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***A Critical Evaluation of the EU 2020 Poverty and Social
Exclusion Target: An Analysis of EU-SILC 2009***

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Abstract

As part of its 2020 Strategy adopted, the EU has set a number of headline targets including one for poverty and social exclusion reduction. Our analysis in this paper suggests that, in focusing on the union of the three chosen component indicators, cross-nationally we are not comparing like with like and the case for aggregating the indicators to produce a multidimensional indicator is seriously undermined. In relation to the measurement of deprivation, the development of this target was conducted on the basis of information available in the European Union Survey of Income and Living Conditions (EU-SILC) that was generally recognised to be less than satisfactory. More recently the introduction of a special module on material deprivation as part of EU-SILC 2009 provides an opportunity to explore the consequences of critical choices in relation to the deprivation index utilised and the threshold employed. In order to deal with problems relating to the fact that neither the union or intersection of the current dimensions proves to be satisfactory, we explored a consistent poverty approach using both the EU severe material deprivation 4+ threshold and a 3+ threshold and nationally relative threshold based on an alternative basic deprivation index. Employing the EU material deprivation index, extreme deprivation is largely abolished in more affluent member states. A purely relative measure produces much higher rates in these countries but leads to a compression of rates across countries. The basic deprivation 3+ index largely manages to avoid both of these problems. Understanding the scale of between country differences while continuing to be able identify those groups within countries who should remain the focus of attention is an indispensable part of any attempt to develop EU poverty and targets. The absence of coherent principles underlying the measurement process is likely to undermine the stated objectives of achieving an effective way of communicating in a political environment, and a necessary tool in order to monitor national situations.

Keywords: Poverty, exclusion, EU 2002 target, multidimensionality **JEL classification:** I3

1. Introduction

As part of its 2020 Strategy adopted in 2010, the EU has set a number of headline targets including one for poverty and social exclusion reduction over the next decade. This is the first time these indicators have been combined to identify an overall target group “at risk of poverty and exclusion”. The population identified in framing the target as set out in “ Box 1” is persons in the Member States either below a country-specific relative income poverty threshold, above a material deprivation threshold, or in a “jobless” household.

Our analysis focuses on the consequences of crucial choices regarding the manner in which the constituent elements of the target are combined. These include the *union* and *intersection* approaches to counting the poor (Atkinson, 2003). The former considers as poor those fulfilling any one of a set of conditions while the latter counts only those above the relevant thresholds on a specified number of dimensions. In relation to the income poverty and “jobless” elements of the target we proceed on the basis of the existing definitions. However, for the material deprivation threshold element we seek to take advantage of the availability of the special module on deprivation as part of EU-SILC 2009 in order to extend our earlier critique of the manner in which the poverty targets have been set (Nolan and Whelan, 2011).

BOX 1**Population at risk of Poverty or Social Exclusion****The Europe 2020 strategy**

At the European Council held in June 2010 the EU member states endorsed a new EU strategy in order to promote jobs, a smart and sustainable and inclusive growth. The Council selected five headline targets to constitute shared objectives guiding the action of member states and the Union as regards promoting employment, improving the conditions for innovation, research and development, meeting the EU climate change and energy objectives, improving educational levels, and “promoting social inclusion in particular through the reduction of poverty”.

Social inclusion target

The fifth headline target focuses on lifting at least 20 million people out of risk of poverty and social exclusion. To monitor progress towards this target an indicator of ‘at risk of poverty and social exclusion’ has been agreed. In order to capture the multidimensional nature of poverty and social exclusion this measure uses three indicators already included in the EU’s social inclusion indicator portfolio, at-risk-of poverty, material deprivation and jobless household. The indicator is derived from the EU-SILC data.

The population at risk of poverty or social exclusion for this purpose is defined as the population experiencing at least one of the following three conditions: being at-risk-of-poverty, being severely materially deprived or living in households with very low work intensity.

Individual Indicators

1. The “at-risk-of-poverty” indicator identifies persons living in households with less than 60% of the national median equivalized (using the modified OECD scale) disposable income after social transfers.
2. The material deprivation indicator identifies persons living in households that cannot afford (or experience) at least three of the following nine items:
 - avoiding arrears (in mortgage or rent, utility bills or hire purchase instalments);
 - to keep their home adequately warm;
 - to face unexpected expenses;
 - a meal with meat, chicken, fish or vegetarian equivalent every second day;
 - one week annual holiday away from home;
 - a colour TV;
 - a washing machine;
 - a car;
 - a telephone.

However while the common indicator employs a threshold of 3 items, for the purpose of the social inclusion target this element is based on the “**severe material deprivation**” that identifies only those reporting **at least four** of the above-mentioned items.

3. The household joblessness indicator identifies persons aged 0 to 59 that are living in households with “very low work intensity” that is where the adults (aged 18-59) worked less than 20% of their total work potential during the past year. It is based on the number of months spent at work over the previous 12 month period by household members aged 18 to 59 (excluding students).

Our critique recognises that setting a poverty target is a major development in the role accorded to social inclusion in the EU and is thus very important at the level of principle. We also appreciate that the establishment of such a target can never be a purely methodological exercise and that it necessarily involves a series of compromise between political and policy preferences and traditions of Member States. Nevertheless if such targets are to prove valuable, the specific manner in which the target itself has been framed, and the implications for approaches to implementing it, require careful scrutiny on both conceptual and methodological grounds.

2. The EU's Poverty and Social Exclusion Target

As described in “Box 1” the indicators are combined to identify the target group so that meeting *any* of the three criteria suffices for an individual to be included among those counted as poor and socially excluded. The relevant figure is the union of the three outcomes. However, Member States are free to set national targets on the basis of what they consider to be the most appropriate indicator or intersection of indicators as long as they are in a position to demonstrate how these will contribute to the achievement of the overall EU-wide target.

As Copeland and Daly (2012) stress, the establishment of the European Union Poverty and Social Exclusion Target needs to be located in the context of the politics of EU social policy which involves a complicated mix of EU-level and national interests. As a variety of authors have stressed, there is a striking contrast between policies promoting market efficiencies and policies promoting social protection and equality (Ferrera, 2005, 2009, Scharpf, 2002); between the forms and scale of ‘positive’ and ‘negative’ integration’ (Beckfield, 2006). Notwithstanding the extent to which EU rules and regulations may restrict national control over welfare policies, the semi-sovereign nature of EU social policy creates considerable scope for the influence of Member States that are characterised by a variety of welfare

models involving distinct policy orientations and underpinning values and norms. Copeland and Daly (2012) conclude that, while the target is ambitious, rather than signifying deeper integration of EU Social Policy the European Poverty and Social Exclusion Target reveals fundamental conflicts relating to such policy. Crucially for our purposes, they conclude that

“ as a substantive measure the target is internally complicated and constructed in a manner that is likely to continue the pattern of *à-la-carte* take up of European Social Policy ideas and initiatives by member States” (Copeland and Daly, 2012;274).

The initial proposal in the first draft of Europe 2020 on March 2010 included a headline target of a 25% reduction in poverty based on the ‘at risk of poverty’ measure calculated on the basis of 60% of national equivalized median income (European Commission, 2010). Strong opposition to this proposal emerged from a number of sources and Member States were invited to develop alternative proposals. Dialogue between the Commission and the Member States was facilitated by the work of the Social Protection Committee (SPC) and its indicators sub-group (ISG). A number of authors have provided accounts of the impact of varying influences on the shift from this one dimensional target to the final multidimensional indicator agreed in June 2011 by the European Council (Copeland and Daly, 2012, Bontout and Delautre, 2012). Opposition to a target based solely on relative income derived from a number of different sources and motivations. Italy, Ireland and a number of New Member States argued for the need to go beyond low income *per se* in order to take into account the situation of the most vulnerable and their material conditions. In contrast, for countries such as Sweden, the Netherlands and Denmark, for whom the concept of poverty has more limited resonance and social policy is viewed in more solidaristic terms, the focus was on the need to incorporate exclusion from the labour market and its role in generating poverty and social

exclusion. Daly and Copeland (2012) note the contrast between this position and the emphasis by a range of countries including Austria, Belgium, Cyprus, France, Italy, Portugal and Spain that progress in relation to economic growth and job creation should be accompanied by a strengthening of the European social model.

The multidimensional poverty target allows for the accommodation of rather different perspectives and traditions. It also allows considerable latitude for individual Member States in interpreting its requirements. They can opt to focus on any one of the three indicators, the union of any pair of indicators, the union of all three elements, one of the three intersections involving an overlap of two indicators or the intersection of all three indicators and indeed can propose alternative indicators by demonstrating the relationship between these indicators and the EU target. This provides considerable reassurance against the threat of downward imposition of national targets.

3. The Implications of a Multidimensional Approach

Combining these three distinct indicators represents a multidimensional approach to identifying the target population. The academic and policy debates relating to the advantages and disadvantages of summary indices constructed on a multidimensional basis has been vigorous, focusing inter alia on the value of such indices for communication to a wide audience versus the potentially arbitrary nature of decisions required in combining distinct dimension. A number of authors have questioned whether acceptance that poverty is multidimensional necessarily implies a need for a multidimensional poverty index (MPI). Ravallion (2011), for example, concludes that it is one thing to recognise that something is missing from a given measure and quite another to conclude that what is required is a single composite index. Nolan and Whelan (2007) note that while a case can be made for a

multidimensional approach in seeking to adequately measure, understand and respond to poverty, they are not the same case, they have different implications and one does not simply follow from the other. It does not automatically follow that the multidimensional poverty target necessarily constitutes an advance on the range of social indicators developed by the EU associated with the Open Method of Coordination (OMC) in Social Protection and Social Exclusion (Atkinson *et al* 2001 and Marlier *et al* 2010).

The case for including a measure of material deprivation is based on a long standing critique of sole reliance on low income to identify the poor. While the use of non-monetary indicators in monitoring living conditions or quality of life has a long history, their use in capturing deprivation and poverty received a major impetus with Townsend's pioneering British study (1979). As these indicators became more widely available, they underpinned a more radical critique: that reliance on income actually fails to identify those who are unable to participate in their societies due to lack of resources (Ringen, 1988). Since then an extensive research literature on measures of material deprivation in OECD countries and the extent of the mismatch with low income has grown up with reviews by among others Boarini and Mira d'Ercole (2006) and Nolan and Whelan (2011) listing over a hundred studies covering a wide range of countries.¹ In the EU more recent studies have made use of data emerging from the EU-Statistics on Income and Living Conditions (EU-SILC). The study by Fusco, Guio and Marlier (2010) was carried out in association with Eurostat with a particular eye to the use of deprivation indicators in the EU's social inclusion process.

As Copeland and Daly (2012) observe, concern with joblessness can be traced to the focus in neo-liberal countries on the possibility that families and household excluded from the labour

¹ Among the French contributions to this debate see Lolliver and Verger (1979) and Fall and Verger (2005)

market are characterized by distinctive values and behaviour. However, the focus on work intensity can be located in a much wider context relating to the perceived challenges to the welfare state created by the restructuring and polarization of social risk and the need to shift from passive social protection and job security to a ‘social investment’ strategy focused on activation and investment in education, more and better jobs and the development of flexi-security (Boveneberg, 2007, Taylor-Gooby, 2008). It encourages an increasing focus on social interventions in the field of child care, education and elderly care with view to enhancing people’s ability to work (Cantillon, 2011, Esping-Andersen, 2002).

4. Data and Measures

The data employed here comes from the 2009 wave of EU-SILC. Sweden has been excluded from our analysis because of a large number of missing values on the deprivation items, so the analysis covers 26 EU Member States.. In line with the conventional approach, our analysis of poverty is conducted at the individual level. The total number of individuals included in the analysis is 559,767. All of our subsequent analysis is based on the total sample in each country. However, following the existing procedure those over 60 cannot be counted as experiencing low work intensity,

The broader range of deprivation items available in the EU-SILC 2009 special module has been analysed by Whelan and Maître (2012), whose factor analysis identified six dimensions of deprivation.² The key dimension on which we focus in this paper is labelled *basic deprivation*. Details of the measure are set out in “encadre 2”. Our development of this measure is situated within the influential formulation by Peter Townsend (1979:31) that

² For an alternative analysis of the dimensionality of this data and a somewhat different treatment of the relationship between material deprivation and economic stress see Guio, A-C, Gordon, G, and Marlier, E. (2102)

people are in poverty when ‘their resources are so seriously below those commanded by the average individual or family that they are excluded from ordinary living patterns customs and activities’’. From this perspective poverty has two core elements: it is about inability to participate and, this inability to participate is attributable to lack of resources. In measuring the first component one is seeking to capture a form of generalised deprivation in which those deprived on that dimension are more likely to be deprived on a range of other life-style deprivation dimensions while the reverse is not necessarily true. Further confirmation of the construct validity of a particular measure can be found by exploring its relationship to key socio-economic attributes and the subjective experience of those exposed to such deprivation.³

The basic deprivation measure, although obviously having similarities to the EU material deprivation indicator differs from it in some important respects. In addition to including some items that had not been previously available, it excludes items relating to a TV, a washing machine and a telephone that are almost universally available in more affluent societies. We do so because the pattern of interrelationships between such items, and as a consequence the level of reliability in any index in which they play a prominent role, differs substantially from those in less affluent countries. In constructing the basic deprivation index, we have also excluded the items relating to arrears and difficulty in coping with unexpected expenses. We would argue that such items relating to economic stress should be distinguished from material deprivation since questions relating to the relationship between these dimensions should play an important role in validity assessment. Given the limited number of deprivation items available in EU-SILC prior to the 2009 special module, a number of authors, including ourselves, have sought to establish the validity of material deprivation indices by considering

³ The fact the target identifies close to a quarter of the EU population does not invalidate such a process although it means that the strength of such relationships will tend to be weaker than for a more restrictive indicator.

their relationship to the item relating to household experiencing “difficulty in making ends meet”. However, since the items relating to arrears and difficulty in coping with expenses seem likely to be influenced not only by material deprivation *per se* but also by coping skills and differential subjective responses it seems to us to be desirable to avoid this approach where possible.⁴ We have taken this decision primarily on conceptual grounds. However, significant evidence is also available that the relation between material deprivation indicators and subjective economic stress varies systematically across countries by level of affluence with the impact of deprivation being greater in the more affluent countries. This points to the superiority of an approach that involves constructing separate measures of material deprivation and subjective economic stress (Whelan and Maître 2009, forthcoming). Details of the economic stress index that we employ comprising the items relating to arrears, housing expenses, difficulty in coping with unanticipated expenses and difficulty in making ends meet are set out in “Box 2”

Box 2

Basic deprivation measure

In 2009 the EU-SILC data had a special module on deprivation that included additional deprivation items. Whelan and Maitre (2012) using EU-SILC 2009 and using factor analysis technique have identified six distinctive dimensions of deprivation relating to: basic deprivation, consumption deprivation, household facilities deprivation, health, neighbourhood environment and access to public facilities. In this paper our main focus is on the basic deprivation dimension that acts as an alternative measure to the material deprivation dimension used by Eurostat. The purpose of this dimension is to capture enforced deprivation relating to relatively basic items reflecting inability to participate in customary standards of living due to

Empirical analysis by Whelan and Maître (2012 & forthcoming) shows that the basic deprivation and economic stress measures we employ are characterized by high levels of reliability with modest variation across countries making it much less likely than in earlier analyses employing EU-SILC that measurement error could be confused with substantive cross-national variation. The basic deprivation measure displays the highest average correlation with the other dimensions of deprivation and thus comes closest to capturing a form of generalized deprivation in which those deprived on that dimension are also significantly more likely to be deprived on a range of other dimensions. In the analysis that

follows we will compare the manner in which the basic deprivation and EU material deprivation are related to socio-economic differentiation and economic stress.

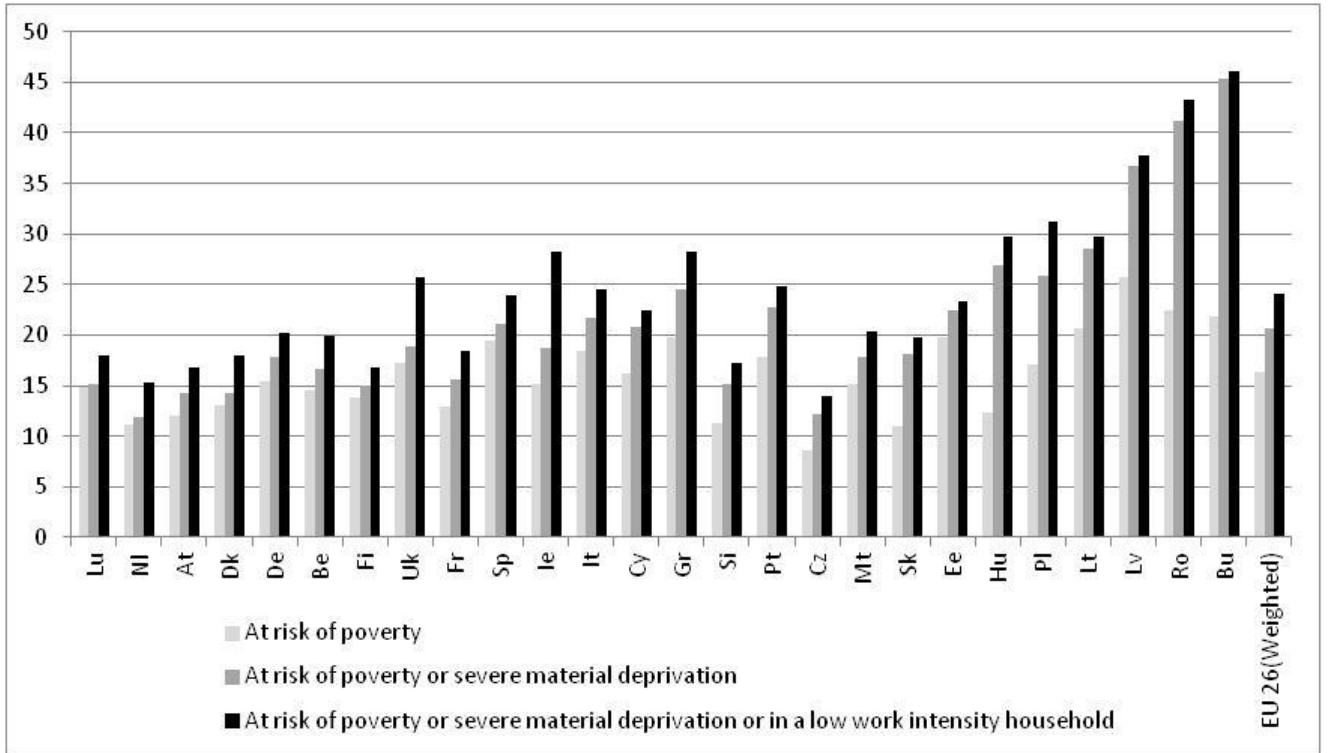
5. The Distribution of Poverty and Social Exclusion Using the EU Poverty Target Indicators

We now proceed to investigate the consequences of decisions relating to the manner in which dimensions are combined to produce a European Poverty and Social Exclusion Target and the implications of specific choices in relation to the items comprising the material deprivation component and the designated threshold. Our analysis is based on data from EU-SILC 2009. For each country in turn, the first column in Figure 1 shows the percentage in each country 'at-risk-of-poverty' in the sense of being below the 60% of median relative income threshold. For ease of interpretation, countries have been ranked in terms of their gross national disposable income per head (GNDH). This provides a familiar picture. The highest rates (of 22-26%) are seen in some of the New Member States including Estonia, Latvia, Romania and Bulgaria, the next highest levels are observed for the southern European countries, and at the other end of the spectrum the Netherlands and Denmark have relatively low rates of 11 per cent and 13 per cent respectively. However, the Czech Republic, Slovenia and Slovakia enjoy even lower rates ranging from 9-11%. The overall extent of cross-national variation is relatively modest, and the association between the poverty indicator and average national levels of prosperity is rather weak.

The second column for each country in Figure 1 shows the impact on the size of the target population of adding to column one those who are deprived on 4 or more items on the 9-item material deprivation scale but who are not below the 60% income threshold. In Denmark, the Netherlands, Luxembourg and the UK this adds no more than 1% to the target population.

For Germany, Austria, Belgium Germany and Finland the figure is approximately 2%. For virtually the whole of affluent Northern Europe the union of at risk of poverty and material deprivation identifies almost the same group of people captured by the income poverty measure taken on its own. At the other extreme, in Romania, Bulgaria and Hungary the target population is approximately doubled. The rate for the union of relative income poverty and material deprivation ranges from a low of 12 per cent in the Netherlands to a high of 45 per cent in Bulgaria. The addition of the deprivation criterion thus produces much sharper variation across countries but this mainly involves a polarization between a sub-set of New Member States and the remaining countries. This outcome is an entirely predictable consequence of the high deprivation threshold and the extremely low levels of deprivation on some of the constituent items.

Figure 1: Elements of the EU Poverty and Social Exclusion Target by Country for EU-SILC 2009



In the last column we add those living in households where the level of work intensity is less than 0.20 who have not already been captured by the relative income and material deprivation criteria. For 22 countries this produces only modest increases in the size of the target population ranging from 1 to 3%. Somewhat larger increases of 4 and 6% are observed for Greece and Poland. The UK and Ireland poverty levels prove to be quite exceptional with additions respectively of 7 and 10%. The overall variation in the size of the target population is now from 14% in the Czech Republic to 46% in Bulgaria – a smaller range than in column two. Introducing the work intensity criterion produces less rather than more differentiation of countries in terms of the overall number at risk of poverty and social exclusion.

If being at risk of poverty and social exclusion is thought of as involving variable intersections of these three elements, then the phenomena is being captured by quite distinctive combinations of outcomes in different countries. For most of the more affluent Northern Europe countries, together with the former Czech Republic, Slovakia, Slovenia and

Estonia, the head count is driven by the at-risk of poverty measure. For Ireland and the UK the work intensity measure plays a much more substantial role. In Italy and Greece we observe some non-trivial increases relating to the additional elements. For the remaining Eastern European countries we see substantial increases associated with the material deprivation component but little further impact of the work intensity measure. It is difficult to be persuaded that, when considering variable combinations of these outcomes, that we are comparing like with like.

In Figure 2 we explore the issue of precisely what is being captured when we combine the three constituent elements of the poverty target by considering the relationship between an 8-category typology comprising the set of combinations it is possible to form from the three elements and social class composition and economic stress. Our expectation is the components or combinations of such elements which best capture the latent concept of poverty will be characterised by greater differentiation in relation to such outcomes. For our present purposes, we are employing the European Socio-economic Classification (ESeC) as set out in “Box 3”⁵.

Encadre 3

European Socio-economic Classification (ESeC)

The ESeC Classification

The ESeC schema (Rose and Harrison (2009)) aims to cover the whole adult population. The ESeC distinguishes four basic positions: employers, the self-employed, employees and those involuntarily excluded from the labour market. Among employees one distinguishes three employment contracts regulating their relationship with the employers, that are the 'service relationship', the 'labour contract' and the 'mixed'.* In total the ESeC has 10 categories as detailed in the table below:

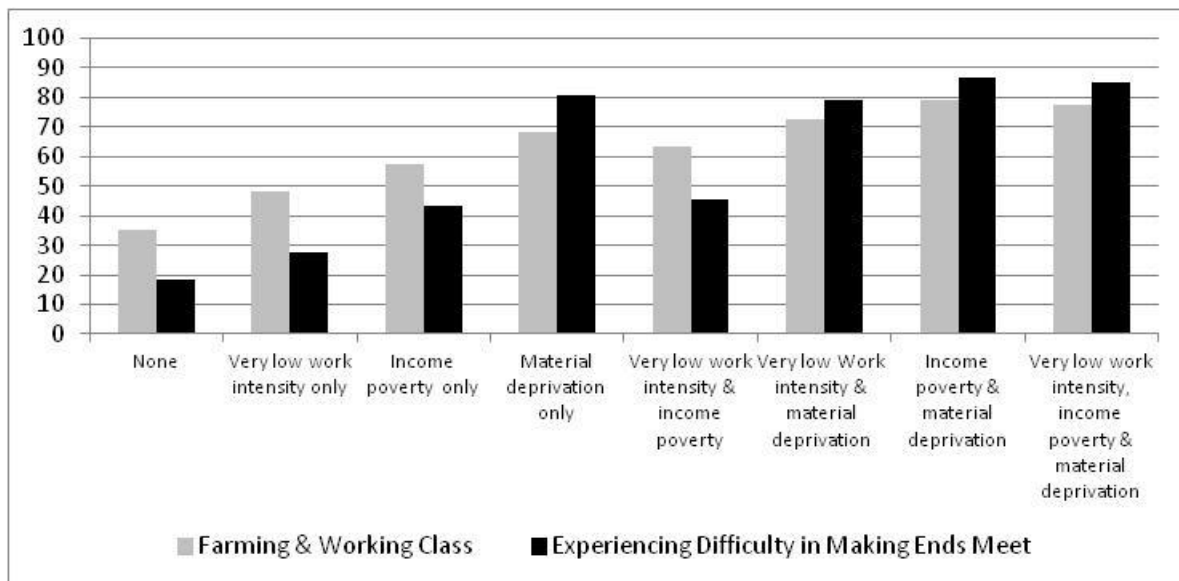
	ESeC Class	Common Term	Employment regulation
1	Large employers, higher grade professional	Higher salariat	Service Relationship

The outcome on which we focus is the percentage of each category of the European Poverty and Social Exclusion typology drawn from farmers and the working class. The situation of farmers varies significantly across countries. However, where they are most numerous, their materials conditions resemble the working class group much more closely than the remaining classes. Social class is measured at the level of the Household Reference Person (HRP)⁶. From Figure 2 we see that, for those fulfilling none of the poverty conditions, 35% are drawn from this group. For those fulfilling the working condition criterion only this rises to 48%.

⁶ The HRP is defined as the person responsible for the accommodation. Where more than one person is responsible the oldest person is chosen.

For the income poverty only group a further increase to 57% is observed. The highest level of representation of farmers and working class individuals among those fulfilling only one condition is for those experiencing material deprivation where the figure reaches 68%. When we turn to pairwise intersection of dimensions we observe that the figure for those experiencing both low work intensity and income poverty is actually lower than the rate for material deprivation alone at 64%. It then rises to 73% for the combination of work intensity and material deprivation and to 79% for that involving income poverty and material deprivation. Finally, for those fulfilling the conditions for all three elements it falls modestly to 77%.

Figure 2: Farming & Working Class Composition & Risk of Experiencing Economic Difficulty in Making Ends Meet by European Poverty & Social Exclusion Target Typology, EU-SILC 2009



It is clear that the dimension most strongly associated with a high level of farming and working class composition is the material deprivation index followed by the income poverty measure. The working intensity measure does allow us to differentiate between those experiencing difficulties solely in this regard and those insulated from all three problems. However, it has considerably less discriminatory capacity than the remaining dimensions.

Also when experienced in combination with material deprivation it provides only a modest contrast with the group exposed solely to the latter. Finally, when it is added to income poverty and material deprivation the extent of social class differentiation is actually reduced rather than exacerbated.

Focusing on the likelihood that individuals are located in a household experiencing difficulty in making ends meet we observe a very similar pattern. Among those disadvantaged in relation to none of the three dimensions we find only 19% experience such difficulty. This rises to 28% for those experiencing problems only in relation to work intensity and to 43% for income poverty only. It then almost doubles in reaching 81% for deprivation only. The intersection of work intensity and deprivation produces a figure of 45%. It then rises to 79% for the combination of work intensity before peaking at 87% for the intersection of income poverty and deprivation. Finally it declines slightly for exposure to all three negative outcomes.

It is clear that material deprivation is the primary factor in predicting the likelihood of experiencing difficulty in making ends meet. While the observed relationship is undoubtedly inflated by the inclusion of items relating to arrears and difficulty in coping with unanticipated expenses, the pattern of results in regard to differentiation in relation to social class composition and difficulty in making ends meet is robust. It confirms that the independent contribution of work intensity in relation to factors that, from a theoretical perspective, can be seen to be plausible causes and consequence of poverty and social exclusion is extremely modest.

6. *The Implications of the Choice of Material Deprivation Measure and Threshold*

While the material deprivation element of the poverty target proves to be a powerful differentiation factor, this occurs despite the fact that the specific measure used has several weaknesses. The most important for the analysis on which we now focus relates to the inclusion in the 9-item index of several items relating to housing facilities where the numbers deprived approach zero in the more affluent countries. The fact that this choice is accompanied by selection of an extremely high threshold leads inevitably to obscuring socio-economic differences within such societies (Whelan and Maître, 2010). It is thus worth exploring whether alternative material deprivation could do a better job.

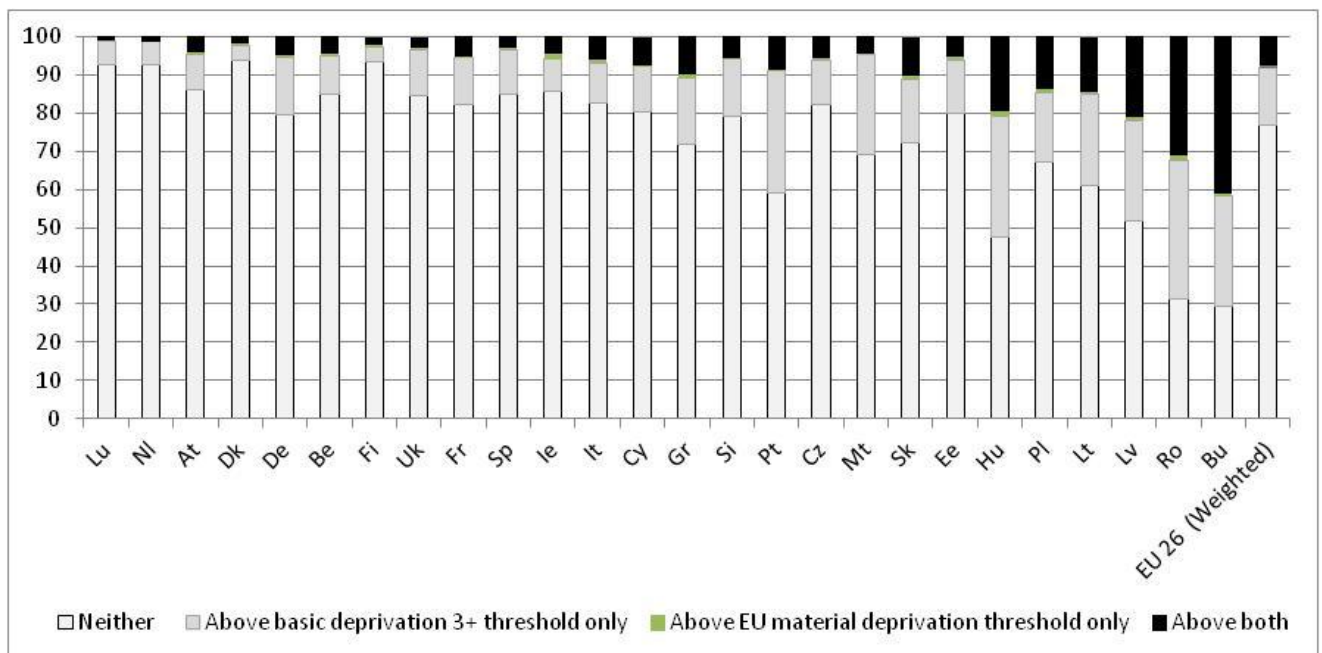
In the analysis that follows we compare the outcomes deriving from the EU material deprivation indicator with those associated with the basic deprivation measure described earlier. Setting a deprivation threshold inevitably has an arbitrary element. We have chosen a threshold of 3+ in relation to the basic deprivation index because this brings us as close as possible with a discrete threshold to a cut off equivalent to that achieved by a 60% income threshold set at the EU rather than the national level. This leads to an EU benchmark for basic deprivation that, in principle, allows for perfect overlap between those identified by the income and deprivation thresholds. The number of individuals in EU countries (excluding Sweden) above the 3+ threshold is 22.5% which is close to the figure of 16.4% above an EU calibrated 60% income poverty line. It is substantially higher than the figure of 8.2% for the EU materials deprivation threshold but slightly lower than the figure of 24.0% for the EU poverty target.⁷

⁷ For further discussion of the issues involved in setting deprivation thresholds see Whelan and Maître (2010).

In order to explore further the consequences of choice of material deprivation index and threshold in Figure 3 we distinguish four groups and show their distribution across country:

- 1) Those neither above the 4+ threshold nor the basic deprivation 3+ cut off point the;
- 2) Those above the threshold for basic deprivation but not EU material deprivation cut off;
- 3) Those above the latter but not the former;
- 4) Those above both thresholds

Figure 3: Material Deprivation Typology by Country, EU-SILC 2009



The total experiencing some form of deprivation ranges from 6% in Denmark to 71% in Bulgaria. Outside of Bulgaria and Romania the next highest figures are 53% for Hungary and 48% for Latvia. Segment three of Figure 3 identifying those above the EU material deprivation can largely be ignored since the levels range from 0.1% in Luxembourg to 1.4% in Ireland. As a consequence the figures for those above the basic deprivation threshold only are very close to those relating to those above one or other threshold but not both. For

Denmark and Romania the respective figures are 4% and 36%. Outside of Bulgaria and Romania the levels are highest in Hungary, Portugal and Latvia with respective levels of 32% and 26% for the latter country. Combining the segments three and four gives the total above the EU material deprivation threshold. Consistent with our earlier analysis of the EU poverty target, this produces levels of deprivation of 6% or below for 16 of the 26 countries. The overall level of basic deprivation is substantially higher than for the EU material deprivation index but this is a prerequisite of successfully identifying both a non-trivial minority of deprived individuals and capturing cross-national variability. Given that the basic deprivation threshold of 3+ identifies similar numbers of individuals it is striking that it produces much sharper cross-country variability than that observed in column one of Figure 1.

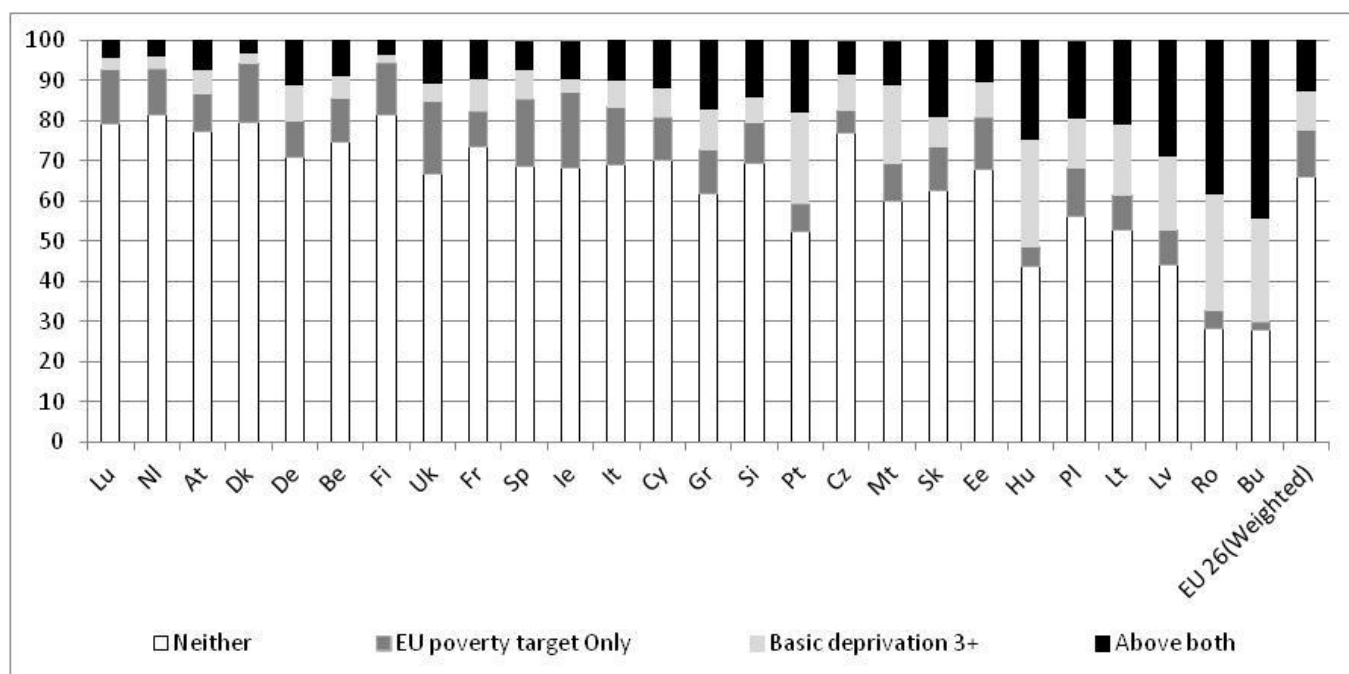
Substituting a threshold of 3+ rather than 4+ for the EU material deprivation measure increases the absolute numbers in segments three and four in Figure 3. However, it continues to be true that for those experiencing only that form of deprivation cross-national variation is extremely modest.

Given our preference for the basic deprivation measure, we proceed to ask to what extent those above the 3+ threshold are captured by the European Poverty & Social Exclusion Target indicator and vice versa. In Figure 4 we pursue this issue by creating a new typology that is derived from cross-classifying the basic deprivation dichotomy with the EU target dichotomy giving a 4-category typology as follows.

- 1) Neither fulfilling any of the EU Poverty Target conditions nor being above the basic deprivation 3+ threshold.
- 2) Fulfilling the poverty and social exclusion target condition only.
- 3) Above the basic deprivation threshold only.

4) Meeting both conditions

Figure 4: EU Poverty & Social exclusion Target & Basic Deprivation Typology by Country, EU-SILC 2009



In Figure 4 we breakdown this typology by country. Overall 16% fulfil both conditions. The numbers doing so varies systematically across countries in line with national income levels. The lowest level of 3% is observed in Denmark and the highest of 44% in Bulgaria. A similar outcome is observed for the 6% who meet the basic deprivation condition only. The lowest level of 2.5% is found in Denmark and the highest of 29% in Romania. In contrast, for the 13% who meet the poverty target requirement but not the basic deprivation condition a quite different pattern is observed. The highest numbers in this category are generally observed in more affluent countries. Specifically the UK and Ireland are characterised by the highest rates with respective levels of 18% and 19%. Denmark, which had the lowest levels in relation to the two earlier categories reports a level of 15%. In contrast, Romania and Bulgaria which earlier displayed the highest levels have respective rates of 5% and 2%. It is clear that including those who meet the EU target conditions but are not above the basic deprivation

threshold results in drawing individuals disproportionately from the more affluent countries and, in particular, from the liberal welfare regimes which are characterised by distinctive interrelationships between labour market arrangements and household formations.⁸

At this point we focus on extent to which membership of the categories of this typology is influenced by the social class position of the HRP employing a 7-category version of the ESeC social class schema. Table 1 shows the results of a multinomial regression which takes those not in the EU target group or above the basic deprivation threshold, as the reference category. The estimated odds ratios then quantify the impact of social class on the odds on being in each of the three remaining groups relative to that benchmark category. If we look in the first column (i) at the likelihood of being both in the EU target group and above our basic deprivation threshold rather than in the reference category, we see a strong hierarchical class effect: as one moves from the higher professional managerial class to the semi and non-skilled manual class, with the odds ratio rising gradually from 1 to 13 with the level for farmers being close to that for semi and non-skilled manual workers. When we focus on column (ii) those above basic deprivation threshold but not in the EU target group, we observe a weaker but still marked class hierarchy effect, with the odds ratio gradually rising to 6 for the non-skilled class. In this case the farmers and the petit bourgeoisie are characterised by lower values than both working class groups. In the final column (iii), we see a much weaker class hierarchy effect for those in the EU target group but below the

Table 1: Multinomial Regression of EU 1 of 3 Indicators and Basic Deprivation Typology on Social Class: Entire Sample			
	<i>In EU Target Group and Above</i>	<i>Above Basic Deprivation</i>	<i>In EU Target Group but Below</i>

⁸ Constructing an EU poverty target measure substituting a 3+ material deprivation threshold does not affect this conclusion.

	<i>Basic Deprivation Threshold (i)</i>	<i>Threshold but Not In EU Target Group(ii)</i>	<i>basic Deprivation Threshold (iii)</i>
	Odds Ratio	Odds Ratio	Odds Ratio
<i>HRP Social Class</i>			
Higher Salariat (ESeC Class 1) Reference Category	1.000	1.000	1.000
Lower Salariat (ESeC Class 2)	1.600	1.568	1.122
Higher Grade white & blue collar (ESeC classes 3 & 6)	2.892	2.487	1.816
Petit Bourgeoisie (ESeC Class 4)	4.638	2.117	4.250
Farmers (ESeC Class 5)	12.019	3.934	6.364
Lower Grade white & blue collar (ESeC classes 7 & 8)	9.651	5.292	3.263
Semi & non-skilled workers (ESeC class 9)	12.577	5.968	3.519
Nagelkerke ²	0.122		
Reduction in Log Likelihood	53,478		
N	479,814		

basic deprivation threshold, peaking at less than 4 for the semi-skilled & non-skilled workers whereas both of the propertied classes but particularly the farmers are most likely to be found in this group; with respective odds ratios of 4 and 6.

As Whelan and Maître (2010) argue, unless we seek to construct an entirely nationally relative measure of poverty, considerations of construct validity imply that we should observe cross-national variation in levels of poverty and social exclusion that are broadly in line with levels of national affluence and should, in addition, exhibit a clear pattern of socio-economic differentiation. The findings we have presented regarding those who meet the conditions relating to the EU Poverty and Social Exclusion Target but are below the basic deprivation threshold produces outcomes that are directly contrary to such requirements. Conducting this analysis with a threshold of 3+ rather than 4+ for the EU material deprivation indicator leads to identical conclusions.

As well as looking at the factors that influence both deprivation indices it is also interesting to consider how they impact on relevant outcomes. Here we focus on the measure of economic stress which is constructed from the set of dichotomous items relating to difficulty in making ends meet, inability to cope with unanticipated expenses, structural arrears and housing costs being a burden (see description in Box 2).

One difficulty in assessing the relationship of the respective deprivation indices to the measure of economic stress is that the EU index includes items relating to arrears and inability to cope with unanticipated expenses. We proceed to exclude these items from this analysis. In Table 2 we report the results of an ordinary least squares regression with economic stress as the dependent variables with the seven item version of the EU material deprivation scale (nine items minus the two items used in the economic stress measure) dichotomised at 3+ and the basic deprivation scale also dichotomised at 3+. Entering the basic deprivation dichotomy gives a standardised regression coefficient of 0.566 and an R^2 of 0.320. The corresponding values for the EU material deprivation measure are 0.377 and 0.142. Entering the two variables together produces coefficients of 0.500 and 0.138 respectively for the basic deprivation and EU material deprivation measures with an R^2 of 0.335. While both measures are significantly related to economic stress, adding the EU material deprivation measure, once the impact of the basic deprivation has been taken into account, adds little in the way of explanatory power while the former adds substantially to the variance accounted for by the latter. The proportion of the variance accounted for uniquely by the EU measure is 0.015. For basic deprivation this rises to 0.193. The shared variance is 0.127. The EU material deprivation measure adds little in the way of discriminatory capacity once we have taken the impact of basic deprivation into account.

	Standardised B	Standardised B	Standardised B
Basic Deprivation Dichotomy	0.566***		0.500***
EU 7-item Material Deprivation		0.377***	0.138***
R ²	0.320	0.142	0.335
N	532,903	532,903	532,903
*** p < .001			

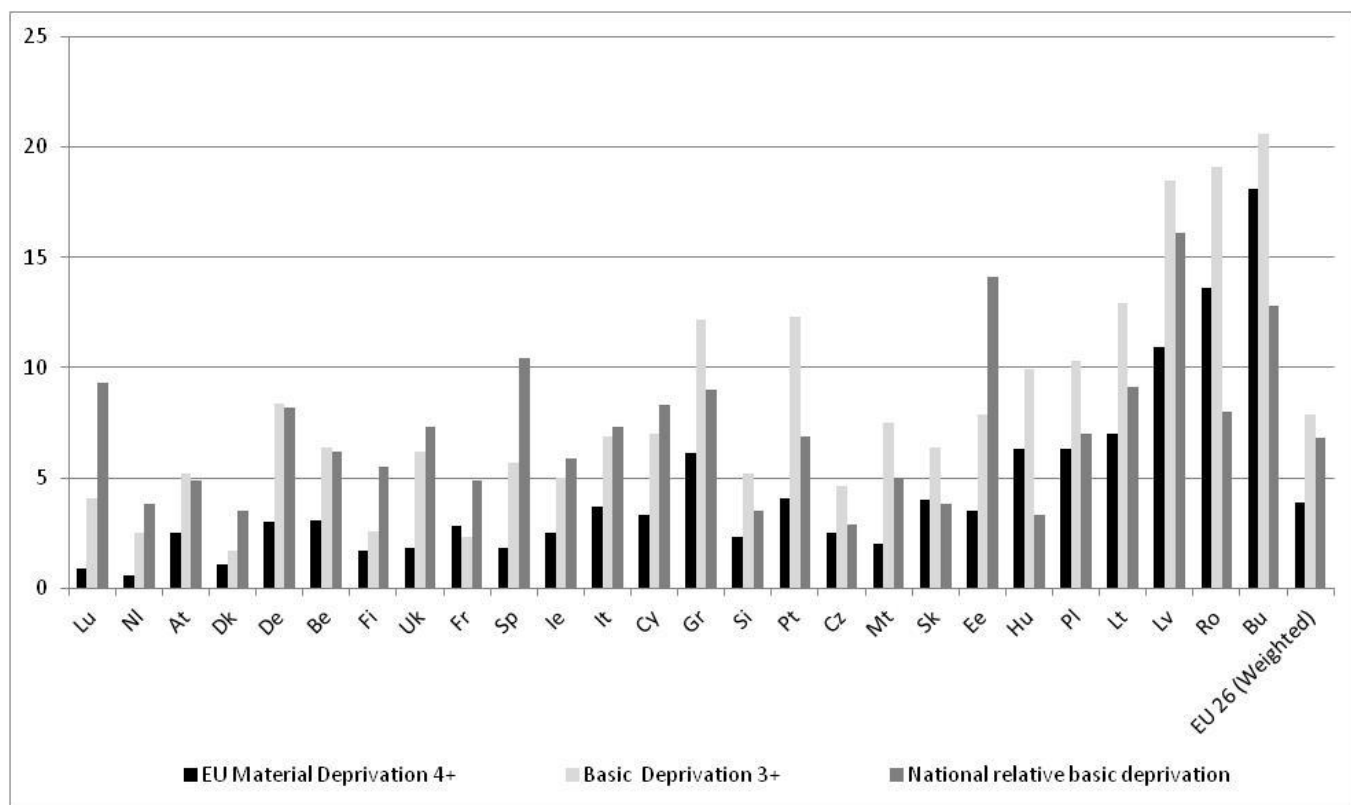
7. A 'Consistent Poverty' Approach?

It is far from clear why low work intensity is incorporated in a target focused on identifying those “at risk of poverty and social exclusion”. However, combining relative income poverty and material deprivation, and focusing on the group where they overlap, is worth serious consideration. Such a measure has value either as an alternative way of identifying the overall target population in the EU target context or, perhaps more realistically now in the light of decisions already made at EU level, as a way of distinguishing a sub-set within that population which merits priority in framing anti-poverty policy. Some countries have combined national low income and deprivation indicators to identify the ‘consistently poor’, notably Ireland in setting its national anti-poverty targets (see for example Noland and Whelan, 1996), and some comparative studies have combined income-based poverty measures with either relative deprivation measures or a common deprivation standard across the EU (see for example Delautre, 2012, Förster, 2005, Guio, 2009, Nolan and Whelan, 2010, Whelan and Maître, 2010). Combining the relative income poverty and material deprivation elements used in identifying the EU target population is one possible application of such an approach. Here we also explore a variant utilising basic deprivation in order to assess how much difference the choice of material deprivation indicator makes. It is also useful to include in the comparison a purely national consistent poverty measure, where the

deprivation element is framed in country-specific relative terms by weighting each deprivation item according to the proportion of persons having the item in the country and deriving the deprivation threshold so the number above it matches the number below the relative income poverty line.

In Figure 5 we show the level of consistent poverty in each country for each of these three variants. The version incorporating the EU material deprivation measure with a 4+ threshold produces extremely low levels in the Scandinavian countries, Netherlands and Luxembourg, the only countries above 10 per cent are Latvia, Bulgaria and Romania, and the remaining rates are concentrated in the narrow range from 1-7 per cent. These results again reflect the choice of deprivation threshold and the negligible levels of deprivation on a number of the constituent items in the more affluent countries. The variant incorporating the basic deprivation index with a threshold of 3+ measure produces rather higher poverty rates, ranging from 2 per cent in Denmark to 21 per cent in Bulgaria and with a significantly greater degree of differentiation across countries. Finally, when the deprivation component of the consistent poverty measure is framed in national relative terms we observe more modest variation across countries, the range now being from 3 per cent in the Czech Republic and Denmark up to 13 per cent in Bulgaria. Twenty-one countries have rates in the narrow range between 3-7 per cent. As one would expect when switching from a common deprivation standard across countries to country-specific reference points, consistent poverty levels are broadly similar in the more affluent countries with the exception of Denmark where it is somewhat lower.

Figure 5: Alternative Consistent Poverty Measures by Country, EU-SILC 2009



Despite the suggestion in the European Commission (2011) report on *Employment and Social Developments in Europe 2011* that the current EU material deprivation index is in the Townsend tradition, either singularly or in combination with income poverty, it entirely fails to capture the form of relative poverty involved in being poor in a rich country. Allowing for the addition of those in low intensity work households who fulfil neither the material deprivation nor at-risk-of poverty conditions is not a solution because those identified appear to be a socially heterogeneous group. The consistent poverty measure employing the basic deprivation threshold does identify such a minority in all countries while at the same time capturing a sharp pattern of differentiation across countries. A less stringent threshold would maintain this patterning while raising the poverty rates. A purely national measure is even more effective in capturing the poor and social excluded in rich societies. In this sense it is actually the approach most in line with the Townsend tradition. However, it reveals little in the way of systematic variation across countries.

8. Conclusions

The population for the EU's central 2020 poverty and social exclusion reduction target is currently being identified via combining indicators of low income, deprivation, and household joblessness. We recognise that this approach to targeting involves a compromise between different political and policy traditions. However, it is impossible to avoid the conclusion that the particular decisions made in constructing the target result in a fundamental incoherence in the approach adopted.

Our analysis suggests that, in focusing on the union of the three indicators cross-nationally, we are not comparing like with like and the case for aggregating the indicators to produce a multidimensional indicator is seriously undermined. For most of affluent countries the head count is driven by the income measure. For Ireland and the UK work intensity plays a much more substantial role. For most of the Eastern European countries we observe significant increases associated with the material deprivation component but little further impact of the work intensity measure. Not only are the dimensions of distinctly variable relevance across countries but the profiles of those defined as poor and excluded also vary significantly across the dimensions. Adding to the count of the poor and socially excluded by incorporating the material deprivation dimension exhibit social class profiles in line with our theoretical expectations. However, incorporating the work intensity criterion leads to the identification of a distinctly more heterogeneous sub-group.

An alternative basic deprivation index with a threshold of 3+ was associated with a significantly more satisfactory social class profile. Furthermore, once the basic deprivation index has been taken into account, the EU material deprivation index adds little to our ability to predict economic stress.

Adopting a consistent poverty approach, we find that employing the EU material deprivation index such poverty is largely abolished in more affluent member states. A purely relative poverty measure produces much higher rates in these countries but leads to a compression of rates across countries. The basic deprivation 3+ index largely manages to avoid both of these problems. In addition, unlike the EU measure, it produces outcomes related to social class composition that are consistent with theoretical expectations.

These results are in line with Whelan and Maître's (2010) analysis of the respective value of national and European perspectives on poverty. A purely national focus on consistent poverty produces lower levels of poverty than the at risk of poverty measure but it shares with that indicator an inability to capture the kind of cross-country differentiation that we expect to be associated with a valid measure of poverty. Switching to a purely European perspective solves that problem but at the price of obscuring socio-economic differentiation. Issues of European versus national solidarity are currently central to the debate on the economic crisis. Authors, such as Ferrera (2009), promote the case for increased protection of national welfare state arrangement from EU law and policies promoting market integration. In this context there are obvious danger in allowing the scale of between country differences to blind us to the continuing importance of national standards and reference points.

The consistent poverty measure incorporating the basic deprivation index succeeds in identifying a non-negligible poor and excluded group in each country while also capturing substantial cross-country variation. The income component is intended to maintain a focus on resources by identifying those falling more than a certain 'distance' below a nationally defined income level. It seeks to identify those who are at particular risk of being excluded from a minimally acceptable way of life. Implicitly it accepts that such a resource level should be set at a national rather than a European level. On the other hand, setting the

deprivation threshold at the same level across countries involves a recognition that the challenge for Europe is to have the whole population share the benefits of high average prosperity rather than to reach basic standards of living as in less developed parts of the world (European Commission, 2004). It does not take into account that, what is regarded as a minimal acceptable living standard depends largely on the general level of social and economic development (Whelan and Maître, 2009, 2012a).

The EU *Employment and Social Developments in Europe 2011* report notes the concern of authors such as Ravallion (2011) who questions whether it is realistic to envisage a single index measure of poverty, and suggest developing a credible set of multiple indices instead of a single one. The report, however, argues that the computation of a single indicator is an effective way of communicating in a political environment, and a necessary tool in order to monitor 27 different national situations. The proposed EU poverty and social exclusion targets it argues removes some of the obvious weakness of the current relative income poverty indicator.

From the foregoing it should be clear that we are not entirely persuaded by such arguments. Indeed, while sympathising with what it is seeking to achieve, our general evaluation would be that the approach introduces more problems than it solves. Furthermore, our concerns are exacerbated by the suggestions in the report that future efforts might seek to incorporate factors such as exclusion from social relationships, access to services etc. Seeking to accommodate a variety of very loosely correlated dimensions of social exclusion in a single index appears to us to be a recipe for confusion. An incoherent index is likely to produce incoherent communication and less than productive discussion. Our preference is for keeping the focus of EU poverty and social exclusion targets and measurement on the core elements of income poverty and generalised deprivation. Alongside such efforts, we clearly need to

enhance our understanding of the processes leading to outcomes, such as labour market exclusion, and the factors mediating the consequences of such disadvantage for wider exclusion from society, social cohesion and quality of life.

In any event, if we are to pursue a multidimensional approach to the European poverty targets relating to poverty and social exclusion then it is desirable that the measurement procedures involved should be explicitly considered in light of the on-going debates in the burgeoning literature on multidimensional measurement so that the principles of aggregation and disaggregation can be evaluated in a coherent fashion (Alkire and Foster 2011 a & b, Ravillon, 2011).

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