which is not nil but below the poverty threshold.

The advantage of an indicator of "poverty in earned income" is that it can be directly interpreted, since we thus evaluate the proportion of the population whose activity conditions are such that they do not provide (monetary) resources which would allow people not to be poor if they lived alone and had no other source of income. The approach therefore has the attraction of simplicity and direct comparability.

[39] This information is not available for Italy.
[40] Other references could be used, based for example on implicit thresholds of means tested benefits, or on an employment norm.

The other advantage of this approach is that it does not in principle require a definition of workers: the indicator is meaningful for all the population of working age, since it measures the proportion of this population which is not in a position to "live off their work"[41]. The next table shows the result of a first implementation for the population of potential workers[42].

Table 20 –Poverty in earned income (%)

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
Total	33.8	36.3	27.6	41.3	35.9	30.4	34.9	31.6	20.8	19.0
Of which :										
market income = 0	10.9	22.0	12.0	28.2	22.6	17.8	14.7	19.3	3.0	4.0
dont femmes (%)	*80.6*	*80.6*	*78.9*	*81.7*	*82.9*	*72.7*	*72.2*	*85.5*	*65.4*	*51.4*
market income > 0	22.9	14.3	15.6	13.2	13.3	12.6	20.2	12.3	17.7	15.0
dont femmes (%)	*66.5*	*65.6*	*68.5*	*59.7*	*59.2*	*60.5*	*65.8*	*77.3*	*55.2*	*58.5*

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: potential workers (*cf.* table 5)

Considering the population of potential workers, which includes individuals who have no earnings, the rate of poverty in earned income ranges from about 20% in Sweden or Finland to more than 40% in Greece. This percentage indicates the share of individuals of working age who do not live off their economic activity. Part of this population are people who have no earnings at all[43], with a significant difference between countries of the North, especially if look at Sweden or Finland, where it represents less than 5% of the population of potential workers, and countries of the South, where it is about 20% and up to 28% in Greece. This difference reflects firstly the disparity accounted for by women's participation in the labour market in the two groups of countries. Indeed in all countries, the overwhelming majority of individuals who are poor in terms of earned income are women, whether they have any earnings or not. When the population is restricted to those with non zero earnings, cross country differences in the rates of poverty in earned income are less pronounced, ranging from a minimum of 13% in Luxemburg, Greece, Italy and Portugal to a maximum of about 20% in United-Kingdom and Germany.

[41] The approach could be extended to a more general conception of market income by also integrating retired people into the analysis and pensions into replacement income. In this case we would need to be able to distinguish earned pensions from basic social allowances.
[42] Since the poverty threshold is computed on the basis of disposable incomes, it would be necessary to compute net earnings. Yet the data (EU-SILC UDB2006) do not provide them for all the countries: for some, only gross earnings are available – i.e. before social contributions and tax on income (Germany, Luxemburg, Finland) or after social contributions but before tax on income (France, Sweden). In these cases, it is then possible that economic poverty is under-estimated, because a gross income above the poverty threshold can correspond to a net income which would be below this threshold.
[43] Having no earnings does not necessarily mean the absence of any economic activity, as is the case of unpaid family workers. Sample sizes are too small to distinguish them.

2. Presentation of the approach based on poverty in earned income

In the analysis of the link between work and poverty, the use of the indicator, calculated using a chosen definition of "workers" (we will use the Insee definition), allows us to develop an approach in two steps, which avoids confusing the range of factors linked to labor market and employment with family configuration characteristics. The first step consists in identifying a risk of poverty at the individual level; the second step consists in examining whether it results in poverty (in its usual meaning).

At the individual level, an indicator of economic poverty (or poverty in earned income) allows to identify workers who would be poor if they lived alone and had no other source of income. The factors causing poverty in earned income can be strictly linked to labor market and employment conditions, and analyzed in terms of employment quantity, employment quality (salaried or self employment, full-time and part-time work), remuneration from the months worked, and unemployment benefits. Such an analysis would be particularly appropriate to assess the outcomes of "flexicurity".

The link between poverty is evaluated afterwards: poverty in earned income does not automatically give rise to poverty in the usual sense – in which case the poverty rate among the poor in earned income would be 100%; in this sense, it entails a poverty risk. The aim is to examine the process from individuals' activity and earnings to households' poverty, starting with the distribution of income resulting from individual activity, then introducing the household dimension and social transfers. The approach consists basically in examining whether the worker's household income is below the poverty threshold at different stages of composition of the household income[44]. It can be summarized as follows:

- the starting point is the identification of workers whose earnings are below the poverty threshold (indicator of poverty in earned income at the individual level).

- then the process from individual economic poverty to household poverty consists in adding successively the other components of the worker's household income, and examine after each addition whether he/she escapes poverty; this is done firstly at the level of the household earned income, *i.e*. the worker's own income added with the earnings of the other (if any) household's members (it could provide an indicator of household poverty in earned income); then the other private incomes of the household (income from property, interests, dividends, and net private transfers) are added, then social transfers net of social contributions and tax on income; the total resulting from these additions is the household's disposable income.

The main drawback with this approach is that individual activity and subsequent earnings are considered separately from choices of activity, as if family situations and transfers did not count, while, in all likelihood, these choices can be at least partly conditioned by familial conditions and

[44] A similar type of approach is adopted by Laïb (2006) in the case France, or Gardiner & Millar (2006) for the UK.

social transfers[45]. Yet the basis of the approach is precisely the identification of individuals whose activity characteristics are such that they would be poor if they were living in single households with their earnings as only resource. This would be a serious bias if poverty in earned income was to be interpreted as a measure of individual performance, resulting only from choices of activity made in the context of intra-household division of labor. The point of view adopted here is rather to consider poverty in earned income as an indicator of the income distribution associated to a given employment and social protection regime, hence a measure of its performance.

[45] The same type of assumption is made when poverty rates are computed before and after social transfers, as it is frequently done in studies on social protection.

II.3 – From poverty in earned income to poverty

This section illsutrates the approach presented above. The table below presents firstly how the poor in earned income are distributed by activity status (defined using the Insee definition of workers). It shows that there are pronounced contrasts between countries: in Sweden, and to a lesser degree in United-Kingdom and Finland, a majority of them are active (*i.e*. workers or unemployed), while in Luxemburg and Italy, a majority are inactive. The proportion of workers is very unequal too, going from at most one in four in Italy to more than four in five in Sweden.

Table 21 - Poor in earned income by activity status (%)

Status (Insee definition)	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
Workers (at least 6 months in the labor market and at least 1 month in work)	42.2	36.2	44.9	38.0	24.1	48.5	54.0	34.4	52.7	83.4
Unemployed (at least 6 months in the labor market and 0 month in work)	21.3	18.1	16.7	15.3	17.9	13.8	4.9	4.5	21.2	8.6
Not economically active (less than 6 months in the labor market)	36.5	45.7	38.4	46.7	58.0	37.8	41.1	61.1	26.2	8.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: potential workers poor in earned income

We focus on workers in what follows.

1. Workers' poverty in earned income

1.1. Poverty rates

Among workers, the rate of poverty in earned income varies between countries from a minimum of about 12% in Finland to a maximum of about 22% in United-Kingdom (Table 22). In any country, it is higher than the poverty rate (in its usual meaning), particularly in the case of Germany and United-Kingdom – this could be due to larger shares of women working part-time which determine a large gender earnings gap in these two countries, a gap which does not appear with the usual approach to poverty.

Table 22 – Poverty in earned income and poverty in the population of workers (%)

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
% poor in earned income	18.1	17.3	15.0	21.2	12.3	18.0	22.6	13.8	12.5	16.6
% poor in earned income and living in a poor household	3.5	5.9	3.9	8.3	4.7	6.3	6.0	4.5	4.3	6.2
% poor (usual meaning)	5.9	10.5	6.5	14.2	10.4	10.8	8.0	11.0	5.5	7.8

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: workers (Insee definition)
Reading : In Germany, 18,1% of workers (Insee definition) are poor in earned income, 3,5% of workers are poor in earned income and live in a poor household, 5,9% of all workers are poor.

Not all workers who are poor in earned income live in a poor household: this type of situation represents from about 4% in Germany and France to about 6% in the other countries (8% in Greece) of

poor in earned income workers. This illustrates the "correction" resulting from household composition and social transfers.

This proportion (of workers poor in earned income who live in a poor household) is lower than that of workers who are poor in the usual meaning. The discrepancy between the two poverty rates is resulting from the unperfect overlapping of the two notions: while all the workers who are poor in earned income and live in a poor household are working poor, the reverse is not true, *i.e*. some of the working poor are not poor in earned income. The gap between the two measures corresponds, broadly, to the percentage of workers who are poor because of "family factors", in that they would not be poor if they lived alone off their own earnings.

To get a more complete picture, we have combined the two types of poverty; the population of workers is then distributed into four groups: 1- workers poor in earned income who are not poor; 2- workers poor in earned income who are poor; 3- workers not poor in earned income but poor; and 4- workers who are neither poor in earned income nor are poor (Table 23).

Table 23 – Distribution of workers by poverty in earned income and poverty status (%)

group	Poor in earned income	Poor (usual meaning)	**DE**	**ES**	**FR**	**GR**	**IT**	**PT**	**UK**	**LU**	**FI**	**SE**
1	yes	no	14.6	11.5	11.1	12.9	7.6	11.8	16.6	9.3	8.2	10.4
2	yes	yes	3.5	5.9	3.9	8.3	4.7	6.3	6.0	4.5	4.3	6.2
3	no	yes	2.5	4.7	2.6	5.9	5.6	4.5	2.0	6.5	1.3	1.6
4	no	no	79.4	78.0	82.5	72.9	82.0	77.5	75.4	79.7	86.3	81.8
Total			100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: workers (Insee definition)

It shows firstly that group 4, neither poor in earned income nor poor, represents (fortunately) a majority of workers. It illustrates also the change of perspective with an approach based on poverty in earned income: the usual approach to working poverty is concerned with workers from groups 2 an 3, and aimed at distinguishing between those who are poor because of labor market factors (group 2), and those who are poor because of "family factors" (group 3). The approach in terms of poverty in earned income is interested firstly in those whose activity characteristics result in earnings below the poverty threshold (groups 1 and 2), and is aimed at examining which activity characteristics make them poor in earned income, and whether they escape poverty or not.

1.2. Labor market problems of economically poor workers

To analyze workers' employment characteristics, we use the same four categories of "labor market problems" as in section 2.1, adding, for those who have been unemployed, an indicator of absence of unemployment benefits.

Table 24 shows that workers poor in earned income face different employment problems depending on the country: the incidence of part-time work appears especially high in Germany, United-Kingdom and Luxemburg, that of self employment in Greece and Portugal, and low wage employment in

Finland (together with unemployment), Sweden and Luxemburg. In the case of workers who had experienced unemployment spells[46], the proportion who did not receive any benefit appears especially high in Greece, Italy, and Portugal, then in Spain and Finland.

Table 24 – Labor market problems of the poor in earned income (%)

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
Spells of unemployment	18.0	31.9	30.3	26.7	31.1	26.8	16.8	26.5	45.4	22.8
Of which % with no unemployment benefits	*2.4*	*19.6*	*9.5*	*23.6*	*24.4*	*20.7*	*8.7*	*8.4*	*27.7*	*10.4*
Part-time in full year salaried employment	50.5	22.5	35.6	12.6	20.7	13.4	48.7	45.5	17.5	25.8
Low wage in full time employment	39.5	30.3	32.7	21.4	31.3	22.7	15.8	42.4	43.8	40.9
Self employment	8.0	33.1	15.0	52.9	31.8	46.9	19.2	5.2	23.1	22.1

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: workers (Insee definition) poor in earned income
Note: the total obtained is greater than 100% because unemployment and low wage employment are not exclusive.

Compared with that observed with the usual approach to working poor (*cf.* Table 13 with definition D2), the distribution of labor market problems among workers poor in earned income differs essentially in the incidence of part-time work, which had (with the exception of Germany) the lowest incidence[47]. This difference results precisely from the fact that the usual approach to working poverty shows labor market problems only as far as they are not compensated at household level.

1.3. Demographic and household's characteristics

Women are much more exposed than men to economic poverty, and represent the majority of economically poor workers (Table 25). This gender composition is strikingly different from that of the working poor, which, on the contrary, shows a majority of men (*cf.* Table 15 with definition D2). Economically poor workers are also on average slightly younger than the working poor - except in Sweden and United-Kingdom where there is no noticeable difference in the age means.

Table 25 – Gender and age of workers poor in earned income

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
% women	69.1	62.3	69.4	60.5	57.2	61.0	67.4	76.5	53.8	55.6
Age (mean)	36.0	36.9	37.2	38.1	36.1	40.4	40.7	35.6	36.3	34.5

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: workers (Insee definition) poor in earned income

The larger share of women goes together with workers' households profiles which are also different from that observed in the population of working poor. Firstly, the proportion of one-worker households is neatly lower (Table 26 - to be compared with Table 16 with definition D2) representing

[46] The definition used for workers excludes long term unemployment.
[47] In addition, all the workers poor in earned income face (by construction) at least one employment problem, which is not the case of all the working poor.

from 21% (Luxemburg) to 40% (Finland) of workers poor in earned income, when it ranges from 44% to 74% of the working poor.

Table 26 –Workers poor in earned income who are the only "worker" in their household (%)

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
All	28.3	21.9	32.9	22.0	35.5	23.2	34.4	21.0	40.3	38.8
Living in single household	10.2	3.0	9.6	3.1	11.3	3.0	8.1	6.5	22.8	21.0
Living in other types of household	18.1	18.9	23.3	18.9	24.2	20.2	26.3	14.5	17.5	17.9

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: workers (Insee definition) poor in earned income

The distribution by household type and individual status in the household is also different from that of the working poor (table 27 - to be compared to Table 17 with definition D2). Broadly speaking, while the distribution of the working poor by household type is close to that of the poor, the distribution of the poor in earned income is close to that of workers (see Table 28). As for detailed individual statuses in the household, we observe that the share of "mothers" is much higher than among the working poor, consistent with a higher share of women in the population of workers who are poor in earned income than in that of working poor.

Table 27 – Household type and status in the household of workers poor in eraned income(%)

		DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
Single households	All	**10.2**	**3.0**	**9.6**	**3.1**	**11.3**	**3.0**	**8.1**	**6.5**	**22.8**	**21.0**
	Men	*3.6*	*1.6*	*4.1*	*1.6*	*5.7*	*1.0*	*4.5*	*ns*	*9.9*	*12.9*
	Women	*6.6*	*1.4*	*5.5*	*1.6*	*5.6*	*2.0*	*3.7*	*ns*	*12.9*	*8.0*
Couples no children	All	**18.5**	**9.9**	**23.7**	**10.7**	**10.4**	**13.6**	**21.2**	**11.5**	**29.3**	**23.1**
	Men	*4.7*	*3.2*	*6.7*	*3.4*	*3.6*	*4.8*	*6.9*	*ns*	*13.2*	*10.1*
	Women	*13.8*	*6.7*	*17.0*	*7.3*	*6.8*	*8.9*	*14.3*	*ns*	*16.2*	*13.0*
Couples with chil(dren)(*)	All	**49.4**	**43.3**	**46.1**	**38.5**	**40.9**	**38.5**	**45.2**	**54.6**	**32.7**	**42.0**
	Fathers	*3.4*	*11.4*	*8.4*	*8.6*	*12.0*	*11.9*	*9.9*	*7.2*	*9.6*	*10.1*
	Mothers	*31.7*	*24.6*	*31.7*	*23.3*	*21.4*	*20.9*	*28.8*	*41.2*	*15.0*	*23.8*
	Children	*14.3*	*7.3*	*6.0*	*6.6*	*7.5*	*5.8*	*6.5*	*6.2*	*8.1*	*8.1*
Single-parent households	All	**8.9**	**3.7**	**6.7**	**2.3**	**4.0**	**3.6**	**9.8**	**6.5**	**5.1**	**7.5**
	Parents	*3.7*	*2.0*	*5.1*	*ns*	*2.8*	*ns*	*7.4*	*ns*	*2.6*	*5.2*
	Children	*5.2*	*1.8*	*1.6*	*ns*	*1.2*	*ns*	*2.3*	*ns*	*2.5*	*2.4*
Other households		**13.0**	**40.1**	**13.9**	**45.5**	**33.4**	**41.2**	**15.7**	**21.0**	**10.1**	**6.4**
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: workers (Insee definition) poor in earned income
(*) Children aged less than 25.

Table 28 – Potential workers by type of household (%)

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
Single households	17.6	4.7	12.2	4.7	9.8	3.3	12.9	12.1	17.6	19.1
Couples no child	26.7	14.3	23.0	11.9	12.1	12.3	24.9	19.8	30.0	28.1
Couples with child(ren) (*)	39.8	42.2	49.2	43.9	43.6	45.5	39.9	49.0	41.4	43.6
Single-parent households	5.4	2.2	5.2	2.1	3.0	3.0	7.2	2.8	4.7	5.6
Other households	10.5	36.7	10.5	37.4	31.5	36.0	15.1	16.3	6.4	3.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: potential workers.
(*) Children aged less than 25.

2. From economic poverty at the individual level to poverty at the household level

As mentioned above, economic poverty is only a risk of poverty in the usual meaning: the other incomes received in the household and social transfers can counterbalance an individual's insufficient earnings so that eventually he/she escapes poverty. The last step of the approach consists in testing whether workers poor in earned income escape poverty or not once the other incomes received in their household are taken into account – assuming intra-household income sharing. Firstly, we add to the worker's own earnings the earnings received by the other members (if any) of his/her household and test whether the total is above or below the poverty threshold (Table 29a); for those whose household's total earned income is below the poverty threshold, we add the other private incomes received in the household, and again test whether the total is above or below the poverty threshold (Table 29b); finally, for those whose household total private income is below the poverty threshold, we take into account their household's total disposable income, and check whether they are poor (in the usual meaning) or not (Table 29c).

Table 29 – From poverty in earned income to poverty (%)

		DE	**ES**	**FR**	**GR**	**IT**	**PT**	**UK**	**LU**	**FI**	**SE**
All workers poor in earned income		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
29a - Other household members market income taken into account											
Worker's household earned income:	*> poverty threshold*	*66.6*	*51.9*	*51.9*	*44.1*	*46.7*	*45.9*	*55.1*	*60.8*	*49.7*	*42.6*
	< poverty threshold	33.4	48.1	48.1	55.9	53.3	54.1	44.9	39.2	50.3	57.4
29b - Other private net incomes of the household taken into account											
Worker's household private income:	*> poverty threshold*	*3.0*	*1.2*	*3.4*	*2.9*	*3.0*	*4.3*	*2.0*	*0.3*	*5.1*	*1.9*
	< poverty threshold	30.5	46.9	44.7	53.0	50.3	49.8	42.9	38.9	45.2	55.5
29c - Net social transfers taken into account Household											
Worker' household disposable income:	*not poor*	*11.3*	*12.9*	*18.7*	*13.7*	*11.9*	*15.0*	*16.3*	*6.2*	*11.0*	*18.4*
	poor	19.2	34.0	26.0	39.3	38.4	34.8	26.7	32.7	34.1	37.1

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: workers (Insee definition) poor in earned income
(*) As mentionned above, only gross income variables are provided at individual level for Germany, Luxemburg and Finland; it may result in under estimating the proportion of workers who are poor in earned income (since this gross earned income is compared to a net poverty threshold), and possibly over estimating the proportion of those who escape poverty.

The approach shows firstly that, in general, about one half of the wokers poor in earned income live in a household where the earnings of other members counterbalance their own poor earnings, *i.e.* these workers escape poverty. This proportion depends firstly on the workers household's composition, then on the activity status of these workers. Of course, for those living in single household, there are no other earnings than their own. This is why it is less frequent in countries where the incidence of single household is higher (Finland and Sweden), or those where the share of self employment is high, and concerns the whole household (Greece, Portugal, Spain in a lesser degree); on the contrary, intra-household compensation is higher in countries where poverty in earned income is linked to part-time work, meaning it concerns mostly women (Germany, Luxemburg, United-Kingdom), or countries where young workers who are more at risk of unemployment spells or low pay, stay with their parents (Spain, Italy, France to a lesser degree).

The second finding is that, in all countries, the other private incomes (income from property, interest, dividends and inter-household private transfers) of households poor in earned income have a very small impact.

The last finding is that of a significant impact of transfers. This impact results largely from the interelation between taxation and social transfers and the presence of children in the household. This can be illustrated by examining the concentration ratio[48] of poverty (usual meaning) according to the workers' type of household (Table 30).

Table 30 – Concentration ratio of poverty by household type

		DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
Single household	Total	3.5	2.4	2.0	1.8	2.4	1.8	2.7	2.7	2.1	1.9
	Men	*3.9*	*2.5*	*2.1*	*2.0*	*2.4*	*2.1*	*3.0*	*ns*	*2.3*	*2.2*
	Women	*3.3*	*2.3*	*1.9*	*1.6*	*2.3*	*1.6*	*2.2*	*ns*	*2.0*	*1.6*
Couples no child	Total	0.9	0.9	0.6	1.1	0.7	1.3	0.8	1.0	0.7	0.7
	Men	*1.6*	*1.7*	*0.9*	*1.9*	*1.3*	*1.5*	*1.2*	*ns*	*0.8*	*0.8*
	Women	*0.6*	*0.6*	*0.5*	*0.7*	*0.4*	*1.1*	*0.6*	*ns*	*0.6*	*0.6*
Couples with child(ren) (*)	Total	0.5	1.1	0.9	1.1	1.0	1.1	0.8	0.9	0.6	0.6
	Fathers	*1.5*	*2.0*	*1.8*	*1.7*	*1.9*	*1.6*	*1.9*	*1.5*	*1.2*	*1.6*
	Mothers	*0.4*	*0.8*	*0.8*	*0.9*	*0.6*	*1.0*	*0.4*	*0.7*	*0.5*	*0.4*
	Children	*0.2*	*0.7*	*0.5*	*0.7*	*0.6*	*0.6*	*0.5*	*1.0*	*0.1*	*0.1*
Single-parent households	Total	1.7	0.9	1.6	0.9	1.5	1.3	1.3	2.5	1.2	1.4
	Parents	*3.2*	*0.9*	*1.9*	*ns*	*1.8*	*ns*	*1.4*	*ns*	*1.7*	*1.7*
	Children	*0.6*	*0.9*	*0.5*	*ns*	*0.8*	*ns*	*0.7*	*ns*	*0.7*	*0.7*
Other households		0.8	0.8	1.0	0.9	0.6	0.7	0.9	0.4	0.6	1.2

Source: European Commission, Eurostat, EU-SILC 2006 users' database version February 2008.
Population: workers (Insee definition) poor in earned income.
(*) Children aged less than 25.

The crucial role of the household context in the « correction » (actually non correction) of individual poverty in earned income appears in the clear over-representation of poverty (usual meaning) among the workers poor in earned income living in single households: in any country, it is for this type of household that the concentration ratio is the highest, going from 1.8 in Greece and Portugal to 3.5 in Germany. The next workers' type of household most at risk is that of workers living in single-parent households.

The household type, or its economic composition, has nevertheless different effects depending on the individual status in his/her household (man or woman in a couple, parent or children in a family). While the household composition determines entirely the potential presence of other earners, the likelihood for their earnings to be able to compensate for those of the worker is smaller for men than for women, and smaller for parents than for children. In couples, it is firstly because women are more often inactive than men, secondly because when they are active, women's earnings are at best equal to their partners' earnings and not likely to compensate for their low level. The same applies to compensation between parents and children. Poverty concentration by household type shows also clearly that, in any country, transfers are less favorable to single households than to any other

[48] Ratio of the share of a given household type among workers poor in earned income living in a poor household and its share among all workers poor in earned income.

household configuration. As for workers who are poor in earned income and live in single-parent households, it appears that it is in countries where the incidence of this type of household is the greater (Germany, France, United-Kingdom, Luxemburg and Sweden – *cf.* Table 26) that they face on average a higher risk of poverty than that faced by workers who live in families with children.

Conclusion part II

The approach developed above addresses the particular problem of the statistical construction of a working poor-type category, which results in a hybrid unit of observation made of workers, identified by their individual characteristics on the labor market, who are poor on a basis of variables measured at the household level - following the conventional assumption of income sharing within households. Because of the "black box" effect introduced by the household dimension, this combination reduces the apparent role of labor market factors, increases that of family configurations, and in the end obscures the link between work and the risk of poverty. The construction makes employment characteristics leading to low earnings (mostly the case of women) less obvious, visible only when they are not offset at the household level, while at the same time a significant proportion of working poor have no labor market problem (mostly the case of men); it results in the now well known paradox, observable in almost all the countries compared: while women's employment situations are on average less favorable than that of men, a majority of working poor are men.

In order to go past this unsatisfying construction, we propose to complement it with an approach based on a notion of "economic poverty" or "poverty in earned income", a notion of poverty which is linked directly to individuals' situations in the labor market and which can be implemented strictly at the individual level; an individual is said poor in earned income when his/her earned income is below the poverty threshold. Since individuals who are poor in earned income are not necessarily poor in the usual meaning, economic poverty is analyzed as a risk of poverty. The proposed approach consists in studying firstly labor market situations associated with economic poverty, then examining whether, once the household dimension is taken into account and social transfers are introduced, workers poor in earned income are actually poor or not.

The interest of the approach is twofold: firstly, an indicator of poverty in earned income is meaningful in itself, its interpretation is straightforward - as a measure of economic dependence, *i.e.* the share of individuals who do not live off their activity income - and its level is directly comparable over time or between countries. It can be measured for any relevant population, of course that of workers, but also among larger groups, for example individuals of working age (and could also include retired workers), since it does not require a definition of workers. Secondly, it allows to link directly individual activity characteristics with a notion of poverty.

In addition, when implemented at the level of the whole population of working age, it emphazises women's situation, doubly disadvantaged in terms of earned income, since on the one hand, they are less frequently participating in the labor market than men, and on the other hand those who are economically active get on average smaller earnings than men. When implemented at the level of workers, it allows to go beyond the feeling that something is wrong with the usual approach to

working poverty, which by construction results in the absence from the population of working poor of large groups of women, whose employment and earnings are less favourable than that of men, and in a “low paid women / working poor men” paradox.

Unlike the conventional approach to working poverty, which mixes labor market factors and household factors which have to be disentangle in order to interpret the phenomenon, the approach based on the notion of individual poverty in earned income focuses firstly on labor market factors. It is only in a second step that the households characteristics and social transfers are taken into account. This allows to better distinguish the respective influence of these three dimensions and their articulation, and to take national specificities in each of them explicitely into account in cross-country comparisons. In complement to the usual approach to working poor, it could contribute to identify where levers useful to policies aimed at fighting poverty can be found.

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APENDICES

1 – Source and selected countries

2 – Definitions

3 – « *In-work poverty risk* » in the European indicators

4 – The *working poor* : short history of the statistical approach

Apendix 1 – Source and selected countries

Source :

The data used in the paper are from wave 2006 of EU-SILC[49] (European community statististics on income and living conditions) ; EU-SILC, which has replaced the ECHP in 2004, was in large part designed to become the EU reference source for the measurement and analysis of income, poverty and social exclusion, and of many social inclusion indicators (cf. Atkinson *et al*., 2005).

All member states participate in EU-SILC, and national data are harmonized by Eurostat. However, survey processes are not the same in all countries (survey or administrative data, type of interview,…), and in 2006, all harmonized target variables were not yet available for all countries. This is why 1) some countries do not provide detailed retrospective calendars (in place, people are asked how many months they have spent in various sitiations) and 2) incomes at individual level can be gross or net. The table below indicates for the 10 countries compared in the paper the availibilty of these informations:

	DE	ES	FR	GR	IT	PT	UK	LU	FI	SE
Detailed retrospective calendar	no	yes	yes	no	yes	yes	yes	yes	no	no
Individual incomes :										
- gross	yes	yes	no	no	no	no	yes	yes	yes	no
- nets of social contributions	no	no	yes	no	no	no	no	no	no	yes
- nets of social contributions and tax on income	no	yes	no	yes	yes	yes	yes	yes	no	no

Selected countries :

Working with sub-populations very often entails small size samples. We have considered that a minimum of 400 observations of working poor with the most selective of the definitions compared was needed for the descriptive statistics at country level. This threshold could not be satisfied for the following countries : Austri, Belgium, Denmark, Ireland and The Netherlands.

The countries studied are presented in all tables as follows:

DE	**ES**	**FR**	**GR**	**IT**	**PT**	**UK**	**LU**	**FI**	**SE**
Germany	Spain	France	Greece	Italy	Portugal	United-Kingdom	Luxemburg	Finland	Sweden

[49] UDB-2006 ver 2006-1 from 01-03-08

Apendix 2 – Definitions

The main definitions used in the document (either usual or specific) are presented below, in their order of apparition in the text.

Poverty threshold

The poverty threshold is measured as 60% of the median national equivalent income.

Equivalent income: equal to the household disposable income divided by the number of equivalent adults.
Disposable income: sum, over all the household's members, of work and replacement incomes (salaries, income from self employment, retirement pensions, unemployment, sickness and incapacity benefits), capital and property income, inter-household net transfers and social transfers received, minus social contributions and direct taxes.
Equivalent-adult: the number of equivalent adults in a household is obtained using the "modified-Oecd" equivalence scale, *i.e*. a weight of 1 for the first adult of the household, 0.5 for each additional adult (aged 14 and over) and 0.3 for each child.

Potential workers

Population of individuals aged from 16 to 64 in the reference year, excluding those who were students or in retirement during the refrence period, and for whom the retrospective calendar covers the 12 months of this reference period.

Low-wage

Monthly wage below 60% of national monthly wage. An individual monthly wage is computed as the yearly wage divided by the number of months in work during the refrence period. Computed only for employees in full-time work.

Market income

Sum of wages, self employed incomes, unemployment and sickness benefits received during the reference period.

Poverty in earned income / economic poverty

Market income below the poverty threshold.

Levels of income measurement

Individual: market income

Household :

- market income = sum of all household members market incomes.
- private income = market income + capital and property income + inter-households net transfers
- disposable income = private income + social transfers received – social contributions and taxes

Apendix 3 – « *In-work poverty risk* » in the European indicators

The indicator "*in-work poverty risk*" is one of the 13 indicators retained in the overarching portfolio for the monitoring of the European strategy as defined in Lisbon by the European Commission in 2006 (*cf*. European Commission, 2006a ; see also Caussat et Lelièvre, 2007, p.4). It is also one of the analysis indicators retained for the monitoring of the employment strategy for 2005-2008 which mentions explicitely the reduction of in-work poverty as an objective (*cf*. European Commission, 2006b), under guideline 19 "Ensure inclusive labor markets, enhance work attractiveness, and make work pay for job seekers, including disadvantaged people and the inactive (…)",.

The indicators in these lists (agreed by Member States) are the information used in the "Open method of coordination" (OMC[50]). Based on benchmarking techniques, the method is aimed at comparing national performances and sharing of "good practices" in the various areas of the Lisbon strategy and objectives (of which one was the eradication of poverty by 2010). The indicators are defined in order to measure Member States performances.

1 – REVISED LIST OF OVERARCHING INDICATORS (from European Commission, 2006a)

3.2. Overarching portfolio

The table indicates for each indicator the key dimension covered, the "name" and definition of each indicator and whether it is considered a commonly agreed EU indicator (EU) or a commonly agreed national indicator (NAT).

	Key dimension *overarching objectives concerned*	**Commonly agreed EU indicator (EU)** **Commonly agreed national indicators (NAT)**[1]	**Definition**	**Breakdowns**
1a	Risk of poverty (a)	**EU: At-risk-of-poverty rate** **+ Illustrative threshold value** ***In future consider the possibility to add At-persistent risk of poverty rate***	Share of persons aged 0+ with an equivalised disposable income below 60% of the national equivalised median income2. Value of the at-risk-of-poverty threshold (60% median national equivalised income) in PPS for an illustrative household type (e.g., single person household) Source: SILC	By age: Total, 0-17, 18-64, 65+
1b	Intensity of poverty risk (a)	**EU: Relative median poverty risk gap**	Difference between the median equivalised income of persons aged 0+ below the at-risk-of poverty threshold and the threshold itself, expressed as a percentage of the at-risk-of poverty threshold.	By age: Total, 0-17, 18-64, 65+

[1] **Commonly agreed national indicators based on commonly agreed definitions and assumptions** that provide key information to assess the progress of MS in relation to certain objectives, while not allowing for a direct cross-country comparison, and not necessarily having a clear normative interpretation. These indicators/statistics should be interpreted jointly with the relevant background information (exact definition, assumptions, representativeness).

[2] **Equivalised median income** is defined as the household's total disposable income divided by its "equivalent size", to take account of the size and composition of the household, and is attributed to each household member (including children). Equivalization is made on the basis of the OECD modified scale.

[50] The European Commission website provides a short presentation of the OMC. See also: R. Salais, 2004, « De la production de connaissances à la fabrication du chiffre. L'exemple de la méthode ouverte de coordination appliquée à la stratégie européenne pour l'emploi », Actes des 10èmes Journées de l'ACN, Paris:Economica; J. Zeitlin *et al.*, 2005, *The open method of coordination in action : the European employment and social inclusion strategies*, Bruxelles:PIE.

	Key dimension *overarching objectives concerned*	Commonly agreed EU indicator (EU) Commonly agreed national indicators (NAT)[1]	Definition	Breakdowns
2	Income inequalities (a)	**EU: S80/S20**	Ratio of total income received by the 20% of the country's population with the highest income (top quintile) to that received by the 20% of the country's population with the lowest income (lowest quintile). Income must be understood as equivalised disposable income. Source: SILC	None
3	Health outcome, inequality in health (a)/(b)	**NAT: Healthy life expectancy**	Number of years that a person at birth, at 45, at 65 is still expected to live in a healthy condition (also called disability-free life expectancy). To be interpreted jointly with life expectancy Source: Eurostat	At birth, at 45, at 65 By sex *(By SES)*

	Key dimension *overarching objectives concerned*	Commonly agreed EU indicator (EU) Commonly agreed national indicators (NAT)[1]	Definition	Breakdowns
4	Educational outcome and human capital formation (a)/(b)	**EU: Early school leavers**	Share of persons aged 18 to 24 who have only lower secondary education (their highest level of education or training attained is 0, 1 or 2 according to the 1997 International Standard Classification of Education – ISCED 97) and have not received education or training in the four weeks preceding the survey. Source: LFS	By sex
5	Access to labour market (a)/(b)	**EU: People living in jobless households**	Proportion of people living in jobless households, expressed as a share of all people in the same age group3. This indicator should be analysed in the light of context indicator N°8: jobless households by main household types Source: LFS	By age: 0-17, 18-59 By sex (18+ only)

	Key dimension *overarching objectives concerned*	Commonly agreed EU indicator (EU) Commonly agreed national indicators (NAT)[1]	Definition	Breakdowns
6	Financial Sustainability of social protection systems (a)	**NAT: Projected Total Public Social expenditures**	Age-related projections of total public social expenditures (e.g. pensions, health care, long-term care, education and unemployment transfers), current level (% of GDP) and projected change in share of GDP (in percentage points) (2010-20-30-40-50) Specific assumptions agreed in the AWG/EPC. See "The 2005 EPC projections of age-related expenditures (2004-2050) for EU-25: underlying assumptions and projection methodologies" Source: EPC/AWG	
7a	Pensions adequacy (a)	**EU: Median relative income of elderly people**	Median equivalised income of people aged 65+ as a ratio of income of people aged 0-64 Source: EU-SILC	-
7b	Pensions adequacy (a)	**EU: Aggregate replacement ratio**	Median individual pensions of 65-74 relative to median individual earnings of 50-59, excluding other social benefits Source: EU-SILC	By sex
8	Inequalities in access to health care (a)	***Unmet need for care***	*Use, definition and breakdowns yet to be agreed upon once data is available for all countries.* *Source: EU-SILC*	-

	Key dimension *overarching objectives concerned*	Commonly agreed EU indicator (EU) Commonly agreed national indicators (NAT)[1]	Definition	Breakdowns
9	Improved standards of living resulting from economic growth (a)/(b)	**EU: At-risk-of-poverty rate anchored at a fixed moment in time (2005)** ***Possibly replaced or supplemented in future by material deprivation or consistent poverty indicators***	Share of persons aged 0+ with an equivalised disposable income below the at-risk-of-poverty threshold calculated in year 2005 (1st EU-SILC income reference year for all 25 EU countries), up-rated by inflation over the years. Source: SILC	By age: Total, 0-17, 18-64, 65+ By sex (18+ only)

	Key dimension *overarching objectives concerned*	Commonly agreed EU indicator (EU) Commonly agreed national indicators (NAT)[1]	Definition	Breakdowns
10	Employment of older workers (a)/(b)	**EU: Employment rate of older workers** ***Possibly replaced or supplemented by "average exit age from the labour market" when quality issues are resolved***	Persons in employment in age groups 55 - 59 and 60 – 64 as a proportion of total population in the same age group Source: LFS	By age: 55-59; 60-64 By sex
11	In-work poverty (a)/(b)	**EU: In-work poverty risk**	Individuals who are classified as employed4 (distinguishing between "wage and salary employment plus self-employment" and "wage and salary employment" only) and who are at risk of poverty. This indicator needs to be analysed according to personal, job and household characteristics. It should also be analysed in comparison with the poverty risk faced by the unemployed and the inactive. Source: SILC	By sex

[4] Individuals classified as employed according to the definition of most frequent activity status. The most frequent activity status is defined as the status that individuals declare to have occupied for more than half the number of months in the calendar year.

	Key dimension *overarching objectives concerned*	Commonly agreed EU indicator (EU) Commonly agreed national indicators (NAT)[1]	Definition	Breakdowns
12	Participation in labour market (a)/(b)	**EU: Activity rate** ***Possibly replaced or supplemented in future by MWP indicators***	Share of employed and unemployed people in total population of working age 15-64 Source: LFS	By sex and age: 15-24, 25-54, 55-59; 60-64; Total
13	Regional cohesion (a)/(b)	**NAT: Regional disparities – coefficient of variation of employment rates**	Standard deviation5 of regional employment rates divided by the weighted national average (age group 15-64 years). (NUTS II) Source: LFS	
14	*More health (a)/(b)*	***To be decided following ISG work on health indicators***		

2 – INDICATORS FOR MONITORING OF THE EMPLOYMENT STRATEGY (from European Commission, 2006b)

INDIC/17/111006/EN

Employment Guidelines (2005-08) - indicators for monitoring and analysis - endorsed by EMCO 19/09/06.

Guideline 19

Ensure inclusive labour markets, enhance work attractiveness, and make work pay for job-seekers, including disadvantaged people, and the inactive *through:*

- *active and preventive labour market measures including early identification of needs, job search assistance, guidance and training as part of personalised action plans, provision of necessary social services to support the inclusion of those furthest away from the labour market and contribute to the eradication of poverty;*
- *continual review of the incentives and disincentives resulting from the tax and benefit systems, including the management and conditionality of benefits and a significant reduction of high marginal effective tax rates, notably for those with low incomes, whilst ensuring adequate levels of social protection;*
- *development of new sources of jobs in services to individuals and businesses, notably at local level.*

Indicators for monitoring

Indicator and definition Targets in capitals	**Subgroup**	**Other use**
19.M1 Long-term unemployment rate. *Source QLFD* Total long-term unemployed population (12 months or more) as a proportion of total active population	Sex	SI, SPC, Q20
19.M2 Preventative services. *National sources* Share of young/adult unemployed becoming unemployed in month X, still unemployed in month X+6/12, and not having benefited from intensive counselling and job-search assistance. (LMP category 1) [target value 0%=full compliance] Method: B*/A. In addition, on a voluntary basis, B*/(B*+C*) A = Inflow into unemployment in month X B* = Persons still unemployed in month X+6/12 months who did not receive intensive counselling and job-search assistance C* = Persons still unemployed in month X+6/12 months who received intensive counselling and job-search assistance See conventions to be applied when calculating this indicator at the end of this list.	**X+6/12, sex**	
19.M3 NEW START (a). *National sources* Share of young/adult unemployed becoming unemployed in month X, still unemployed in month X+6/12, and not having been offered a new start in the form of training, retraining, work experience, a job or other employability measure. (**New start = a job or** LMP categories 2-7) [target value 0%=full compliance] Method: B/A. In addition, on a voluntary basis, B/(B+C) A = Inflow into unemployment in month X B = Persons still unemployed in month X+6/12 months who did not receive a New Start C = Persons still unemployed in month X+6/12 months who received a New Start but still unemployed See conventions to be applied when calculating this indicator at the end of this list.	**X+6/12, sex**	
19.M4 ACTIVATION OF LONG-TERM UNEMPLOYED. *Sources national and LMP* Stock of participants in an active measures (cat 2 -7) that were previously long-term registered unemployed divided by the stock of long-term registered unemployed plus the stock of participants in active measures that were previously long-term and whose unemployment registration is interrupted by an active measure. Long-term unemployed = 12+months for adults (25+) and 6+ months for youth (<25).	TOTAL Measure (LMP cat 2–7), sex	
19.M5 Labour market gaps for disadvantaged groups. *National sources* Gaps on the labour market, such as difference between the employment, unemployment and activity rates for a non-disadvantaged group in percentage points and the corresponding rates for the disadvantaged group (such as non-EU nationals, disabled people, ethnic minorities, immigrants, low skilled people, lone parents, etc. according to national definitions.)	Sex	Q27, Q28
19.M6 Poverty (low wage) trap. *Source OECD – EC* The marginal effective tax rate on labour income taking account the combined effect of increased taxes on labour and in-work benefits withdrawal as one increases the work effort (increased working hours or moving to a better job). Calculated as the ratio of change in personal income tax and employee contributions plus change (reductions) in benefits, divided by increases in gross earnings, using the "discrete" income changes from 34-66% of APW. Breakdown by family types: one earner couple with two children, single parent with two children and single person.	Family types	SI, SPC
19.M7 Unemployment trap *Source OECD – EC* The marginal effective tax rate on labour income taking account the combined effect of increased taxes and benefits withdrawal as one takes up a job. Calculated as one minus the ratio of change in net income (net in work income minus net out of work income) and change in gross income for a single person moving from unemployment to a job with a wage level of 67% of the APW.		SI, SPC

Indicators for analysis

19.A1 Inflow into long-term unemployment. *National sources* Share of young/adult unemployed becoming unemployed in month X, still unemployed in month X+6/12 without any break **of more than one month**	Young/adults X+6/12, sex	
19.A2 Activation *Source LMP* Number of participants in LMP measures (training, retraining, work experience or other employability measure)/in assisted activation programmes divided by the number of persons wanting to work (LFS unemployed plus labour reserve).	**Total Regular/Assisted Sex**	
19.A3 Activation of registered unemployed *Source LMP* Stock of participants in active measures (training, retraining, work experience or other employability measure) that were previously registered unemployed divided by the stock of registered unemployed plus the stock of participants in active measures that were previously registered unemployed and whose unemployment registration is interrupted by participation in an active measure.	Sex	
19.A4 New start (b). *National sources* Share of young/adult unemployed becoming unemployed in month X, still unemployed in month X+6/12, and not having been offered a new start in the form of training, retraining, work experience, a job or other employability measure. (**New start = a job or** LMP categories 1-7) [target value 0%=full compliance] **Method: B/A. In addition, on a voluntary basis, B/(B+C)** **A = Inflow into unemployment in month X** **B = Persons still unemployed in month X+6/12 months who did not receive a New Start** **C = Persons still unemployed in month X+6/12 months who received a New Start but still unemployed** Source: National data **See conventions to be applied when calculating this indicator at the end of this list.**	**X+6/12, sex**	
19.A5 Transitions into employment/training *Source SILC* Transitions of unemployed people into employment and training from year n to year n+1.	Sex	Q17
19.A6 Follow-up of participants in active measures. *National sources* 1. Rate of inflow of LMP participants into employment (3 or 6 months after participation in a measure) 2. Rate of return of LMP participants into unemployment (3 or 6 months after participation in a measure)	Sex	
19.A7 LMP expenditure. *Source LMP.* LMP expenditure as % of GDP	Active, passive measures	
19.A8 LMP expenditure per person wanting to work *Source LMP* Expenditure on LMP divided by the number of persons wanting to work (LFS unemployed plus labour reserve)	Services active, passive measures	
19.A9 Labour reserve. *Source LFS* Inactive persons wanting to work as a percentage of working age population 15-64. Annual average	Main reason for inactivity, sex	
19.A10 In-work-poverty risk. *Source EU-SILC* Individuals who are classified as employed (distinguishing between "wage- and salary employment plus self-employment" and "wage and salary employment" only) and who are at risk of poverty (whose equivalised disposable income is below 60% of national median equivalised disposable income).	Sex	SPC
19.A11 Employment rate in services. *Source QLFD* Number of employed persons working in the services sector (in main job) aged 15-64 as percentage of the population of the same age group	Sex	

Apendix 4 – Steps in the definition of the European indicator "in-work poverty risk"

The indicator *"in-work poverty risk"* was first adopted in 2003 by the EU Social Protection Committee, and added as a secondary indicator to the list of "Laeken" indicators[51] designed to monitor national performances in the fight against poverty and social exclusion.

The new indicator did not result from the harmonization of prior national definitions or measurement practices, since with a few exceptions, such practices did not exist. A review of the indicators provided by the member states in the first edition of the reports on National Action Plans submitted to the Commission in 2001 (*cf.* Atkinson *et al*, 2002), shows that only five in the then fifteen Member States included working-poor type indicators: Belgium and Ireland assessed the proportion of low-wage workers, Portugal evaluated the proportion of workers on low incomes from work, Spain the proportion of poor individuals by employment status, and France referred to the poverty rate of "workers" following the definition used by Insee (a definition that the report criticized for including the unemployed).

The formulation of the indicator results from debates within the Social Protection Committee on the basis of recommendations of the "Atkinson report" (Atkinson *et al*, 2002). Initially, the report recommended an indicator focusing on "previous year and current workers", *i.e.* individuals in work at the time of interview, who had been participating in the labor market at least 6 months during the previous year and whose most frequent activity status was employment (see Atkinson et al, 2002, pp.147-49). The indicator was to be supplemented with an indicator of the proportion of low hourly wages, defined as hourly earnings below 2/3 of the median hourly earnings. In order to face the constraint of data availability (the yearly income is known only with a lag of one year, and the activity status at a given time during the year of survey can differ from the one which generated the income in the previous year), the report suggested to approach poverty on the basis of a concept of "current modified income" (*cf.* Atkinson *et al*., 2002, p.107), computed as the annualized current regular components of income (those known on a monthly basis at the time of interview: wages, social benefits, pensions) added to the other components measured over the most recent period. This approach, a bit complex, was aimed at reconciling the reference to the preceding year for the income variable and other informations such as household composition, detailed activity status, and current employment characteristics - especially the monthly wage and working hours which were te be used to compute the low-pay indicator - which refer to the current situation. This notion of "current modified income" has not been applied.

The Social Protection Committee, which adopted the current indicator, has also not validated the inclusion of an indicator of low pay, probably fearing an interpretation in terms of norm of minimum wage - not an objective, at the time, for the Employment Committee (see Lelièvre *et al*, p.158); there is no recommandation for an additional indicator of low pay in the next report (Atkinson *et al*., 2005). Finally, as for the definition of workers, the Social Protection Committee - especially the Indicators Sub-Group - considered that the operating method suggested in the Atkinson report (current employment + participation + most frequent status) was too complex and contained various incoherencies; a more direct sorting method, focusing only on the current activity status and the most frequent activity status was preferred (cf. Lelièvre *et al*., p. 161).

[51] This list has been revised since – see Apendix 3 and European Commission, 2006a.