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Income poverty and material deprivation in European countries

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Income poverty and material deprivation
in European countries

Eurostat is the Statistical Office of the European Union (EU). Its mission is to provide the EU with high-quality statistical information. To that end, it gathers and analyses data from the National Statistical Institutes (NSIs) across Europe and provides comparable and harmonised data for the EU to use in the definition, implementation and analysis of EU policies. Its statistical products and services are also of great value to Europe's business community, professional organisations, academics, librarians, NGOs, the media and citizens. In the social field, the EU Statistics on Income and Living Conditions (EU-SILC) instrument is the main source for statistics on income, poverty, social exclusion and living conditions.

Over the last years, important progress has been made in EU-SILC. This is the result of the coordinated work of Eurostat and the NSIs, *inter alia* in the context of the EU 'Living Conditions' Working Group and various thematic Task-Forces. Despite these significant achievements, EU-SILC data are still insufficiently analysed and used.

It is in this context that Eurostat launched in 2008 a call for applications with the following aims:

(1) develop methodology for advanced analysis of EU-SILC data;

(2) discuss analytical and methodological papers at an international conference; and

(3) produce a number of publications presenting methodological and analytical results.

The 'Network for the Analysis of EU-SILC' (Net-SILC), an ambitious 18-partner Network bringing together expertise from both data producers and data users, was set up in response to this call. The initial Net-SILC findings were presented at the international conference on 'Comparative EU Statistics on Income and Living Conditions' (Warsaw, 25-26 March 2010), which was organised jointly by Eurostat and the Net-SILC network and hosted by the Central Statistical Office of Poland. A major deliverable from Net-SILC is a book edited by Anthony B. Atkinson (Nuffield College and London School of Economics, United Kingdom) and Eric Marlier (CEPS/INSTEAD Research Institute, Luxembourg). It was published by the EU Publications Office (OPOCE) in December 2010 and can be downloaded free of charge from:
(http://epp.eurostat.ec.europa.eu/portal/page/portal/product_details/publication?p_product_code=KS-31-10-555)

The present methodological paper is also an outcome from Net-SILC. It was prepared by Anne-Catherine Guio (IWEPS, Belgium) and Alessio Fusco and Eric Marlier (both CEPS/INSTEAD, Luxembourg). Gara Rojas González was responsible at Eurostat for coordinating the publication of the methodological papers produced by Net-SILC members.

It should be stressed that this methodological paper does not in any way represent the views of Eurostat, the European Commission or the European Union. The authors have contributed in a strictly personal capacity and not as representatives of any Government or official body. Thus they have been free to express their own views and to take full responsibility both for the judgments made about past and current policy and for the recommendations for future policy.

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Furthermore, Eurostat databases are freely available at this address, as are tables with the most frequently used and requested short- and long-term indicators.

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Income poverty and material deprivation in European countries

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Abstract: Since 2009, the European Union (EU) portfolio of commonly agreed social indicators includes measures of material deprivation. The rationale for this inclusion is that if purely income-based indicators of poverty and inequality are essential, they are nevertheless not sufficient to satisfactorily reflect the diversity of living conditions in the EU, especially since the 2004 and 2007 enlargements. The paper analyses the relationship between income poverty and material deprivation in 25 European countries (24 EU Member States plus Norway) and aims at identifying the most important factors that determine the risk of being income poor and/or materially deprived. It is based on the 2007 cross-sectional data of the *EU Statistics on Income and Living Conditions* (EU-SILC) users' data base.

Key words: material deprivation, income poverty, European Union, EU-SILC, open method of coordination, social inclusion

1. Introduction

Since the March 2000 Lisbon Summit of EU Heads of State and Government, European Union (EU) Member States and the European Commission have cooperated in the field of social policy on the basis of the so-called *Open Method of Coordination (OMC)*. The OMC has significantly developed over time and now covers EU cooperation in three main policy areas: social inclusion (formally launched in March 2000), pensions (since 2001), and health care as well as long-term care (since 2004). It also includes information exchanges in the field of *making work pay*. For monitoring the Social OMC, EU countries and the European Commission have adopted commonly agreed indicators. This set of indicators is continuously updated and completed. The first set of commonly agreed indicators were adopted in 2001 and the most recent list in 2009 (European Commission, 2009).[2]

A major novelty in this most recent list is that it now includes measures of material deprivation (and also of housing deprivation which we do not address here). The rationale for this inclusion is that if purely income-based indicators of poverty and inequality are essential, they are nevertheless not sufficient to satisfactorily reflect the diversity of living conditions in the EU, especially since the 2004 and 2007 enlargements.[3] Material deprivation can be defined as the inability to possess the goods and services and/or engage in activities that are ordinary in the society or that are socially perceived as 'necessities'.

The paper takes as a starting point the different methodological options discussed in previous publications (e.g., Marlier *et al* (2007), Guio (2009), Guio *et al* (2009)) and aims at deepening the analysis of material deprivation in Europe. Its main focus is on the relationship between income poverty and material deprivation (EU definitions; see below, Section 2), and also on the identification of the factors that impact on the risk of income poverty and/or deprivation. A better understanding of this relationship and of these factors has

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[2] For more information on these commonly agreed social indicators and their (potential) use in the Social OMC, see for instance Atkinson *et al* (2002) and Marlier *et al* (2007; forthcoming). Useful Social OMC-related documents, including the 2009 and 2010 EU *Joint Reports on Social Protection and Social Inclusion*, can be downloaded from the European Commission websites: http://ec.europa.eu/social/main.jsp?catId=750&langId=en and http://ec.europa.eu/social/main.jsp?catId=753&langId=en.
For the national values of the commonly agreed EU indicators for social inclusion and various breakdowns of these, see:
http://epp.eurostat.ec.europa.eu/portal/page/portal/employment_and_social_policy_indicators/omc_social_inclusion_and_social_protection/social_inclusion_strand

[3] As a result of the 2004 enlargement, the EU grew from 15 to 25 Member States. The 10 new EU countries were Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovenia and Slovakia. In 2007 (the most recent enlargement), Bulgaria and Romania joined. For a list of all 27 EU Member States as well as their official abbreviations, see Table A1 in Annex.

become even more important since the adoption in June 2010 by the European Commission and all 27 Member States of a social inclusion target for the EU as a whole. This target, which represents an important step forward in the EU political commitment to combat poverty and social exclusion, is indeed based on a combination of three indicators: the number of people considered 'at-risk-of-poverty' and the number of materially deprived persons (EU definitions except that for deprivation the criterion retained for the target is stricter; see below, Section 2), and the number of people aged 0-59 living in 'jobless' households (defined, for the purpose of the EU target, as households where none of the members aged 18-59 are working or where members aged 18-59 have, on average, very limited work attachment).[4] The data used are those of the 2007 cross-sectional *EU Statistics on Income and Living Conditions (EU-SILC)* data.[5]

Section 2 of the paper briefly introduces the concepts of income poverty and material deprivation and the data used in the analysis. Section 3 provides some national figures for the EU indicators of income poverty and material deprivation. Section 4 analyses (at individual level) the relationship between income poverty and material deprivation. Section 5 provides a characterisation of income poverty and material deprivation through the application of multinomial logit regressions for each country separately. Finally, Section 6 concludes.

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[4] The target was adopted in the context of the new Europe 2020 Strategy which, since June 2010, replaces the 2000-2010 Lisbon Strategy (European Commission, 2010). It consists of lowering by 20 million the number of people who are at risk of poverty and/or deprived and/or living in 'jobless' households. For the EU-27 as a whole, this number is currently around 120 million. For a detailed discussion of some of the key challenges to be met by the new Strategy, see Frazer, Marlier and Nicaise (2010).

[5] Together with the Labour Force Surveys, EU-SILC provides the data for most of the Social OMC indicators on a comparable basis across all EU Member States. All EU-27 countries were covered in the 2007 wave of EU-SILC but data for 3 countries (Bulgaria, Malta and Romania) were not included in the 2007 cross-sectional data-files that were made available to researchers in the 01.08.09 EU-SILC users' database. EU-SILC also covers a few non-EU countries. Norway is one of them and various figures for Norway are also presented in the paper.

For detailed information on EU-SILC, see web-site of Eurostat, the Statistical Office of the European Communities: http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home.

2. Concepts and data

Income poverty and material deprivation are two concepts that can be used in conjunction to analyse different aspects of households' and individuals' living conditions. The two concepts are directly related to the definition of poverty that the EU Council of Ministers agreed back in 1985 and according to which the poor are 'the persons whose resources (material, cultural and social) are so limited as to exclude them from the minimum acceptable way of life in the Member State to which they belong' (Council, 1985). This definition is relative and includes both outcome elements ('the exclusion of minimum acceptable way of life....') and input elements ('... due to a lack of resources').

In the income poverty approach, the focus is on the (lack of) financial resources available to individuals for meeting their needs, with the latter being defined in relation to an 'ordinary' or 'minimum living pattern' in the society where they live. Because it focuses on the means available to individuals (or to the households they belong to), this approach is said to be an indirect approach to poverty and social exclusion. By contrast, 'direct' (outcome) approaches are based on the direct observation of the effective rather than potential satisfaction of the needs, that is on the actual results that individuals manage to achieve. In this case, the measurement is based on non-monetary indicators of material deprivation (for the first literature on this, see for instance: Townsend, 1979; Mack and Lansley, 1985; Dickes, 1989; Nolan and Whelan, 1996), or to assess failure to achieve a range of basic functionings (Chiappero Martinetti, 2000).[6] Means have an instrumental value in reaching a given level of well-being whereas direct outcomes have an intrinsic value. If Ringen (1988) considers that the choice between a direct or an indirect conception is ideological, and raises questions about the individual versus social responsibility, Nolan and Whelan (2010:307) argue that the case for using non-monetary indicators is that 'they can bring out what it means to be poor, help to do a better job than income on its own in identifying the poor, and also directly capture the multifaceted nature of poverty and exclusion'.

The measurement of income poverty is well established in the EU since 2001, when the European Commission and Member States adopted the first indicators in this field: the *at-risk-of-poverty* rate as well as the median *at-risk-of-poverty* gap, the persistent *at-risk-of-poverty* rate and the *at-risk-of-poverty* rate anchored at a point in time. In each country, the EU indicator of *at-risk-of-poverty* rate is calculated with a threshold set at 60% of the national household equivalised median income; it is thus a relative definition. An individual is considered income poor (or at risk of poverty) if the equivalised income of his/her household is below this threshold. The equivalence scale applied to take

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[6] Alcock (2006) considers that the indirect approaches focus on what people actually *have or do not have* in order to meet their needs whereas the direct approaches focus on what people *actually do or do not do*.

account of differences in household size and composition is the *modified OECD scale*, which assigns a value of 1 to the first adult in the household, 0.5 to each other adult and 0.3 to each child under 14. Even though it is the total household income that is taken into account, the unit of analysis is thus the individual (for more details, see Atkinson *et al*, 2002). The concept of income that is used is broad as it comprises earnings from work including company cars, all social benefits received in cash, income from investment and property and inter-households payments. It is however not comprehensive as it currently excludes non-monetary income components such as imputed rents, the value of goods produced for own consumption and non-cash employee income (with the exception of company car).

The measurement of material deprivation has been regularly on the EU agenda since 2004 but it is only since 2009 that two indicators have been formally agreed and added to the EU set of indicators for social inclusion. Originally proposed by Guio (2009), these indicators significantly improve the multi-dimensional coverage of the EU portfolio of indicators for social inclusion. The construction of material deprivation indicators requires data on the extent to which households that would like to possess specific 'basic' commodities, or to engage in certain 'basic' activities, cannot do so because of financial pressures; it also requires that three key questions be tackled: the selection of items, the dimensional structure of the list of relevant items and their aggregation. As is the case for the income poverty, the unit of analysis for the EU indicator of deprivation is the individual (considered within his/her household). The methodology followed at the EU level for addressing the afore-mentioned key questions has been detailed by Guio (2009) and Guio *et al* (2009) and is not developed here.

Calculated on the basis of EU-SILC data, the two newly endorsed EU indicators on material deprivation are based on the following 9 items:

1. to face unexpected expenses[7];
2. one week annual holiday away from home;
3. to pay for arrears (mortgage or rent, utility bills or hire purchase instalments);
4. a meal with meat, chicken or fish every second day;
5. to keep home adequately warm;
6. to have a washing machine;
7. to have a colour TV;
8. to have a telephone;
9. to have a personal car.[8]

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[7] The capacity to face unexpected expenses is defined in each country as the monthly income poverty threshold for a one-person household in the year T-2.
[8] See Whelan *et al* (2008) for another proposition for a deprivation scale in the EU. The consumption scale they propose contains 7 items. The same as the official index except for telephone, washing machine and colour TV; it also includes the ability to afford a PC.

The first EU indicator is a deprivation rate defined as the proportion of people living in households who lack at least 3 of these 9 items because they cannot afford them. The second indicator measures the intensity of deprivation, that is the mean number of items (from 0 to 9) lacked by people. (For more information, see Guio, 2009 and Guio *et al*, 2009.) [9]

These indicators of material deprivation aggregate information focused on some key aspects of *material* living conditions; they do not aim at covering all the dimensions of poverty and social exclusion (i.e., health, employment, education, social participation, etc). It is essential to stress that the focus of the material deprivation indicators discussed in this paper is not on the lack of items due to choice and lifestyle preferences but on the *enforced* lack – i.e., people would like to possess (have access to) the lacked items but cannot afford them.[10] This approach, in terms of 'enforced lack' due to financial pressures, makes the suggested indices more comparable with income poverty. It is also worth emphasising that the EU commonly agreed indicators of material deprivation are based on a common set of items and that they are equal weights measures, which reinforces the 'absolute' character of the measures (whereas the use of nationally defined weights could reflect the relative importance of individual items in the different countries).

By so doing, a common standard is applied to all countries[11] so that the counterpart of this approach in terms of income poverty would be to apply a common EU poverty threshold to all countries (see Figure 1 below).

The analyses presented in this paper are based on the data of 25 countries included in the 01.08.09 EU-SILC users' data-base (UDB): 24 EU Member States (exceptions: Bulgaria, Malta and Romania) and Norway. The data analysed are the cross-sectional data collected in 2007. In EU-SILC, income

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[9] In the indicator used for the EU target, the criterion for being materially deprived is stricter as the threshold has been put to an enforced lack of at least four rather than three items out of nine.

[10] To provide a concrete illustration of the difference between 'lifestyle preferences or other possible reasons' and 'enforced lack', which applies to the possession of each of the 4 durables covered in the material deprivation index (washing machine, colour TV, telephone, personal car, see Section 2), EU-25 average results for the 'possession' of a car are as follows in 2007: 82% of EU-25 citizens live in a household that has access to a car for private use, 7% live in a household that does not have access to a car for private use because they cannot afford one, and 11% live also in a household that does not have access to a car for private use but for one or several other (non-financial) reasons. These 'EU-25 averages' and those provided in Sections 3 and 4 are weighted averages of the 25 countries that were members of the EU after the 2004 enlargement, with the exception of Malta for which data were not available from the available EU-SILC users' database; in these averages, each country is weighted by its population size.

[11] Dickes *et al* (2010) analyse data from a Eurobarometer survey conducted on behalf of the European Commission and aimed at assessing what EU citizens consider as being part of a minimum living standard in their country. They assess the (in)variance of the structure of the perception of social needs between countries on the basis of an extension of the multi-dimensional scaling method and show that there is a high level of congruence between the 27 national patterns. This conclusion tends to support the approach which consists of measuring deprivation on the basis of a same set of items across all the Member States.

data generally refer to the total annual income of households in the year prior to the survey. The sole exceptions are the United Kingdom (total annual household income calculated on the basis of current income) and Ireland (calculation on the basis of a moving income reference period covering part of the year of the interview and part of the year prior to the survey). This may have an impact on the relationship between income poverty and material deprivation measures, as the latter refer to the current situation of the household.

3. Material deprivation and income poverty

Marlier *et al* (forthcoming) provide an illustration of the picture that can be drawn of the social situation in the EU by putting in perspective eight EU indicators of social inclusion (covering income poverty and material deprivation as well as unemployment, joblessness, education and health). In particular, they highlight the value of complementing income poverty indicators (poverty risk rate plus poverty risk gap) with material deprivation indicators, a value added that is particularly striking in an enlarged EU context. Below, we only consider the EU poverty risk rate and the two EU material deprivation indicators (deprivation rate and deprivation intensity).

As shown by Figure 1, the range across countries in terms of the percentage (materially) deprived is wide – from 3% in Luxembourg and 6% in Sweden and the Netherlands up to 45% in Latvia; the 'EU-25 average' is 15%. This range is much wider than that in poverty risk rates, which is only from 10% in the Netherlands and the Czech Republic to 21% in Latvia (EU-25 average: 16%).[12] These results reflect the fact that 'the differences in average living standards across countries as well as the distribution within them now come into play' (Marlier *et al*, forthcoming). This is particularly clear in Hungary and Slovakia (which have high levels of deprivation but low income poverty rates) as well as, though to a lesser extent, the Czech Republic (lowest poverty risk in EU, together with the Netherlands, but intermediate performance on deprivation). Conversely, Spain has a high poverty risk but a below average proportion deprived.

When comparing income poverty rates based on a national threshold with deprivation rates based on a common set of (equally weighted) items, we compare approaches that differ in two respects. First, there is a change of concept (income vs. deprivation); second, there is a move from a national based measure to an EU-wide criterion. Figure 1 therefore also displays the value of income poverty rates for each country, computed on the basis of an EU-wide threshold; these rates range from 1% in Luxembourg to 69% in Estonia and more than 70% in Hungary, Latvia, Lithuania, Poland and Slovakia.[13] National material deprivation rates are much more correlated with

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[12] Table A2 provides the national share of people deprived by item and Table A3 the national distribution of material deprivation intensity.

[13] To compute the EU-wide threshold, data for the 24 EU countries included in the EU-SILC users' database were pooled together. The equivalent income of all individuals has been converted in Purchasing Power Standards (PPS), which – on the basis of Purchasing Power Parities (PPP) – convert amounts expressed in a national currency to an artificial common currency that equalises the purchasing power of different national currencies (including those countries that share a common currency). A poverty threshold of 60% of the median of this EU-25 distribution was then defined.

the EU-wide based national income poverty rates than with the standard national income poverty rates (0.80 vs. 0.31).

**Figure 1: National material deprivation rates and national
and EU-wide at-risk-of-poverty rates (AROP), 2007**
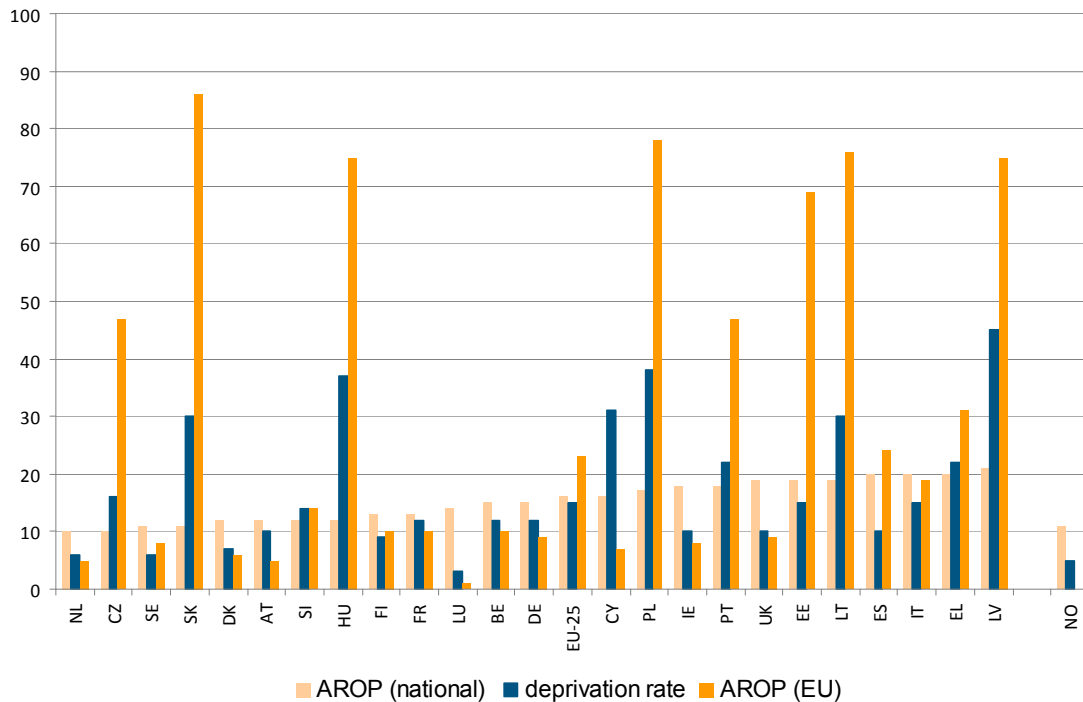
Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation.
Countries are ranked according to their national at-risk-of-poverty rates (AROP) and then their national deprivation rates.
Reading note: For the Netherlands, the AROP rate based on the national median is 10%, the MD rate 6% and the AROP rate based on the EU median 5%.

If we now consider the intensity of deprivation (Figure 2), we see that in all Member States this is much higher for those below the poverty risk threshold than above it; this is true in all Member States even if the gap is considerably wider in some countries than in others. We also see that the deprivation intensity for those *at risk* of poverty in some of the richest countries is lower than the corresponding figures for those *not at risk* in the poorest countries. So, in Spain and the UK, the intensity of deprivation for the income poor is 1.5, whereas in Hungary and Latvia the corresponding figure for those *not* at risk of poverty is 1.9. As put by Marlier *et al* (forthcoming), 'this does not invalidate the poverty measures for the rich countries, because they relate (supposedly) to norms of acceptability in those countries, but it does help reinforce the long-standing importance assigned by the EU to seeking convergence in average income/ living standards across its Member States.'

Figure 2: Intensity of deprivation (mean number of 'lacked' items) among income-poor and non-income-poor by country, 2007
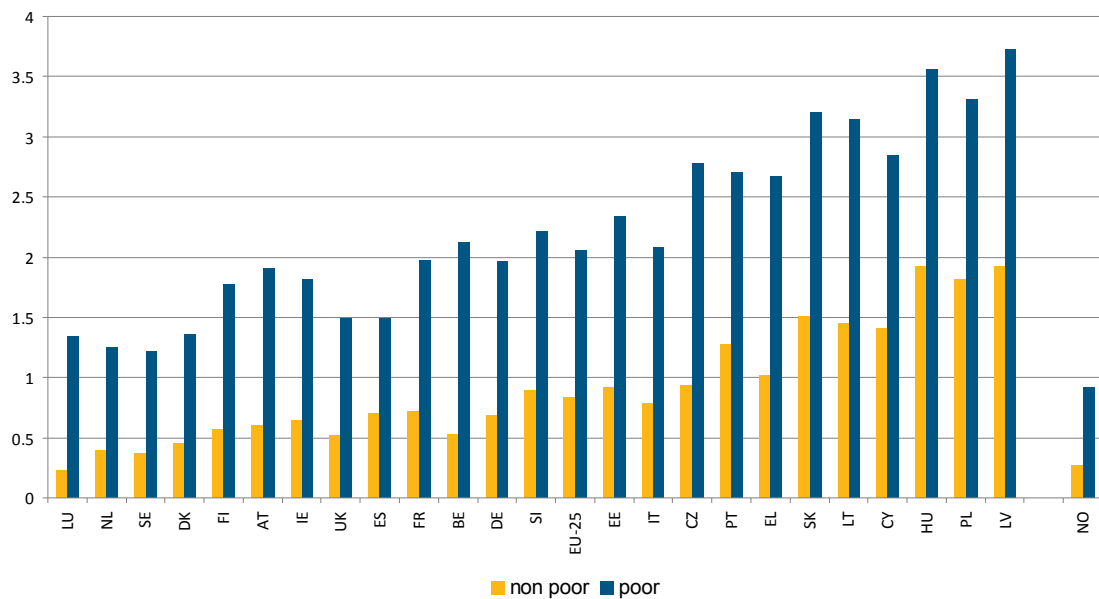
Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation.
Countries are ranked according to their national deprivation rates and then their poverty risk rates.
Reading note: In the UK, on average, those above the 60% of median income poverty risk threshold lack 0.52 item out of the 9 items constituting the material deprivation index while those below that threshold lack 1.49 items.

These first results tend to show that material deprivation and income poverty measures usefully complement each other, especially when considering the highly diverse EU that has emerged as a result of the 2004 and 2007 enlargements. Sections 4 and 5 explore further the relationship between these two measures by looking at the degree of association between them as well as the characteristics of the income poor and/or deprived. In these two sections, the unit of analysis is no longer the country but the individual person within his/her household.

4. Relationship between material deprivation and income poverty

When considering the relationship between income poverty and material deprivation, we can look either at the 'causal' role of income as a determinant of deprivation or look at the degree of association of the two measures and the extent to which the two approaches identify the same individuals as disadvantaged. The latter approach is the one followed here. It consists of analysing the overlap between deprivation and income poverty as two different measures of the material disadvantages of the population.[14]

4.1 Factors affecting the relationship between material deprivation and income poverty

The relationship between income poverty and material deprivation has been widely researched. Most studies have argued that the populations identified as 'income poor' or 'materially deprived' do not perfectly overlap (see, for instance, Nolan and Whelan (1996) or Perry (2002)). It is therefore important to explore this further at EU level with a view to better understanding the possible differences between income poverty and material deprivation through an analysis of the factors underlying the relationship between these two measures.

Both theoretical and empirical elements can have an impact on the relationship between income poverty and material deprivation. Theoretical elements have to do with (1) the household's command over resources and (2) the household's needs, whereas the empirical aspects concerns (3) the available data (items included in the survey, measurement errors, etc.) (Layte *et al*, 2001). Two individuals with the same income can have very different living standards if their income does not measure adequately all the resources that are available to each of them and/or if their needs differ.

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[14] In conventional 'overlap' analyses, not only income poverty but also material deprivation are measured in relative terms; so, when calculating a deprivation index these analysis might for instance weight the various individual items from one country to the next. Sometimes, these analyses do this in a way that ensures that the income-poor and deprived groups are the same size. By contrast, we analyse here the relationship between a relative approach, with nationally-defined thresholds (based on an 'income poverty' measure), and a more absolute approach, where the same standard is applied in all countries (based on 'material deprivation'). See also below.

4.1.1 Household's command over resources

In EU-SILC, resources available to a household are measured through its disposable income. However, whilst clearly linked, disposable income and resources are not the same thing. On the one hand, a household can borrow or make use of accumulated savings to increase its current consumption capacity; on the other hand, repayment of debts can decrease its ability to consume. On top of this, past investments in housing or durables as well as the current state of housing and durables have an impact on how much a household can/ should spend on these items from its current resources. Access to free or subsidised public goods and services (in particular health care, education and housing) as well as the possibility to rely on family, friends or neighbours support are also part of the potential resources of individuals. This implies that disposable income levels may only partially correspond with the actual standard of living of a household, which is likely to impact on the relationship between the level of income and material deprivation. Standard of living or deprivation may have a stronger link with 'permanent income' than with 'current' income and information on wealth and debt would help understand part of the mismatch (even if collecting good data on these is not easy and consumes a lot of interviewing time as it requires several variables). Moreover, the impact of income on deprivation may not be immediate. Finally, as already highlighted (see above, Section 2) current income is not available in EU-SILC. It is approximated by the total income perceived by the household during the calendar year prior to the survey, which means that the income reference year is not the same as the reference year for measuring material deprivation. (This difference in reference years raises several technical and theoretical issues but can in fact help address the potential lagged effect between income and deprivation.)

4.1.2 Household's needs

The needs may also differ across households. By focusing on the means available to household members, the indirect approaches such as the income poverty approach are less suitable for taking into account human diversity. The heterogeneity among individuals regarding their personal, socio-economic and environmental characteristics affects the translation of financial means into standards of living. The fact that income does not take into account this heterogeneity can explain why individuals with the same levels of resources can have different levels of accomplishments (see for example Sen, 1979 and 1999; Alcock, 2006), and can thus contribute to explaining the mismatch between income poverty and material deprivation.[15] Differences in household size and composition are addressed by equivalising the household disposable income on the basis of the OECD-modified equivalence scale. Other differences such as the health status of household members, their needs for transport or child care are more difficult to be adjusted for in the analysis.

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[15] As for Sen (1999: Chapter 4) it is not the lack of income that we should measure but the inadequacy of income.

Deprivation measures also raise conceptual issues. Indeed, it is difficult to assert that they only capture differences in living conditions and not (only) differences in tastes and preferences. An unavoidable limitation of deprivation measures is that the closer an individual's preferences correspond to the list of items collected and chosen in the index, the less likely that person will appear to be deprived (Halleröd, 1995). Addiction expenses can also be an example of such mismanagement of resources. This is another potential cause of mismatch between deprivation and income measures.

4.1.3 Data issues

Measurement errors for both income poverty and material deprivation indicators can also contribute to weakening the measured relationship between them. At the level of income, measurement errors can be due to miscoding as well as reporting errors by respondents. When income data are correctly reported and collected, the measured income can still be far from an individual real well being as some income component are simply difficult to measure. This is especially the case for the self-employed for various reasons, which can include: the difficulty to assess personal disposable income on the basis of the professional/ business book-keeping, the difficulty to differentiate between professional and private expenses, and the fact that the relevant income reference period may not fit with that imposed by the EU-SILC framework, etc.

Moreover, payment of taxes on incomes received in an earlier year or inter-household transfers can lead to a negative income. As mentioned by Van Kerm (2007:2) 'such observations may not be plainly tagged as 'mistakes' in the sense of error of data collection but they are clear expressions of a mis-measurement of economic well-being that lead to extreme measured incomes'. These extreme observations can increase the mismatch between income poverty and deprivation in the lower tail of the income distribution.

As mentioned in Section 2, the EU material deprivation indicators are concerned with the *enforced lack* of items – i.e., people would like to possess (have access to) the lacked items but cannot afford them. The assessment of affordability is made by respondents and there is no attempt to exclude cases where respondents report deprivation on a particular item but possess (have access to) a similar item and/or to a more expensive item (Layte *et al*, 2001). Psychological phenomena can also introduce 'noise' in the measure of 'enforced' lack of items. So, individuals' expectations concerning their material well-being tend to increase with income and to decrease with long-term income poverty (the so-called 'adaptive preferences') and, as a consequence, poor people may report that they do not want things, simply because they cannot afford them. Furthermore, some people may feel ashamed not to be able to afford buying certain items.

These different factors highlight the fact that the relationship between the EU at-risk-of-poverty and material deprivation indicators is a complex one which, by definition and construction, is likely to lead to divergences between the two measures in terms of identification of the disadvantaged populations.[16]

4.2 Results from EU-SILC

As described above, the items covered in the EU indicators of material deprivation are items referring to financial stress and possession of durable goods which are the dimensions that have been shown to have stronger relationship with income than others such as housing conditions or local environment (see for instance Nolan and Whelan, 2010). Some items included in the EU measures are directly linked to current income; this is the case for 'the capacity to afford a meal with meat, chicken, fish (or vegetarian equivalent) every second day'. The possession of a car can be seen as an 'investment', which makes the deprivation indicators closer to 'permanent income' measures and which makes them also more consistent with the stage of the life cycle reached by individuals than what can be estimated through current income approaches. Finally, an item such as the ability to face unexpected expenses is more related to savings.

Table A4 provides the national correlations, at the individual level, between the level of equivalised income and the intensity of material deprivation (from 0 to 9). Correlations range from -0.168 in Denmark to -0.47 in Latvia, with two thirds of the countries having a value between -0.25 and -0.40. The fact that correlations are all below -0.5 is in line with results obtained in previous research (e.g. Layte *et al*, 2001 and Ayllón *et al*, 2007).[17] Let us now look in more detail at the relationship between income poverty and material deprivation across the income distribution by analysing the national distributions of the level of material deprivation first by equivalent income quintiles (Table A5) and then by fractions of the median equivalent income (Table A6).

As expected, the level of material deprivation decreases across quintiles in all countries (Table A5). This is true for both the deprivation rates (i.e. the percentage of people lacking at least 3 items out of the nine included in the list) and the intensity of deprivation (the average number of items, out of 9, lacked by people in the category). Even though some of the deprivation rates are very high in the lowest quintile, there are no countries where all the individuals in the

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[16] This is nicely summarised by Perry (2002:107): 'current income has a significant influence on current living conditions, but so too do the longer term accumulation and erosion of wider resources and the special demands on income that vary from household to household. None of this is new, but it is often not to the fore in our thinking when using a current income as a measure of poverty (risk) understood as exclusion *from the minimum acceptable way of life in one's own society because of inadequate resources.*''

[17] The correlation between the value of the national poverty thresholds (in PPS) and these national coefficients of correlation (i.e., between the two columns of Table A4) is 0.60: the lower the threshold, the higher the correlation (in absolute terms) between equivalised income and intensity of material deprivation.

first quintile are materially deprived; the highest percentages (in Latvia, Hungary and Poland) vary between 66% and 77% and the lowest (in Luxembourg) is only 12%. As to the intensity of deprivation in the lowest quintile, it varies between 1.1 in Luxembourg and Sweden (0.8 in Norway) and 3.3-3.8 in Latvia, Hungary and Poland. At the other end of the distribution, in the fifth quintile, national deprivation rates are all below 5% except in five countries (Latvia, Lithuania, Hungary, Poland and Slovakia) where they are slightly higher than 5 % in Lithuania and between 9% and 12% for the other countries. As to the intensity of deprivation in the highest quintile, the highest values (0.6-1.0) are registered in the same five countries.[18]

If we now look more specifically at people living below the poverty risk threshold and group them into three income groups according to their equivalised income (less than 40% of national median equivalised income, 40% to less than 50%, and 50% to less than 60%), we see that the deprivation rates by income level vary significantly between countries (Table A6). Yet, in most countries (17 out of 25) the level of deprivation decreases with income whether deprivation is measured on the basis of deprivation rates or on the basis of the intensity of deprivation. In six of the eight exceptions (Denmark, Germany, Ireland, the Netherlands, the United Kingdom and Norway), for the two indicators it is in the second group (40 to less than 50% of median) that the level of deprivation is highest – even if the pattern is less clear-cut in the case of the UK and Norway.[19] In the other two exceptions (Austria and France), the pattern is mixed even if the level of deprivation also tends to be highest in the second group.[20] A deeper exploration of the underlying data shows that among those whose income is in the lower tail (less than 40% of median) but who are not materially deprived, negative income components are at work; these negative components can be due to self-employment (especially in Denmark and in the Netherlands), tax burden (Belgium, Denmark, France, Germany, Greece, the Netherlands and Norway), transfers to other households (Belgium, Finland, Greece, Latvia, Lithuania and the Netherlands) or loss in property income (Denmark).[21]

Figures 3a (EU-15 countries and Norway) and 3b (10 'new' Member States (NMS10) except Malta) provide a visual representation of the relationship between income poverty and material deprivation across the income distribution. They bring together the information presented in Tables A5-A6 but

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[18] The specific case of Slovakia should however be highlighted as in this country the intensity of deprivation jumps from 0.1 (out of nine) to 0.7 between the fourth and fifth quintiles.

[19] The fact that people whose income is in the lower tail of the distribution are not necessarily the group with the highest level of deprivation has also been shown *inter alia* by Ayllón *et al* (2007) on data from Catalonia and by Whelan *et al* (2001) on ECHP data. These results can prove to be useful when exploring the issue of 'extreme poverty'.

[20] In Austria, the profile is different depending on whether we consider deprivation rate or deprivation intensity: the rate increases between the first 2 groups and then drops (respectively for each of the 3 groups: 36%, 42% and 27%), whereas the intensity is virtually identical between the first 2 groups (2.09 vs. 2.07) but then drops (1.73). In France, deprivation rates are almost identical in all 3 groups (34-35%) whereas deprivation intensity is highest in the second group.

[21] Detailed results are available upon request.

in a more detailed manner. In each country, individuals have been partitioned into 20 groups according to their position in the distribution of equivalised income expressed as a fraction of the median equivalised income. For these 20 groups, the mean deprivation intensity (from 0 to 9; dashed curve) and deprivation rate (%; thick curve) were computed. For each country, these Figures provide thus a plot of the deprivation intensity and rate over the 'discretised' equivalent income distribution. As expected, Figures 3a and 3b clearly show that the level of material deprivation tends to decrease with equivalent income in all countries. This is true for both the deprivation rates (i.e. the percentage of people lacking at least 3 items out of the nine included in the list) and the intensity of deprivation (the average number of items, out of 9, lacked by people in the category). However, they also show that this relationship between income and deprivation is not monotonic (as shown above, individuals in the bottom of the income distribution are not always the most deprived) and not linear (i.e., the slope of this diminution varies across the income distribution.

It should also be noted that the slope and shape of this relationship varies substantially between countries. So, even though it is not always clear-cut and there are some exceptions, the slope tends to be steep in countries where deprivation rates are highest and flat in countries where these rates are lowest.

Figure 3a: Intensity of deprivation (from 0 to 9) and deprivation rate (%) according to the level of equivalised income (% median), EU-15 and Norway, 2007
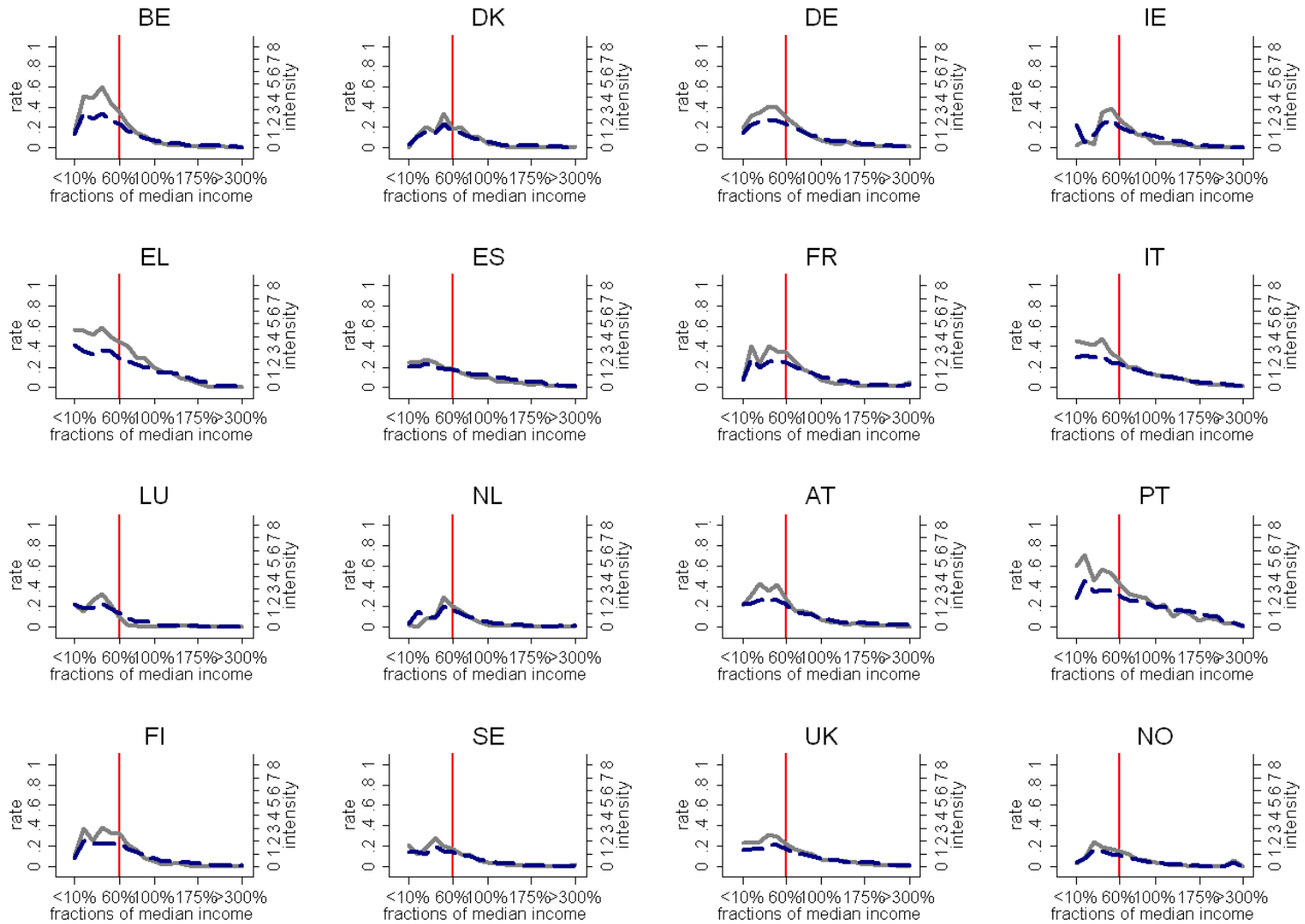
Source and note: see below Figure 3b.

Figure 3b: Intensity of deprivation (from 0 to 9) and deprivation rate (%) according to the level of equivalised income (% median), NMS10 excluding Malta, 2007
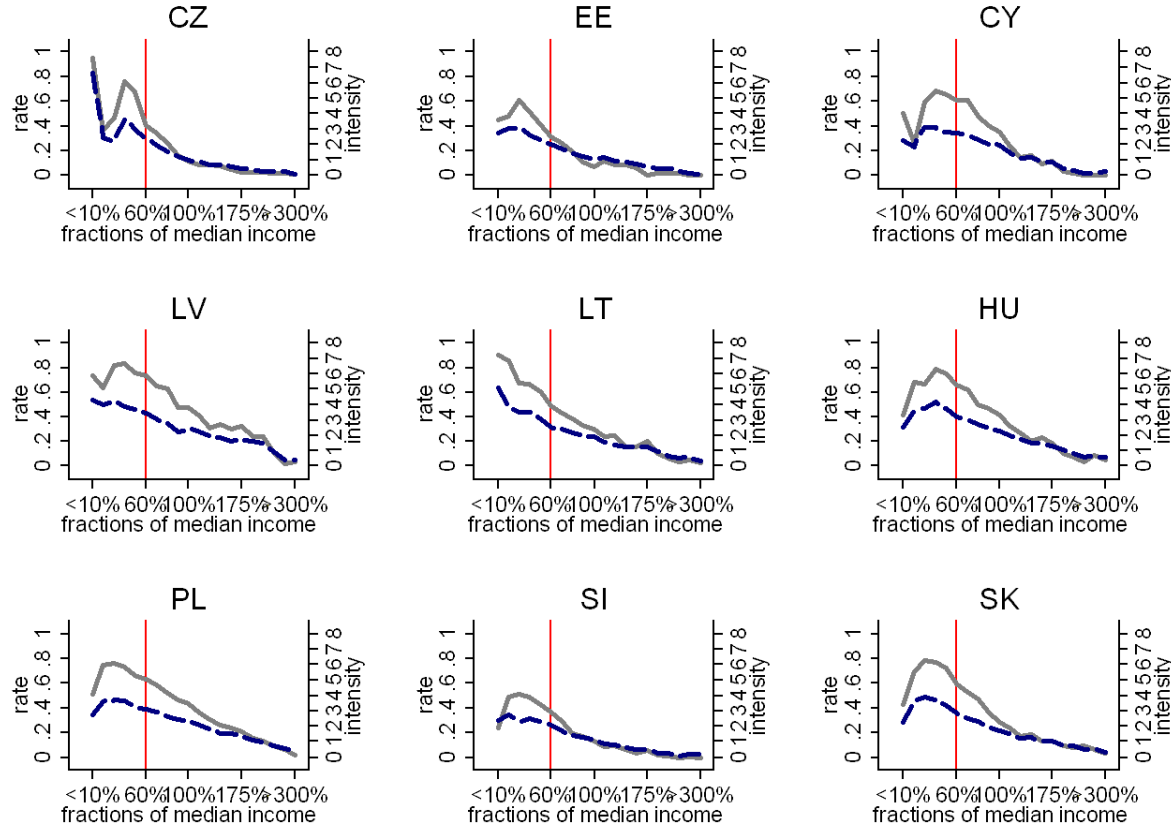
Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation

Reading note: Individuals have been partitioned into 20 groups according to their position in the distribution of equivalised income expressed as a fraction of the median. The 20 groups range from less than 10% of the median (including negative incomes) to 300% and more, with 10% intervals up to <150% median, 25% up to <200% median and 50% up to <300% median. For these 20 groups, the mean deprivation intensity (from 0 to 9; dashed curve) and deprivation rate (%; thick curve) were computed. The intersection of the 60% median vertical bar with the curves provides the mean deprivation intensity and deprivation rate for individuals with equivalised income between 50 and <60% of median equivalised income.

Table A7 provides for each country the mean equivalised income and the poverty risk rate by level (intensity) of deprivation. Results are of the same nature. First, the mean income (resp. the poverty rate) decreases (resp. increases) with the deprivation intensity. Secondly, in almost all countries a significant proportion of highly deprived people are not income poor (e.g., 100-26=74% are in this situation in Sweden); and on the other hand, a significant proportion of non-deprived people are poor (12% in Spain and the UK for those having a deprivation intensity of 0).

These results show that there is definitely a link between income poverty and material deprivation measures but that income alone can fail to identify individuals that may be excluded from 'the minimum acceptable way of life in the Member State to which they belong' (and vice-versa, i.e. that deprivation alone can fail to identify income poor people).

To further investigate the relationship between income poverty and material deprivation, we compare now the conditional distributions of material deprivation given the income poverty status. Table 1 provides the probability for someone to be materially deprived (MD) if he/she is at risk of poverty (AROP), i.e. P(MD=1|AROP=1). This probability is around 20% in Denmark, Spain, Luxembourg, the Netherlands, Sweden and Norway, which means that around one income poor out of five in these countries, is materially deprived. By contrast, it is above 60% in Cyprus, Latvia, Lithuania, Hungary, Poland and Slovakia. Even though the picture is not clear-cut (e.g. the case of Cyprus), the probability tends to be higher in poorer European countries, which is a result similar to that found in Eurostat (2002). Table 1 also presents the probability of being deprived for persons who are not income poor ((P(MD=1|AROP=0)), which ranges from 1% (Luxembourg) to 32-36% (Latvia, Hungary and Poland). In all the countries, the probability of being deprived is much higher for the income poor than for the non income poor. Finally, Table 1 also provides the odds ratios of being deprived according to the poverty status for each country. An odds ratio close or equal to 1 would mean that income poverty and material deprivation are independent from one another. A ratio (much) smaller than 1 would mean that the odds of being deprived is (much) smaller among the income poor than among the non income poor; in line with previous results commented above, this is not the case in any of the 25 countries analysed here. Conversely, a high ratio would mean that the odds of being deprived are higher among the income poor than among the non income poor; this is particularly the case in Luxembourg (ratio of 25.5, a result largely driven by the fact that only 1% of the non-income poor are deprived) and in Belgium (10.0).

**Table 1: Relationship between income poverty
and material deprivation, 2007**

Country	P(MD=1|AROP=0) (in %)	P(MD=1|AROP=1) (in %)	Odds ratio
ES	6.6	21.4	3.8
PL	32.2	67.3	4.3
DK	5.1	20.5	4.7
UK	6.7	26.1	4.9
HU	32.7	70.7	5.0
PT	16.3	49.7	5.1
IT	9.8	35.9	5.2
CY	24.8	63.5	5.3
NL	4.1	18.8	5.4
LT	22.1	61.4	5.6
LV	36.2	76.1	5.6
FR	8.5	34.5	5.7
SE	4.2	19.9	5.7
EL	14.8	50.2	5.8
SK	26.0	67.0	5.8
SI	10.8	41.4	5.8
DE	7.8	34.4	6.2
IE	6.2	29.8	6.4
AT	7.0	33.0	6.5
EE	9.3	41.0	6.8
FI	6.1	32.4	7.4
CZ	12.4	54.6	8.5
BE	6.7	41.8	10.0
LU	0.8	17.0	25.5
NO	3.5	15.5	5.0

Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation.
Countries ranked according to the third column (odds ratio).

Note: P(MD=1|AROP=1) is the probability for someone to be materially deprived if he/she is income poor and P(MD=1|AROP=0) is the probability of being deprived for persons who are not income poor. In Belgium, an odds ratio equal to ten means that the odds of being deprived for the income poor (41.8/58.2=0.72) is ten times higher than the odds of being deprived for the non income poor (6.7/93.3=0.072).

Hence, the conditional distributions show that there is a clear link between income poverty and material deprivation even if this association varies a lot across countries.

Finally, with a view to completing the picture, it is useful to identify the proportion of people falling in each of the following four groups: those who are neither poor nor deprived, those who are only income poor, those who are only deprived and those who are both income poor and deprived (often referred to as 'consistent poor'). Table 2 provides these proportions for each of the 25 countries analysed and also the distribution of these proportions by broad age groups for the EU-25 weighted average (always using the official EU definition of income poverty and material deprivation). [22]

The proportion of people who are neither income poor nor deprived ranges from 50-59% in Latvia, Hungary and Poland to 82-86% in Denmark, Luxembourg, the Netherlands, Austria, Finland, Sweden and Norway.[23] On the other hand, the proportion of individuals combining both income poverty and deprivation is only 2% in Denmark, Luxembourg, the Netherlands, Sweden and Norway, whereas it is 12% in Lithuania and Poland, and reaches 16% in Latvia.

In 15 countries out of 25, the proportion of individuals for which the two criteria lead to 'consistent' results (i.e. for which people are identified either as 'both income poor and deprived' or as 'neither income poor nor deprived') is at least 80%. In Latvia, Hungary and Poland, the match is much lower: 66-68%. When looking at the national figures provided for the EU indicator of *at-risk-of-poverty*, it is important to keep in mind that in these three countries (see column 'deprived only') as many as 27 to 29% of the population are deprived but do not appear as income poor. Figures in Slovakia (23%), Cyprus (21%) and Lithuania (18%) are also very high; by contrast, figures are below 5% in Luxembourg, the Netherlands, Sweden and Norway. The divide between 'older' and 'newer' Member States is particularly striking here: all EU countries but one (Estonia) that have 'deprived only' figures below the EU-25 average are older Member States, whereas all countries above the EU-25 average are newer Member States except for Greece and Portugal.[24]

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[22] It is important to highlight that these EU-25 average results are provided only as an illustration and mask huge national differences as we will see in Section 5 where we analyse in a systematic way and separately for each of the 25 countries considered (24 EU countries plus Norway) the impact of the socio-economic characteristics of individuals/ households on the risk of income poverty and/or material deprivation.

[23] Based on the criterion used in the newly adopted EU target on social inclusion (i.e. a threshold put at 4+ rather than 3+ lacked items out of nine), the level of material deprivation is of course much lower. In 2008, the weighted average rate for all 27 Member States (as calculated by Eurostat) is 17% for a 3+ threshold vs. 8% for a 4+ threshold. The EU-27 proportion of people who are neither income poor nor deprived is 73% for a 3+ threshold and 79% for a 4+ threshold.

[24] The procedure often used to assess the degree of consistency between income poverty and material deprivation consists in the first place, in identifying the proportion of income poor and then in using the obtained rate as a guideline to draw the material deprivation threshold in order to get the same proportion of materially deprived. This choice is the one that was made by Layte *et al* (2001) on the ECHP data, and by Perry (2002) on data from New-Zealand. Having the same proportion of income poor and deprived gives them the possibility of having all the income poor considered as deprived, i.e. a degree of consistency/overlap of 100% (See Fusco, 2009 for an account of this method). Here, we have deliberately opted for not giving the precedence to income poverty when defining the deprivation rate, by calculating the at-risk-of-

Table 2: Joint distribution of income poverty and material deprivation, national distributions and EU-25 distributions by broad age groups, %, 2007

Country	Non income poor & non deprived (1)	Income poor only (2)	Deprived only (3)	Both income poor & deprived (4)	Total (1)+(2)+(3)+(4)	Consistently identified (1) + (4)
National distributions for total population						
LV	50	5	29	16	100	66
HU	59	4	29	9	100	68
PL	56	6	27	12	100	68
SK	66	3	23	7	100	73
CY	64	6	21	10	100	74
LT	63	7	18	12	100	75
PT	68	9	13	9	100	77
EL	68	10	12	10	100	78
ES	75	16	5	4	100	79
IT	72	13	8	7	100	79
UK	75	14	5	5	100	80
EE	73	11	7	8	100	81
IE	77	12	5	5	100	82
CZ	79	4	11	5	100	84
DE	79	10	7	5	100	84
FR	80	9	7	4	100	84
SI	79	7	10	5	100	84
BE	79	9	6	6	100	85
DK	84	9	5	2	100	86
AT	82	8	6	4	100	86
FI	82	9	5	4	100	86
LU	86	11	1	2	100	88
NL	86	8	4	2	100	88
SE	86	8	4	2	100	88
NO	86	9	3	2	100	88
EU-25 distribution by age groups						
0-17	72	11	9	8	100	80
18-64	76	9	9	6	100	82
65+	72	15	9	5	100	77
Total	75	10	9	6	100	81

Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation

Note: Countries ranked according to the last column (consistently identified status).

Reading note: in Luxembourg, 2% of the population are both income poor and deprived, 1% is only deprived and 11% are only income poor; 86% are neither income poor nor deprived. The total proportion of income poor is 11+2=13% and the total proportion of deprived is 1+2=3%.

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poverty and deprivation rates independently. Hence, we do not have the same proportion of deprived and income poor.

So, there is a clear link between income poverty and material deprivation measures but the consistency between the two approaches is not complete and the profile of each of this group is therefore likely to be different. In the next section, we explore some of the socio-economic characteristics of the individuals that are income poor and/or deprived to see to what extent they differ.

5. Characterisation of material deprivation and income poverty in the EU

The aim of this section is to isolate the factors that separately determine the probability of being at risk of income poverty and/or deprived; by so doing, we provide a characterisation of the income poor and materially deprived for each country. Following Ayllón *et al* (2007), we apply a multinomial logit model to analyse the marginal impact of a set of determining factors on the probability of belonging to one of the four groups of interest, namely 'being both income poor and deprived', 'being only income poor', 'being only deprived' and 'being neither income poor nor deprived'. The dependent variable is nominal with four modalities. The modality 'neither income poor nor deprived' is used as the reference category so that all the results are expressed in relation to it.

In the previous sections, our analyses were carried out on the whole population. In this section, we narrow our focus by considering solely the population of people living in households where there is at least one adult aged less than 60 years and where the main income earner (i.e. the household member receiving the highest total individual income[25]) is not retired. Concentrating primarily on people of working age allows a better understanding of the impact of the work attachment on the risk of income poverty and/or material deprivation. Furthermore, for elderly people, the lack of life cycle information (such as length and type of career, major life events) does not allow a relevant analysis of their current living conditions.

The explanatory variables contain a set of individual or household socio-economic characteristics that are often identified in the literature as having an impact on the relative risk of income poverty and/or material deprivation. These variables can affect the needs and/or resources of an individual so that they can impact on the income/deprivation relationship (see previous section). Factors related to needs are those characteristics, such as household structure or the presence of individuals in bad health in the household, that increase the level of resources necessary for a household to maintain its standard of living. Factors related to resources are those that impact on the level of current income such as the work attachment of household members or the presence of highly educated persons in the household.

In line with the EU indicators approach, the unit of analysis is the individual. Household and main income earner variables are attributed to all household

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[25] When several individuals receive the same total income, the main income earner is defined as the oldest one of them. If they have the same age, the main income earner is defined randomly.

members.[26] Household variables refer to the household type, the work intensity of the household, the housing tenure status, the presence of individuals in the household reporting a bad or very bad health and the absence in the household of highly educated individual. The individual characteristics of the main income earner relate to age, gender and most frequent activity status.

In our model, the reference individual lives in a household with the following characteristics:

- its main income earner is a male working full time;
- its work intensity is higher or equal to 0.75;
- it is composed of two adults of less than 65 without children;
- it owns its accommodation without on-going mortgage;
- it does not include any member in bad or very bad health;
- it does include at least one member with an upper secondary education or tertiary education level.

Table A8 shows, for each country, the result of the multinomial logit regression in terms of relative risks ratio.[27] These ratios are computed as the exponentiated considered coefficient. They measure the probability of belonging to one group relative to the probability of belonging to the group of reference for a unit change in the independent variable considered. For dummy variables, they are interpreted in relation to the category of reference of the independent variable. If we take the example of the household type that we consider in Sub-section 5.3 below, the relative risk ratio for people living in single parent households is the ratio between the following two relative risks: the relative risk for people in single parent households and the relative risk of the related 'reference' that has been chosen - i.e., in our case: a 2-adult household without children. Each of these two relative risks measures the probability of belonging to the group of interest (one of the three risks modelled in this paper: 'being both income poor and deprived', 'being only income poor', 'being only deprived'), relatively to the reference group ('neither income poor nor deprived'). So, if we continue with our example, the fact that in NL the relative risk ratio of cumulating income poverty and deprivation is 13 for single parents means that in NL, the risk for people living in single parent households of cumulating income poverty and deprivation, relatively to being neither poor nor deprived, is 13 times higher than for people living in 2-adult households without children. In the sub-sections below, only statistically significant results ($p<0.01$) are commented.

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[26] Data are not weighted and robust standard errors are computed to control for the fact that individuals are clustered within households.
[27] Table A9 provides a synthetic summary of these results.

5.1 Work intensity of the household

Work intensity (WI) is obtained by dividing the number of months that all working-age household members have actually worked during the income reference year, by the total number of months that they could theoretically have worked during that period of time (i.e. the number of months spent in any activity status by all household members aged 18-60). For a worker not working full-time throughout the reference period, the months worked part-time are divided by a coefficient that takes into account the total number of hours that he/she worked during that period.[28] Individuals are classified into 4 work intensity categories: WI<0.25 (referred to here as '(quasi-)jobless' households), 0.25≤WI<0.5 (relatively low WI), 0.5≤WI<0.75 (relatively high WI), and WI≥0.75 ('(quasi-)jobfull' households). The latter is the reference group. In most countries, WI is by far the most discriminating variable.

WI is a major determinant of the risk of cumulating income poverty and deprivation. Compared with people in '(quasi-)jobfull' households, people in '(quasi-)jobless' households have a much higher risk of cumulating income poverty and deprivation: relative risk ratios vary a lot from one country to the next but are all very high, ranging from 9 (PL) to 41-67 (BE, IE, FR, IT, HU, AT, NO) and even higher in SK.[29] In all but two countries (LU and LV), they decrease with the work intensity: they vary from 5.5-6.5 (DE, EL, UK) to 20 and more (CZ, IE, IT) for people living in households with a relatively low work intensity, and that for people in households with relatively high work intensity from 1.7 (EL) to 5.4-6.7 in IT, AT and SE. In LU, the (relative) risk ratio is almost identical for people in (quasi-)jobless households and for people in households with a relatively low work intensity; in LV, it is highest for people in households with a relatively low work intensity.

The probability of being 'income poor only' is also strongly related to WI but (much) less so than for people combining income poverty and deprivation. So, compared with people in '(quasi-)jobfull' households, the relative risk of income poverty for people in '(quasi-)jobless' households ranges from 2.5-5.3 (IE, PL, FI) to 32-34 (CZ, IT, PT). In most countries, these risk ratios decrease with the work intensity: for people in households with a relatively low work intensity the range is from about 3 (PL, FI, SE) to 20-21 (CZ, IT), and for people in households with a relatively high work intensity ratios are between 1.9-2.1 (IE,

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[28] This variable differs from the official EU variable used to break down the income poverty rate, by taking into account the fact that people work part-time. It should be noted that it does not exclude households consisting of students, contrary to the EU definition of 'jobless households'. We are grateful to colleagues from the TARKI research institute (Hungary) for kindly sharing the algorithm they have developed for computing it (we modified the upper bound of the age criterion from 'less than 65' to 'less than 60'). As mentioned previously, the definition of 'joblessness' used in the context of the Europe 2020 target is different.

[29] Countries' abbreviations are provided in Table A1. As indicated above, only statistically significant results are commented. Danish results related to work intensity are not analysed here because of the high proportion of non-significant relative risk ratios for this variable and because of the range of the ratios (which does not always seem plausible).

EL, PL, FI, NO) and 5.8-6.5 (IT, PT). Countries where the (significant) relative risk ratios do not strictly decrease with the work intensity are EE, IE, LT, PL, SI and FI.

For the 'deprived only', (relative) risk ratios tend to be much lower than for the 'income poor and deprived' or the 'income poor only'; they also tend to vary much less across the different levels of work intensity. There are however two outliers that are worth mentioning as they have the highest ratios for each of the 3 levels of work intensity: Belgium (10, 7 and 3) and Sweden (8, 6 and 3).

5.2 Most frequent activity status

The most frequent activity status of the main income earner is the status that he/she declared to have occupied for more than half the number of months for which information on any status is available in the calendar of activities: employed (full-time, part-time), self-employed, unemployed, retired and other inactive. Self-employed are those workers (full-time or part-time) whose main income source is from self-employment income. The reference category here is a full-time worker.

In all countries, the (relative) risk ratio of cumulating income poverty and deprivation is high among the members of households whose main income earner is unemployed; it is 3.5-4.2 in BE, ES and FR, and it reaches 10 in DE, 14 in PL and 16 in SK. Working part-time appears as a serious risk factor in EL (13); for countries where results are statistically significant, all risk ratios are higher than 2. For the self-employed, very few results are significant; it is in FR that working as a self-employed is associated with the highest relative risk ratio (4).

The picture is quite different when we consider the risk of 'income poverty only'. It is in EE and SE that the risk is highest for people in households whose main income earner is self-employed (8-9; for the other countries, ratios vary between 2.1 and 6.4). For people in households whose main income earner is unemployed, the relative risk of being income poor only at least triples and reaches 12.3-12.5 in IE and PL. In EL, working part-time appears again as a serious risk factor (9).

When we consider the risk of 'deprivation only', the main result is that very few ratios are statistically significant. Three results are however worth pointing to: a high risk in EL (3.5) for households headed by a part-time worker, and a high risk in DE (5.3) and the UK (7.6) for those headed by an unemployed.

Finally, looking more closely at the risk run by people in households whose main income earner is self-employed, it appears that the risk ratios are significant for all but 3 countries when we consider 'income poverty only'; this figure falls to 7 for 'deprivation only' and 5 for 'both income poverty and deprivation'. For all seven countries where the comparison can be made, the

relative risk ratios of income poverty of households headed by a self-employed are much higher (2.3 and above) than that of being deprived (ratios all well below one (0.3-0.6)). When interpreting these results, it is important to keep in mind the problems of measuring the income of self-employed (see discussion above) which can explain part of the mismatch between income poverty and deprivation risks.

5.3 Household composition

Household composition has quite often an impact on the (relative) risk ratio of cumulating income poverty and deprivation. In all countries (where ratios are significant), the risk for people living in single-households is higher than for people in households consisting of two adults with no children (the reference category of our model): ratios range from 1.9 to 6.3, except in CZ (9) and NO (25) where they are higher. The presence of children when living alone is an important risk factor: from 2.3-3.3 (DE, FR, PL) up to 9 (PT), 11 (SK), 13 (NL) and 44 (NO). Living in a large family (two adults with three children or more) appears also as a major risk factor in the majority of countries (all ratios are at least 2.8). This is particularly the case in BE (10), DK (19), ES (9), NL (8), SK (9), SE (8) and NO (43). Living in a two-adult household with 1 or 2 children seems generally much less risky: for the very few countries where they are statistically significant, risk ratios are around 2 except in BE (5.3).

For the 'income poor only' and the 'deprived only', (relative) risk ratios tend to vary much less across the different household types. Yet, some results are worth highlighting. In CZ, the risk of income poverty is very high for singles and for single-parents (both 7), and in SK it is very high for singles (10) and for large families (8). In LU (6), CY (7) and NO (8), single-parents are particularly exposed to income poverty risk. Living in a two-adult household with 1 or 2 children is generally less risky: for the few countries where they are statistically significant, risk ratios are between 1.7 and 2.7 except in SK (4.3). As to the 'deprived only', lone parents stand out as a highly exposed group in several countries: most risk ratios are between 1.7 and 3.7 but are (much) higher in DK, NL, FI, SE and NO (4.4-8.8). In SE (4) and NO (3.6), large families are also at high risk of deprivation whereas most other ratios for these households are not significant.

5.4 Age, gender and education

Once the effect of the other explanatory variables is controlled for, the impact of gender depends on the country and on the type of risk considered, i.e. income poverty and/or material deprivation. In the 8 countries where the (relative) risk ratios are statistically significant, people in households with a female main income earner face a relatively higher risk of combining income poverty and deprivation than those headed by a male; ratios are between 1.6 and 2.2 except in EE where it is much higher (3.5). For the risk of 'income poverty only', the 9 significant ratios are between 1.5 and 2.4 except again in EE (3.2). For the risk of deprivation, only 4 ratios are significant and risk ratios range from 1.3 and 2.1.

The impact of age is significant in almost all countries for each of the three risk ratios[30]. It is very limited everywhere, with ratios being either 0.9 or 1.0.

All other things being equal, the absence in the household of highly educated individuals increases significantly the risk of cumulating income poverty and deprivation or to face 'only' one of these problems in most countries. For the combination of the two problems, the highest ratios are to be found in EL, LU, SI (all 3 around 7) and also in PT (13). For 'income poverty only', they are in LU (6) and PT (14), and for 'deprivation only' in EL, ES, NL, PT (4.1-4.4).

5.5 Health problems

In each of the 25 countries analysed here, the presence of at least one person in bad health (self-defined status) in the household seems to have no significant impact on the risk of income poverty. By contrast, in all but four countries (EE, LU, NL, FI) it does have an impact on the risk of deprivation, with ratios ranging from 1.5-2.1 (EL, CY, LV, LT, HU, PL, SK, UK) to 3.7-4.1 (BE, DK, IE, SE, NO). This is quite a remarkable result that would be worth investigating further in the light of the organisation of the national healthcare systems that are in place in these countries. An explanation for this might be that health is more related to permanent than to current income.

In the 12 countries where the results are statistically significant, the presence of an individual in bad health in the household increases the risk of combining income poverty and deprivation, with ratios from 1.7-1.8 (EL, IT) to 4 (LU).

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[30] The quadratic term did not appear as relevant in previous versions of the model and therefore was not introduced in the final version presented in Table A8.

5.6 Housing tenure status

Four types of housing tenure status are distinguished here: outright owner (with no mortgage); acceding owner (with mortgage); tenant at the market price; and tenant at a reduced rate. Outright ownership is the reference category.

The difference between outright and acceding owners is rarely significant for all three risks analysed here (i.e., the risk of income poverty, the risk of material deprivation and the risk of combining both income poverty and material deprivation). And when the (relative) risk ratios are significant, they are maximum 0.6 (i.e. acceding owners run a relatively lower risk than outright owners all other things being equal) except for 5 notable exceptions. In BE, EL, ES, IT (1.9-2.3) and in the UK (3.8), the risk of material deprivation is much higher for acceding than full owners.

If we now look at the relative risk run by tenants (at the market price), the impact of tenure status becomes very strong in several countries. This is especially the case for the risk of facing income poverty combined with deprivation, which is significant in two thirds of the countries: ratios range from 2.6 to 8.9 (except in Luxembourg (27.6) and Norway (70.5) where they are much higher). For tenants at a reduced rate, the picture is similar, with ratios between 1.5 and 8.5 except for the same two outliers (17.6 in LU and 51.4 in NO). Relative risk ratios for tenants on the risk of 'income poverty only' are significant in only 5 countries, including LU where it is highest (6.7 for tenants and 5.0 for tenants at reduced rent). By contrast, for the risk of 'deprivation only', ratios are significant in the majority of countries. (Given the previous results, it is worth highlighting that for LU these results are not significant.) For tenants, the range of ratios is from around 2 (CY, HU, PL, SK) to 11 (IE), 12 (NO) and 19 (UK). And for tenants with reduced rent, it is from around 1.5 (CY, HU, PL) to 11 (SE), 14 (IE) and 24 (UK). This may be due to the fact that tenants spend part of their income on their rent and therefore have less resources available than owners for other spending. Housing costs as well as health costs are clearly types of vital *needs* (see Section 4) that can also differ between households with similar income and that can lead to different deprivation statuses.

6. Conclusions

The aim of this paper was to analyse the relationship between income poverty and material deprivation in 25 European countries and to identify the factors that impact on the risk of income poverty and/or deprivation.

The visual representation of the relationship between income poverty and material deprivation measures shows that they are clearly associated. However, even if the level of deprivation tends to decrease with income, this relationship is neither monotonic (individuals in the bottom of the income distribution are not always the most deprived) nor linear (the slope of this diminution varies across the distribution). And both the slope and shape of the relationship varies substantially between countries. Furthermore, the analysis of the joint distribution of income poverty and material deprivation shows that the consistency between the two approaches is not perfect. The divide between 'older' and 'newer' Member States is particularly striking: all EU countries but one (Estonia) that have a proportion of people 'deprived only', (i.e. deprived but not income poor) below the EU-25 average are older Member States, whereas all countries above the EU-25 average are newer Member States except for Greece and Portugal.

The characterisation of the risk factors for income poverty, deprivation and consistent poverty (combination of the two problems) shows that, to a certain extent, each of these groups has some specific characteristics. Even if results clearly differ across countries, there are some general patterns. So, those explanatory variables that are more linked to the current level of resources, such as the level and the type of work attachment of household members, have a stronger influence on the three measures - with a bigger effect on the risk of consistent poverty and that of income poverty 'only'. Self-employed people are clearly a distinct group, who tends to face a higher risk of income poverty and a lower risk of deprivation. Variables more linked to the needs of the household or to permanent income (e.g., health problems or tenure costs) tend to increase the risk of deprivation, but not necessarily the risk of income poverty or consistent poverty. Households with children which combine high needs and potentially lower equivalised disposable income, as well as large families or single-parents, are more likely to face critical situations for the three measures, with a higher risk of consistent poverty.

The stronger link of material deprivation with permanent income suggests that longitudinal data would be worth exploring, as was already done for instance by Whelan *et al* (2004) on the basis of the European Community Household Panel (ECHP) survey or by Berthoud and Bryan (2010) on the British Household Panel Survey (BHPS). Indeed, as suggested by Layte *et al* (2001:430) a shift from a cross-sectional measure of income to an over-time measure can be expected to increase the association as the measure of income over a period is expected to be a better measure of permanent income than a cross-sectional measure. Moreover longitudinal data would allow tackling better the process of accumulation or erosion of resources.

In terms of data, the paper highlights the need to further improve EU-SILC income information. It emphasises the importance of a careful examination of the lower tail of the income distribution, where the level of material deprivation is often not the highest. Linked to this, a common methodology for the treatment of outliers (esp. negative income components) should be agreed upon and used at national and EU level, and a better understanding of the underreporting of some income components is needed. Income information for the self-employed should be improved.

In terms of national and EU reporting, the paper clearly shows the complementarity of income poverty and material deprivation measures. So, to provide a much better picture of a country's situation with regard to 'poverty' (esp. in the context of international comparisons), it is important that national income poverty rates be systematically published with the related national income poverty thresholds (in PPS) and that they be systematically accompanied with national material deprivation rates. This should be kept in mind when monitoring the social dimension of the new Europe 2020 Strategy, which is to replace the 2000-2010 Lisbon Strategy. In this respect, the new EU target on social inclusion adopted in June 2010 is encouraging. As already mentioned, it is indeed based on a combination of three indicators: the number of people considered 'at-risk-of-poverty' and the number of materially deprived persons (EU definitions except that for deprivation the criterion retained for the target is stricter) and the number of people aged 0-59 living in 'jobless' households. This target represents a major step forward in the EU political commitment to combat poverty and social exclusion. It will be important to ensure that national and EU progress made towards this target is strictly monitored.

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Appendix

Table A1: Countries' abbreviations and EU averages

'Old' Member States		'New' Member States	
AT	Austria	*2004 Enlargement*	
BE	Belgium	CY	Cyprus
DK	Denmark	CZ	Czech Republic
FI	Finland	EE	Estonia
FR	France	HU	Hungary
DE	Germany	LV	Latvia
EL	Greece	LT	Lithuania
IE	Ireland	MT	Malta
IT	Italy	PL	Poland
LU	Luxembourg	SK	Slovakia
NL	Netherlands	SI	Slovenia
PT	Portugal		
ES	Spain	*2007 Enlargement*	
SE	Sweden	BG	Bulgaria
UK	United Kingdom	RO	Romania

The 'EU-25 averages' commented in Sections 3 and 4, as well as in the following annexes, are weighted averages of the 25 countries that were members of the EU after the 2004 enlargement, with the exception of Malta for which data were not available from the available EU-SILC users' database; in these averages, each country is weighted by its population size.

Table A2: Share (in %) of people deprived by item, per country, 2007

country	unexpected expenses	holiday away from home	arrears	meat	keep home warm	washing machine	colour TV	phone	car
BE	21	23	6	3	15	2	0	0	7
CZ	38	34	6	13	6	0	0	1	12
DK	18	9	4	3	10	1	1	0	8
DE	36	24	6	10	5	0	1	0	5
EE	22	57	5	6	4	3	1	1	21
IE	39	21	8	2	3	1	0	0	9
EL	30	47	26	6	14	2	0	1	9
ES	29	36	7	2	7	0	0	0	4
FR	33	30	9	6	5	1	0	1	3
IT	32	39	12	6	10	0	0	1	3
CY	42	53	23	8	35	1	0	0	2
LV	63	65	11	30	22	7	1	3	30
LT	42	60	9	17	22	6	1	3	15
LU	21	10	3	1	0	0	0	0	2
HU	63	65	19	25	11	3	1	3	23
NL	21	14	4	1	2	0	0	0	6
AT	29	26	4	8	3	0	0	0	6
PL	54	65	18	24	23	1	1	2	20
PT	20	61	7	4	42	3	1	5	11
SI	42	30	14	10	4	0	1	0	3
SK	43	54	8	32	5	1	1	1	24
FI	30	18	9	3	1	1	1	0	8
SE	17	13	6	4	2	0	1	0	4
UK	27	21	9	4	5	0	0	0	5
EU-25	34	34	9	8	9	1	0	1	7
NO	11	6	9	2	1	0	0	0	4

Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation.

Table A3: Distribution (in %) of material deprivation intensity by country, 2007

country	0	1	2	3	4	5	6 or more
BE	64	16	8	6	3	2	1
CZ	49	19	16	9	5	2	1
DK	70	17	6	4	2	1	0
DE	56	18	14	7	3	1	0
EE	38	29	17	10	3	1	1
IE	56	21	13	6	3	1	1
EL	43	20	15	11	7	3	2
ES	53	21	16	7	2	1	0
FR	56	18	14	7	3	1	0
IT	51	19	15	8	4	2	1
CY	34	18	18	18	10	3	0
LV	22	15	19	20	12	7	5
LT	30	21	20	13	10	4	3
LU	76	15	7	2	1	0	0
HU	19	19	24	18	11	5	3
NL	73	14	8	4	1	0	0
AT	61	18	11	7	2	1	0
PL	25	17	20	16	12	7	3
PT	31	22	25	13	5	3	1
SI	48	21	16	9	3	1	1
SK	31	21	18	17	9	3	2
FI	63	17	11	6	2	1	0
SE	75	13	6	4	2	0	0
UK	66	13	11	6	3	1	0
EU-25	53	18	14	8	4	2	1
NO	83	8	4	3	1	1	0

Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation.

Reading note: In 2007, 64% of Belgians do not report any of the nine disadvantages covered by the material deprivation index. 16% report 1 such disadvantage and 1% report at least 6 disadvantages.

**Table A4: National correlations between equivalised income and
intensity of material deprivation (from 0 to 9)
(all coefficients are significant at the 0.001 level), 2007**

country	correlation	PPS threshold*
BE	-0.359	10035
CZ	-0.346	5348
DK	-0.168	10175
DE	-0.303	10403
EE	-0.277	4059
IE	-0.323	10706
EL	-0.421	6946
ES	-0.347	7807
FR	-0.328	9363
IT	-0.355	8748
CY	-0.372	10938
LV	-0.470	3356
LT	-0.438	3512
LU	-0.320	17575
HU	-0.413	3979
NL	-0.228	10631
AT	-0.317	10880
PL	-0.418	3422
PT	-0.434	5360
SI	-0.390	7979
SK	-0.385	4133
FI	-0.270	9223
SE	-0.273	9581
UK	-0.250	11366
NO	-0.203	12479

Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation
*Downloaded on Eurostat website on January 31st 2010.

Table A5: Material deprivation rate (MD rate) and deprivation intensity (MD int.) by country and quintiles, 2007

country	variable	1	2	3	4	5
BE	MD rate	38%	13%	5%	2%	1%
	mean MD	2.0	0.9	0.5	0.3	0.1
CZ	MD rate	44%	19%	10%	7%	2%
	mean MD	2.3	1.3	0.9	0.7	0.3
DK	MD rate	20%	9%	4%	1%	0%
	mean MD	1.3	0.7	0.4	0.2	0.2
DE	MD rate	32%	15%	6%	4%	2%
	mean MD	1.9	1.2	0.7	0.4	0.2
EE	MD rate	41%	20%	9%	6%	2%
	mean MD	2.3	1.5	1.1	0.7	0.3
IE	MD rate	27%	16%	6%	2%	0%
	mean MD	1.7	1.2	0.8	0.4	0.1
EL	MD rate	50%	33%	19%	7%	0%
	mean MD	2.7	1.9	1.3	0.8	0.2
ES	MD rate	21%	12%	8%	4%	2%
	mean MD	1.5	1.1	0.9	0.6	0.2
FR	MD rate	31%	17%	6%	3%	2%
	mean MD	1.9	1.2	0.7	0.4	0.2
IT	MD rate	36%	18%	12%	6%	2%
	mean MD	2.1	1.3	0.9	0.6	0.3
CY	MD rate	63%	47%	28%	13%	2%
	mean MD	2.8	2.3	1.7	1.0	0.3
LV	MD rate	77%	61%	43%	30%	12%
	mean MD	3.8	2.8	2.3	1.7	0.9
LT	MD rate	61%	38%	27%	16%	5%
	mean MD	3.1	2.2	1.7	1.2	0.6
LU	MD rate	12%	1%	0%	1%	0%
	mean MD	1.1	0.4	0.2	0.1	0.0
HU	MD rate	67%	49%	37%	23%	10%
	mean MD	3.4	2.6	2.1	1.6	1.0
NL	MD rate	17%	7%	2%	1%	1%
	mean MD	1.2	0.7	0.3	0.2	0.1
AT	MD rate	26%	14%	6%	3%	1%
	mean MD	1.6	1.0	0.6	0.4	0.2
PL	MD rate	66%	52%	39%	24%	10%
	mean MD	3.3	2.7	2.2	1.5	0.8
PT	MD rate	48%	30%	19%	11%	3%
	mean MD	2.6	2.0	1.5	1.1	0.4
SI	MD rate	35%	17%	11%	6%	2%
	mean MD	2.0	1.3	1.0	0.7	0.3
SK	MD rate	60%	41%	25%	17%	9%
	mean MD	2.9	2.1	1.5	0.1	0.7
FI	MD rate	29%	12%	3%	2%	0%
	mean MD	1.7	1.0	0.5	0.3	0.1
SE	MD rate	17%	8%	3%	1%	0%
	mean MD	1.1	0.6	0.4	0.2	0.1
UK	MD rate	25%	15%	7%	4%	1%
	mean MD	1.5	1.0	0.6	0.4	0.1
NO	MD rate	13%	6%	3%	1%	0%
	mean MD	0.8	0.5	0.3	0.1	0.0

Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation.

Table A6: Material deprivation rate (MD rate) and deprivation intensity (MD int.) by country and median income levels, 2007

country	Variable	< 40% median	40%-50%	50%-60%	0.6-1.0	1.0-1.5	>1.5
BE	MD rate	51%	44%	35%	13%	3%	1%
	mean MD	2.45	2.22	1.89	0.93	0.32	0.13
CZ	MD rate	67%	68%	41%	21%	7%	2%
	mean MD	3.34	3.00	2.38	1.38	0.71	0.28
DK	MD rate	13%	33%	19%	10%	1%	0%
	mean MD	0.94	1.85	1.36	0.74	0.25	0.13
DE	MD rate	34%	40%	30%	15%	4%	1%
	mean MD	1.90	2.14	1.84	1.11	0.49	0.20
EE	MD rate	53%	41%	32%	16%	8%	2%
	mean MD	2.81	2.30	2.02	1.38	0.89	0.33
IE	MD rate	21%	39%	28%	13%	3%	0%
	mean MD	1.56	2.22	1.67	1.11	0.51	0.13
EL	MD rate	57%	49%	44%	30%	11%	1%
	mean MD	2.89	2.84	2.31	1.72	0.97	0.20
ES	MD rate	25%	20%	18%	12%	5%	2%
	mean MD	1.64	1.42	1.37	1.07	0.64	0.26
FR	MD rate	34%	35%	35%	16%	4%	2%
	mean MD	1.79	2.12	1.97	1.19	0.48	0.19
IT	MD rate	45%	34%	29%	17%	8%	2%
	mean MD	2.41	2.01	1.83	1.24	0.69	0.29
CY	MD rate	66%	66%	60%	45%	16%	2%
	mean MD	3.07	2.81	2.75	2.22	1.16	0.33
LV	MD rate	79%	76%	73%	57%	34%	15%
	mean MD	4.02	3.68	3.41	2.69	1.90	1.10
LT	MD rate	73%	61%	49%	36%	20%	6%
	mean MD	3.78	3.08	2.53	2.13	1.36	0.65
LU	MD rate	29%	22%	8%	1%	1%	0%
	mean MD	1.78	1.46	1.10	0.43	0.11	0.04
HU	MD rate	73%	75%	66%	50%	26%	8%
	mean MD	3.98	3.73	3.17	2.59	1.69	0.86
NL	MD rate	5%	29%	20%	8%	1%	1%
	mean MD	0.68	1.59	1.37	0.69	0.19	0.09
AT	MD rate	36%	42%	27%	13%	3%	1%
	mean MD	2.09	2.07	1.73	0.95	0.41	0.20
PL	MD rate	72%	66%	63%	50%	29%	11%
	mean MD	3.57	3.28	3.08	2.59	1.72	0.83
PT	MD rate	55%	53%	42%	27%	15%	5%
	mean MD	2.97	2.75	2.44	1.88	1.33	0.52
SI	MD rate	49%	43%	37%	19%	7%	1%
	mean MD	2.45	2.28	2.08	1.34	0.71	0.23
SK	MD rate	73%	73%	60%	40%	18%	8%
	mean MD	3.66	3.35	2.85	2.08	1.23	0.66
FI	MD rate	32%	33%	32%	12%	2%	0%
	mean MD	1.75	1.79	1.79	0.97	0.33	0.09
SE	MD rate	22%	20%	18%	8%	1%	0%
	mean MD	1.29	1.20	1.13	0.64	0.20	0.05
UK	MD rate	27%	29%	23%	12%	5%	1%
	mean MD	1.50	1.65	1.36	0.88	0.41	0.15
NO	MD rate	15%	18%	15%	6%	1%	0%
	mean MD	0.91	0.98	0.85	0.47	0.15	0.04

Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation.

Reading note: 51% of Belgians whose income is below 40% of Belgian median equivalised income are deprived. The mean material deprivation index of Belgians falling in this income category is 2.45.

Table A7: Mean equivalised income (in PPS) and at-risk-of-poverty rate (AROP) by deprivation intensity, by country, 2007

Country	Variable	0	1	2	3	4	5	6+
BE	Mean income	20292	15871	12506	11076	9993	9064	8056
	AROP	6%	15%	30%	45%	55%	69%	74%
CZ	Mean income	12185	9489	8195	7436	6242	5993	4751
	AROP	2%	5%	14%	20%	44%	39%	67%
DK	Mean income	19608	17008	13356	12537	11134	10190	10638
	AROP	7%	14%	25%	18%	45%	63%	59%
DE	Mean income	23570	16895	14090	12598	11514	10506	9009
	AROP	5%	16%	27%	38%	49%	52%	65%
EE	Mean income	11779	7393	5947	5085	4141	3811	2780
	AROP	5%	16%	29%	42%	63%	72%	84%
IE	Mean income	26819	17195	14845	13278	10902	10621	9521
	AROP	8%	19%	28%	38%	63%	63%	85%
EL	Mean income	19482	12758	9983	8741	7734	5902	5208
	AROP	7%	15%	26%	34%	44%	72%	84%
ES	Mean income	18037	13142	10839	10115	8282	6394	4635
	AROP	12%	21%	31%	38%	51%	80%	97%
FR	Mean income	19784	14445	12449	11265	10662	10648	8267
	AROP	5%	13%	23%	32%	45%	43%	69%
IT	Mean income	20950	14487	12220	11004	9633	8738	6381
	AROP	8%	21%	32%	41%	51%	59%	77%
CY	Mean income	29750	21256	17509	14389	13250	12112	8128
	AROP	3%	8%	18%	28%	33%	45%	91%
LV	Mean income	11624	8460	6741	5375	5092	4282	3318
	AROP	3%	8%	17%	27%	32%	49%	65%
LT	Mean income	10573	7397	6287	5287	4588	4033	2641
	AROP	5%	11%	18%	30%	37%	53%	73%
LU	Mean income	33624	20682	17793	16101	11601	11840	5228
	AROP	5%	31%	42%	73%	85%	90%	97%
HU	Mean income	10505	8181	6886	6107	5503	5187	3942
	AROP	3%	4%	10%	15%	24%	29%	56%
NL	Mean income	21521	15387	12964	12650	11717	12108	8339
	AROP	5%	17%	23%	29%	43%	40%	78%
AT	Mean income	22106	16744	14495	13157	11340	10659	8274
	AROP	4%	16%	22%	31%	46%	69%	79%
PL	Mean income	11008	7555	6302	5558	5038	4420	3590
	AROP	5%	8%	15%	22%	28%	42%	57%
PT	Mean income	19142	11364	8802	7778	6638	5779	4222
	AROP	4%	11%	21%	32%	43%	50%	84%
SI	Mean income	17282	13991	11991	10779	9759	9783	6745
	AROP	4%	9%	17%	28%	38%	42%	76%
SK	Mean income	10077	8197	7214	6483	5943	4965	3897
	AROP	3%	5%	9%	15%	25%	42%	64%
FI	Mean income	20509	15351	12825	11153	9903	9462	9576
	AROP	6%	14%	24%	37%	58%	47%	62%
SE	Mean income	18134	13560	12135	11167	10266	8458	9597
	AROP	6%	16%	22%	29%	39%	69%	26%
UK	Mean income	25311	17497	14730	13812	11632	10597	9906
	AROP	12%	22%	35%	40%	57%	66%	72%
NO	Mean income	24343	18592	16897	15945	14619	14574	14073
	AROP	8%	20%	25%	31%	40%	44%	31%

Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation.

Reading note: The mean equivalised income of Belgians whose deprivation intensity is 0 is 20292 PPS per equivalised adult; 6% of Belgians with a deprivation intensity of 0 are at risk of poverty.

Table A8 (1/6): Estimation of the relative risk ratio of being at risk of income poverty and/or materially deprived, 2007

	BE			CZ			DK			DE		
	AROP	MD	both	AROP	MD	both	AROP	MD	both	AROP	MD	both
Characteristics of the main income earner												
Woman	1.3	1.6	1.8*	1.7	1.1	1.4	2.5*	1.5	1.6	1.4	1.4*	1.1
Age	0.96*	0.96*	0.95*	0.96*	0.98*	0.97*	0.93*	0.94*	0.89*	0.96*	0.97*	0.95*
Part-time work	2.0	0.6	1.9	2.2	0.6	0.6	5.4*	0.8	1.4	2.8*	1.5*	3.6*
Self-employed	6.4*	0.2	0.4	2.5*	0.5*	0.6	5.3*	0.7	---	2.4*	1.1	1.4
Unemployed	3.6*	1.1	4.2*	2.7	0.9	5.1*	6.5*	1.1	1.9	6.1*	5.3*	10.4*
Other inactivity	2.3	1.0	3.6	3.1	2.4	4.0	9.8*	1.8	0.9	3.1*	1.8	2.8*
Characteristics of the household												
Single	2.8*	2.9*	3.8*	6.9*	2.1*	9.2*	1.9	1.5	5.5*	1.9*	2.1*	3.8*
Single parent	3.2*	3.1*	5.7*	6.8*	2.8*	7.2*	1.5	4.7*	6.6*	1.3	2.9*	2.3*
Two adults 1 or 2 children	2.7*	1.2	5.3*	1.8	0.8	1.6	0.8	1.3	---	0.8	1.2	0.7
Two adults 3+ children	3.8*	2.5*	10.4*	2.8	1.0	4.1*	3.1*	1.8	19.0*	1.0	1.7	1.0
Other household	2.1*	1.3	2.7	0.6	1.0	1.5	0.1*	1.3	---	0.8	1.6*	1.1
Bad health	1.5	3.7*	2.7*	0.7	2.8*	1.6	1.1	3.7*	1.0	1.0	2.7*	2.7*
Low education	1.6*	2.1*	2.6*	1.4	1.9*	3.3*	1.6	1.7	3.6*	1.6*	1.9*	2.5*
Quasi-jobless households	26.2*	9.5*	41.1*	33.5*	2.1	36.5*	2.2	3.2	179.8*	7.8*	2.3*	13.1*
Low Work Intensity (WI)	12.5*	6.6*	9.9*	21.1*	2.6*	20.4*	0.1*	2.5	11.8*	4.1*	1.7*	5.5*
High Work Intensity (WI)	4.7*	3.0*	2.7	5.0*	1.3	3.9*	1.1	1.4	4.4	2.4*	1.4*	2.6*
Owner with mortgage	0.7	2.3*	0.8	0.7	1.2	1.1	0.2*	0.5	0.3	0.8	1.8	1.7
Tenant	1.4	7.2*	8.4*	2.3*	3.7*	8.2*	0.5	6.3*	4.3	1.3	5.3*	4.6*
Tenant reduced/ free rent	1.7	4.9*	6.3*	1.3	2.2*	4.7*				1.4	6.2*	4.4*
N	12079			17307			11934			21915		
Pseudo R-sq	0.334			0.232			0.371			0.226		
LI	-5500.9			-8712.7			-2422.0			-11765.6		
Chi2	1030.7			1070.9			19925.0			1702.0		

Source and methodological information: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation. Unweighted, robust standard error, exponentiated coefficient (relative risk ratios); *p<0.01; reference category of the dependent variable: neither poor nor deprived. The reference individual lives in a household (1) whose main income earner is a male working full time, (2) whose work intensity is higher or equal to 0.75, (3) composed of two adults of less than 65 without children, (4) who owns its accommodation without ongoing mortgage, (5) with no member in (very) bad health and (6) with at least one member with an upper secondary or tertiary education level.

Table A8 (2/6): Estimation of the relative risk ratio of being at risk of income poverty and/or materially deprived, 2007

	EE			IE			EL			ES		
	AROP	MD	both	AROP	MD	both	AROP	MD	both	AROP	MD	both
Characteristics of the main income earner												
Woman	3.2*	1.6*	3.5*	1.2	1.7	0.9	0.7	1.0	1.1	1.2	1.0	1.6*
Age	0.99	0.98	0.99	0.99	0.97*	0.97*	0.99	0.99	0.98	0.98*	0.97*	0.97*
Part-time work	2.4	2.2	1.4	2.9*	0.7	1.5	9.3*	3.5*	12.8*	2.4*	1.1	2.3*
Self-employed	9.3*	0.8	2.1	3.4*	0.9	1.2	3.9*	0.9	2.4*	4.4*	0.6	1.5
Unemployed	3.1	1.9	3.3	12.5*	2.2	7.3*	4.5*	2.1	6.8*	4.0*	1.4	3.9*
Other inactivity	8.0*	---	6.4*	8.9*	1.3	4.9	2.7*	2.2	1.3	4.5*	1.3	2.7*
Characteristics of the household												
Single	2.3*	1.4	4.5*	4.1*	0.9	5.1*	1.8	1.5	2.5*	1.8*	1.8*	2.6*
Single parent	3.0*	2.0	6.6*	2.8*	1.3	4.9*	3.5*	1.6	4.6*	2.1*	2.6*	6.6*
Two adults 1 or 2 children	1.1	0.6	0.8	1.9	0.5	0.8	2.5*	0.8	2.1*	2.3*	0.8	2.1*
Two adults 3+ children	1.9	0.8	2.8*	2.9*	0.9	1.9	2.1	0.5	2.3	4.2*	1.6	8.8*
Other household	0.6	0.7	0.4	0.6	0.6	0.3	1.0	0.8	1.1	0.9	1.3	1.7
Bad health	0.7	1.6	1.3	0.7	4.1*	1.9	0.9	1.9*	1.8*	1.0	2.6*	2.7*
Low education	1.4	1.7*	2.1*	3.1*	2.7*	3.5*	3.3*	4.1*	6.9*	2.5*	4.4*	4.7*
Quasi-jobless households	9.5*	1.0	31.0*	5.3*	5.0*	66.5*	8.3*	1.5	12.7*	11.1*	2.2	19.5*
Low Work Intensity (WI)	10.1*	2.8*	18.1*	4.6*	3.9*	29.2*	5.1*	1.7*	6.5*	6.9*	1.7*	10.4*
High Work Intensity (WI)	2.9*	1.2	4.0*	2.1*	2.0	4.0	2.0*	1.3	1.7*	3.5*	1.4*	2.7*
Owner with mortgage	0.3*	0.7	---	0.6*	2.3	0.8	0.7	1.9*	1.0	0.8	2.0*	1.3
Tenant	1.0	1.3	1.9	1.1	11.3*	2.0	1.3	3.5*	3.1*	2.4*	4.8*	7.9*
Tenant reduced/ free rent	1.2	2.6*	3.0*	1.4	14.0*	6.7*	1.1	2.3*	2.9*	1.6*	2.6*	5.1*
N	11692			9628			10732			27030		
Pseudo R-sq	0.220			0.371			0.154			0.203		
LI	-7443.3			-4209.2			-8731.0			-17240.1		
Chi2	53515.8			850.5			774.2			1761.9		

Source and methodological information: See above, Table A8 (1/6).

Table A8 (3/6): Estimation of the relative risk ratio of being at risk of income poverty and/or materially deprived, 2007

	FR			IT			CY			LV		
	AROP	MD	Both	AROP	MD	both	AROP	MD	both	AROP	MD	both
Characteristics of the main income earner												
Woman	0.8	1.2	1.2	0.9	1.1	1.1	0.4	0.9	1.2	2.2*	1.3*	2.2*
Age	0.98*	0.97*	0.98*	0.98*	0.98*	0.98*	0.94*	0.97*	0.94*	1.01	1.00	1.00
Part-time work	2.4*	2.0*	3.9*	2.9*	1.4	4.5*	2.0	1.5	5.2*	2.7	1.9	2.9
Self-employed	3.2*	1.5	4.0*	2.3*	0.6*	1.8*	0.4	1.3	0.6	3.6*	0.4*	1.1
Unemployed	1.7	2.3*	3.5*	3.5*	3.4*	6.9*	0.5	0.8	2.8	1.3	0.9	7.2*
Other inactivity	2.0	1.2	2.7*	2.1*	1.9*	2.5*	0.8	0.5	1.7	0.9	1.1	1.4
Characteristics of the household												
Single	1.5	2.1*	1.9*	3.9*	1.7*	3.3*	3.9*	1.3	2.0	2.7*	0.9	3.6*
Single parent	2.9*	3.7*	3.1*	2.8*	1.8*	4.0*	6.9*	2.8*	4.6*	4.4*	1.7*	3.8*
Two adults 1 or 2 children	1.4	1.3	2.0*	1.7*	1.0	1.9*	0.7	0.7	1.1	1.1	0.6*	0.6
Two adults 3+ children	2.4*	1.3	2.9*	3.7*	1.6	4.4*	0.5	0.7	1.3	5.4*	1.1	2.7
Other household	1.4	1.6	1.8	0.7*	1.0	1.2	---	0.8	0.3*	0.6	0.7*	0.4*
Bad health	1.4	2.7*	2.1*	0.8	2.5*	1.7*	1.7	2.1*	3.4*	0.8	2.1*	2.0*
Low education	1.6*	2.1*	2.9*	2.4*	2.1*	4.0*	3.8*	3.1*	5.0*	2.0*	1.8*	2.9*
Quasi-jobless households	24.1*	3.1*	42.6*	32.4*	1.5	42.1*	15.9*	1.7	18.7*	17.6*	1.6	11.2*
Low Work Intensity (WI)	7.0*	2.3*	13.6*	19.8*	2.5*	19.9*	12.2*	2.2*	12.0*	12.9*	1.6	16.6*
High Work Intensity (WI)	3.4*	1.5*	4.1*	6.5*	1.8*	5.4*	4.7*	1.2	3.1*	3.5*	1.7*	4.2*
Owner with mortgage	0.5*	1.3	0.7	0.7	2.1*	1.0	0.5	1.2	1.2	0.6	0.5	---
Tenant	1.4	5.1*	8.9*	1.9*	4.1*	6.9*	1.8	1.9*	5.1*	1.0	1.3	2.0
Tenant reduced/ free rent	1.2	3.0*	6.8*	1.5*	2.0*	4.4*	1.3	1.6*	2.2*	1.5	2.2*	4.9*
N	19801			39180			8639			8642		
Pseudo R-sq	0.247			0.216			0.157			0.170		
Ll	-10396.6			-24922.1			-6498.8			-7872.1		
Chi2	1526.3			2790.5			474.4			13098.6		

Source and methodological information: See above, Table A8 (1/6).

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Table A8 (4/6): Estimation of the relative risk ratio of being at risk of income poverty and/or materially deprived, 2007

	LT			LU			HU			NL		
	AROP	MD	both	AROP	MD	both	AROP	MD	both	AROP	MD	both
Characteristics of the main income earner												
Woman	1.3	1.1	1.9*	0.9	1.5	2.1*	1.0	1.2	1.1	2.5*	2.1*	1.1
Age	0.99	0.99	1.00	0.96*	1.00	0.97*	0.96*	0.98*	0.97*	0.96*	0.97*	0.95*
Part-time work	2.4	2.4	3.6*	1.1	1.2	1.4	1.6	1.4	3.1*	1.6	0.7	1.3
Self-employed	1.5	0.7	1.3	1.9	0.4	0.5	3.6*	0.3*	1.0	3.5*	0.4	0.3
Unemployed	3.2	0.7	6.8*	2.5	---	5.1*	7.6*	1.1	6.9*	2.2	3.6*	8.4*
Other inactivity	2.2	2.2	2.4	1.0	0.6	1.5	8.7*	1.8	4.3*	2.0	2.3	4.1
Characteristics of the household												
Single	3.1*	1.6*	5.1*	3.5*	1.7	4.3*	3.5*	1.8*	6.3*	1.6	3.7*	3.7*
Single parent	4.2*	1.5	5.7*	5.9*	1.9	4.8*	1.8	1.8*	4.5*	1.9	4.8*	12.9*
Two adults 1 or 2 children	1.2	0.6*	1.2	1.8*	0.6	1.8	1.3	0.9	1.3	1.4	1.2	1.5
Two adults 3+ children	4.6*	1.1	5.6*	2.7*	1.7	1.4	0.9	1.5	2.8*	6.5*	1.3	8.0*
Other household	0.5	0.7*	0.5	1.1	1.5	0.6	0.3*	0.7*	0.5*	1.0	1.6	0.4
Bad health	0.8	1.8*	1.1	1.5	3.6	4.0*	0.9	1.8*	1.4	0.7	1.1	1.4
Low education	1.6	1.3	2.1*	5.9*	2.4	7.3*	1.9*	2.3*	4.7*	1.5	4.2*	5.4*
Quasi-jobless households	12.7*	1.6	30.8*	12.8*	1.2	14.2*	17.6*	2.0	45.6*	9.3*	1.4	6.5
Low Work Intensity (WI)	15.1*	1.5	16.0*	6.4*	0.7	13.8*	14.4*	2.4*	16.8*	3.6*	1.4	3.1
High Work Intensity (WI)	3.9*	1.5*	3.5*	4.5*	0.9	3.2*	4.9*	1.5*	3.8*	2.6*	2.0*	4.5*
Owner with mortgage	0.1	0.5	0.3	1.6	1.7	3.1	0.8	1.3	0.8	0.3*	0.9	0.6
Tenant	0.1	0.8	0.9	6.7*	3.3	27.6*	1.4	2.3*	1.3	0.9	5.4*	7.0
Tenant reduced/ free rent	1.6	1.5	3.8*	5.0*	5.7	17.6*	1.4	1.7*	2.2*			
N		9700			8836			15779			21183	
Pseudo R-sq		0.168			0.267			0.205			0.272	
Ll		-7656.4			-4723.2			-12544.5			-4925.9	
Chi2		713.2			17577.1			1118.8			900.4	

Source and methodological information: See above, Table A8 (1/6).

Table A8 (5/6): Estimation of the relative risk ratio of being at risk of income poverty and/or materially deprived, 2007

	AT			PL			PT			SI			SK		
	AROP	MD	both	AROP	MD	both	AROP	MD	Both	AROP	MD	both	AROP	MD	both
Characteristics of the main income earner															
Woman	1.5	1.5	0.7	1.0	1.1	1.0	1.1	0.9	0.9	0.9	1.0	0.7	2.5*	1.2	1.3
Age	0.97*	0.97*	0.97*	0.97*	0.99	0.98*	0.96*	0.98*	0.97*	0.96*	0.97*	0.97*	0.96*	0.98*	0.96*
Part-time work	1.7	1.4	2.4	3.3*	1.3	2.3*	2.9	1.9	2.7	2.2	1.5	1.9	---	0.5	1.4
Self-employed	2.8*	0.3*	1.5	4.3*	0.5*	1.6*	2.1*	0.6	0.7	5.2*	0.6	1.5	2.3*	0.5*	0.4
Unemployed	3.0	3.5	6.3*	12.3*	2.1	13.7*	0.5	1.5	1.4	4.5*	1.1	5.7*	7.5*	1.1	16.2*
Other inactivity	2.7	1.7	2.4	4.3*	1.8*	4.7*	1.3	1.8	1.9	4.3*	1.8	6.0*	10.0	13.2	14.0
Characteristics of the household															
Single	2.0*	1.7	2.4	1.6	1.6*	3.6*	2.7*	2.8*	3.1*	3.2*	1.5	5.8*	9.7*	1.5	5.2*
Single parent	2.0*	1.9	2.5	2.8*	2.2*	3.3*	2.1	2.4	8.9*	1.4	1.7	2.0	1.4	2.0	11.3*
Two adults 1 or 2 children	1.0	1.3	1.1	2.0*	0.9	2.1*	0.9	0.9	1.2	0.6	0.7	0.7	4.3*	0.8	2.2
Two adults 3+ children	1.9	1.7	1.8	3.7*	1.6*	5.0*	2.2	0.7	4.0*	0.7	1.2	0.9	7.6*	1.0	9.3*
Other household	0.5	1.3	0.4	1.0	1.0	1.2	0.3*	0.8	0.6	0.3*	0.9	0.5	1.0	1.1	2.1
Bad health	1.1	3.1*	3.0*	0.9	1.8*	1.2	1.3	2.6*	2.8*	1.4	3.3*	2.8*	0.9	1.5*	1.4
Low education	1.8*	2.0*	3.5*	1.7*	1.6*	3.0*	14.4*	4.4*	12.6*	2.3*	2.3*	7.1*	1.7	1.3*	2.2*
Quasi-jobless households	8.1*	2.3	42.1*	2.5*	1.9*	9.2*	33.8*	2.5	20.1*	10.8*	3.3*	34.6*	13.8*	2.3	81.1*
Low Work Intensity (WI)	5.7*	1.7	17.2*	3.3*	2.3*	7.7*	12.7*	1.8	13.3*	11.3*	2.5*	10.8*	8.3*	2.3*	15.4*
High Work Intensity (WI)	3.5*	1.3	5.5*	2.0*	1.4*	2.8*	5.8*	1.5*	4.2*	3.4*	1.5*	3.8*	2.9*	1.4*	3.7*
Owner with mortgage	1.1	1.5	2.2	0.4*	0.5*	0.2*	0.4*	1.0	0.4*	1.9	1.6	1.9	0.9	1.0	1.2
Tenant	1.5	3.1*	8.4*	0.6	2.3*	1.3	1.1	4.1*	3.7*	2.4*	3.5*	6.4*	0.6	1.8*	2.6*
Tenant reduced/ free rent	1.3	2.4*	8.3*	0.6*	1.4*	1.0	1.2	2.9*	3.3*	1.9*	1.5	2.1	0.6	1.9	1.5
N	12658			29660			8553			24259			12059		
Pseudo R-sq	0.197			0.137			0.190			0.163			0.164		
LI	-6113.0			-29009.6			-6412.6			-12691.4			-8866.3		
Chi2	776.0			1953.3			648.4			1059.8			10424.6		

Source and methodological information: See above, Table A8 (1/6).

Table A8 (6/6): Estimation of the relative risk ratio of being at risk of income poverty and/or materially deprived, 2007

	FI			SE			UK			NO		
	AROP	MD	both	AROP	MD	both	AROP	MD	both	AROP	MD	both
Characteristics of the main income earner												
Woman	1.8*	1.5	1.7*	2.0*	1.5	1.8	1.7*	1.2	1.9*	1.7*	1.3	2.0
Age	0.96*	0.98	0.96*	0.95*	0.99	0.94*	0.98*	0.97*	0.96*	0.95*	0.96*	0.96
Part-time work	5.4*	2.3*	3.3*	2.4*	1.3	4.4*	3.6*	1.8	3.1*	2.3*	2.1	2.5
Self-employed	2.9*	0.6	2.3	8.2*	1.0	2.4	3.0*	1.5	0.7	3.6*	0.6	1.3
Unemployed	7.4*	2.5	6.7*	1.1	1.8	8.0*	5.0*	7.6*	6.9*	3.2	1.1	5.9
Other inactivity	4.5*	1.6	3.7*	2.9*	0.7	3.3	2.2	1.3	1.6	1.7	0.9	0.5
Characteristics of the household												
Single	4.4*	1.9*	5.8*	2.9*	4.1*	5.2*	1.7*	2.6*	5.2*	3.3*	2.5	24.6*
Single parent	2.4*	4.4*	5.3*	4.0*	7.5*	6.6*	1.4	3.2*	4.1*	8.0*	8.8*	43.9*
Two adults 1 or 2 children	1.8*	1.3	1.1	1.2	2.2	3.4	1.2	1.1	2.0	1.0	2.1	12.7
Two adults 3+ children	4.0*	2.3*	3.4*	3.8*	4.0*	7.8*	3.2*	2.5*	6.0*	1.4	3.6*	43.1*
Other household	0.9	1.6	0.9	0.6	1.5	0.7	0.9	2.2*	1.6	0.9	0.8	3.1
Bad health	0.9	1.7	2.0	1.2	4.0*	3.1	0.6	2.0*	0.8	0.9	4.1*	1.1
Low education	1.4	1.6*	2.4*	1.1	1.0	1.8	2.3*	2.0*	3.1*	1.3	2.4*	2.4
Quasi-jobless households	3.7*	3.9*	15.9*	5.7*	7.9*	22.5*	11.7*	2.2	22.0*	4.7	5.5*	56.7*
Low Work Intensity (WI)	3.4*	4.2*	8.2*	3.4*	5.5*	11.2*	6.0*	1.1	6.0*	1.9	0.9	13.0*
High Work Intensity (WI)	2.0*	2.1*	3.4*	2.3*	3.4*	6.7*	2.7*	1.0	1.8	1.9*	1.2	2.2
Owner with mortgage	0.6*	1.6	1.7	0.5	2.2	1.0	0.8	3.8*	0.9	0.5*	1.4	2.8
Tenant	1.2	4.8*	8.0*	1.5	8.1*	4.6	1.5	19.2*	4.5*	1.7	12.0*	70.5*
Tenant reduced/ free rent	1.2	6.1*	11.3*	0.7	10.7*	4.5	1.5	23.7*	8.5*	1.0	5.6	51.4*
N		18398			13023			14657			11316	
Pseudo R-sq		0.252			0.255			0.302			0.286	
LI		-7259.0			-4206.2			-7412.4			-3237.2	
Chi2		1236.1			860.7			1247.2			712.0	

Source and methodological information: See above, Table A8 (1/6).

Table A9 (1/2): Summary of the determinants of income poverty and material deprivation, 2007

AROP	ns	-	+	++		Min1		Min2		Max1		Max2
woman	16	0	9	0	1.7	UK, NO	1.8	FI	3.2	EE	2.5	DK, NL, SK
age	5	20	0	0	0.93	DK	-	-	0.98	ES, FR, IT, UK	-	-
part-time work	12	0	9	3	2.3	NO	2.4	ES, FR, SE	9.3	EL	5.4	DK, FI
self-employed	3	0	17	5	2.1	PT	2.3	IT, SK	9.3	EE	8.2	SE
unemployed	12	0	5	8	3.5	IT	3.6	BE	12.5	IE	12.3	PL
other inactivity	13	0	8	4	2.1	IT	2.7	EL	9.8	DK	8.9	IE
Single	5	0	18	2	1.7	UK	1.8	ES	9.7	SK	6.9	CZ
single parents	8	0	13	4	2	AT	2.1	ES	8	NO	6.9	CY
2 adults & 1 or 2 children	17	0	8	0	1.7	IT	1.8	LU, FI	4.3	SK	2.7	BE
2 adults & 3+ children	10	0	12	3	2.4	FR	2.7	LU	7.6	SK	6.5	NL
other households	18	5	1	0	0.1	DK	0.3	HU, PT, SI	2.1	BE	0.7	IT
bad health	25	0	0	0	-	-	-	-	-	-	-	-
low education	9	0	14	2	1.6	BE,DE,FR	1.7	PL	14.4	PT	5.9	LU
quasi-jobless households	2	0	2	21	2.5	PL	3.7	FI	33.8	PT	33.5	CZ
relatively low WI	1	1	6	17	0.1	DK	3.3	PL	21.1	CZ	19.8	IT
relatively high WI	1	0	21	3	1.9	NO	2	EL, PL, FI	6.5	IT	5.8	PT
owner with mortgage	16	9	0	0	0.2	DK	0.3	EE, NL	0.6	IE, FI	0.5	FR, NO
Tenant	20	0	4	1	1.9	IT	2.3	CZ	6.7	LU	2.4	ES, SI
rent free/ reduced	20	1	3	1	0.6	PL	1.5	IT	5	LU	1.9	SI
MD	**ns**	**-**	**+**	**++**		**Min1**		**Min2**		**Max1**		**Max2**
Woman	21	0	4	0	1.3	LV	1.4	DE	2.1	NL	1.6	EE
Age	8	17	0	0	0.94	DK	-	-	0.98	CZ, IT, HU, PT, SK	-	-
part-time work	21	0	4	0	1.5	DE	2	FR	3.5	EL	2.3	FI
self-employed	18	7	0	0	0.3	HU, AT	0.4	LV	0.6	IT	0.5	CZ, PL, SK
Unemployed	19	0	3	2	2.3	FR	3.4	IT	7.6	UK	5.3	DE
other inactivity	22	0	2	0	1.8	PL	-	-	1.9	IT	-	-
Single	11	0	14	0	1.6	LT, PL	1.7	IT	4.1	SE	3.7	NL
single parents	9	0	14	2	1.7	LV	1.8	IT, HU	8.8	NO	7.5	SE
2 adults & 1 or 2 children	23	2	0	0	0.6	LV, LT	-	-	0.6	LV, LT	-	-
2 adults & 3+ children	19	0	6	0	1.6	PL	2.3	FI	4	SE	3.6	NO
other households	20	3	2	0	0.7	LV, LT, HU	-	-	2.2	UK	1.6	DE
bad health	4	0	21	0	1.5	SK	1.8	LT, HU, PL	4.1	IE, NO	4	SE
low education	4	0	21	0	1.3	SK	1.6	PL, FI	4.4	ES, PT	4.2	NL
quasi-jobless households	16	0	5	4	1.9	PL	2.3	DE	9.5	BE	7.9	SE
relatively low WI	9	0	14	2	1.7	DE, EL, ES	2.2	CY	6.6	BE	5.5	SE
relatively high WI	10	0	15	0	1.4	DE, ES, PL, SK	1.5	FR, LT, HU, PT, SI	3.4	SE	3	BE
owner with mortgage	19	1	5	0	0.5	PL	1.9	EL	3.8	UK	2.3	BE
Tenant	4	0	12	9	1.8	SK	1.9	CY	19.2	UK	12	NO
rent free/ reduced	7	0	13	5	1.4	PL	1.6	CY	23.7	UK	14	IE

Source and notes: See second part of Table. WI: Work Intensity.

Table A9 (2/2): Summary of the determinants of income poverty and material deprivation, 2007

Both	ns	-	+	++	Min1		Min2		Max1		Max2	
Woman	17	0	8	0	1.6	ES	1.7	FI	3.5	EE	2.2	LV
Age	5	20	0	0	0.89	DK	-	-	0.98	FR, IT, PL	-	-
part-time work	13	0	10	2	2.3	ES, PL	3.1	HU, UK	12.8	EL	5.2	CY
self-employed	20	0	4	0	1.6	PL	1.8	IT	4	FR	2.4	EL
unemployed	5	0	3	17	3.5	FR	3.9	ES	16.2	SK	13.7	PL
other inactivity	16	0	7	2	2.5	IT	2.7	ES, FR	6.4	EE	6	SI
Single	2	0	12	11	1.9	FR	2.5	EL	24.6	NO	9.2	CZ
single parents	2	0	11	12	2.3	DE	3.1	FR	43.9	NO	12.9	NL
2 adults & 1 or 2 children	18	0	6	0	1.9	IT	2	FR	5.3	BE	2.1	EL, ES, PL
2 adults & 3+ children	8	0	7	10	2.8	EE, HU	2.9	FR	43.1	NO	19	DK
other households	21	3	0	0	0.3	CY	-	-	0.5	HU	0.4	LV
bad health	13	0	12	0	1.7	IT	1.8	EL	4	LU	3.4	CY
low education	2	0	17	6	2.1	EE, LT	2.2	SK	12.6	PT	7.3	LU
quasi-jobless households	1	0	0	24	9.2	PL	11.2	LV	179.8	DK	81.1	SK
relatively low WI	1	0	0	24	5.5	DE	6	UK	29.2	IE	20.4	CZ
relatively high WI	5	0	17	3	1.7	EL	2.6	DE	6.7	SE	5.5	AT
owner with mortgage	21	2	0	0	0.2	PL	-	-	0.4	PT	-	-
tenant	9	0	5	11	2.6	SK	3.1	EL	70.5	NO	27.6	LU
rent free/ reduced	6	0	10	9	2.2	CY, HU	2.9	EL	51.4	NO	17.6	LU

Source: EU-SILC 2007 cross-sectional data-files, version UDB 01.08.09, authors' computation.

Note 1: This table summarises the results of the multinomial regression in terms of relative risk ratio for each country separately (see Section 5.). *p<0.01.

Note 2: AROP: at-risk-of-poverty only; MD: materially deprived only; both: AROP and MD. The reference category of the dependent variable is 'neither AROP nor MD'. The table reports the number of countries where the relative risk ratio is not significant (ns), where it is below 1 (-), between 1 and 5 (+) and higher than 5 (++); it also lists the countries with the minimum (min1 and min2) and maximum (max1 and max2) values.

Reading note: Compared to living in a quasi jobfull household (0.75≤WI≤1), the impact of living in a household with a 'relatively high work intensity' (0.50≤WI<0.75) on being both income poor and materially deprived is not significant in 5 countries (column ns). In 17 countries, this relative risk ratio is between 1 and 5 (column +) and in 3 countries it is higher than 5 (column ++). There are no countries where living in a household with a 'relatively high work intensity' decreases significantly (p<0.01) the risk of being both materially deprived and income poor (that is a relative risk ratio below 1; column -). The country where the significant impact is lowest (column Min1) is Greece with a relative risk ratio of 1.7, followed by Germany (Min2; relative risk ratio 2.6). By contrast, Sweden is the country where the impact is highest (Max1: 6.7) followed by Austria (Max2: 5.5).

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