



## **UCD GEARY INSTITUTE DISCUSSION PAPER SERIES**

### **Welfare Regime and Social Class Variation in Poverty and Economic Vulnerability in Europe: An Analysis of EU-SILC**

***Christopher T. Whelan\* and Bertrand Maître\*\****

\*School of Sociology, University College Dublin & Geary Institute, Newman Building, Belfield, Dublin 4, Ireland, [Christopher.Whelan@ucd.ie](mailto:Christopher.Whelan@ucd.ie), ++ 353 7168561, author for correspondence

\*\* Social Research Division, Economic and Social Research Institute, Whitaker Court, Sir John Rogerson's Quay, Dublin 2, Ireland, [Bertrand.Maitre@esri.ie](mailto:Bertrand.Maitre@esri.ie), ++353 1 8632015

Paper presented at ECSR conference on *Changing Societies in the Context of an Enlarged EU*, Paris, 11 December 2009

## **Abstract**

In this paper we address a set of interrelated issues. These comprise increasing concerns about reliance on nationally based income poverty measures in the context of EU-enlargement, the relative merits of one dimensional versus multidimensional approaches to poverty and social exclusion and the continuing relevance of class based explanations of life chances. Identifying economically vulnerable groups we find that, contrary to the situation with national income poverty measures, levels of vulnerability vary systematically across welfare regimes. The multidimensional profile of the economically vulnerable sharply differentiates them from the remainder of the population. While they are also characterised by distinctively higher levels of multiple deprivation, a substantial majority of the economically vulnerable are not exposed to such deprivation. Unlike the national relative income approach, the focus on economic vulnerability reveals a pattern of class differentiation that is not dominated by the contrast between the self-employed and all others. In contrast to a European-wide relative income approach, it also simultaneously captures the fact that *absolute* levels of vulnerability are distinctively higher among the lower social classes in the less comprehensive and generous welfare regimes while class *relativities* are significantly sharper at the other end of the spectrum.

**Key words:** economic vulnerability, poverty, social exclusion, welfare regimes, social class, multiple deprivation.

## Introduction

Increasing concern has been expressed that the enlargement of the European Union has exacerbated problems arising from focusing on income poverty measures, defined in purely national terms. This approach produces results that are counterintuitive and at odds with our knowledge of variation across the EU in living conditions and subjective feelings of deprivation (Fahey, 2007). Whelan and Maitre (forthcoming) using EU-SILC assess the case made by Fahey (2007) for the development of an EU-wide poverty line instead of, or alongside, national measures. Their analysis employed both national and EU indicators in relation to relative income poverty and “consistent poverty” incorporating both income and deprivation thresholds. Their findings led them to conclude that, while national level income poverty indicators produce implausible variation across nations and welfare regimes, EU level measures fail to capture the kind of socio-economic variation that one would expect to be associated with a valid measure of poverty.

The resolution of this dilemma they suggested requires transcending the limitation of purely income based relative poverty measures. A ‘mixed consistent poverty’ measure involving a national income poverty line and an EU deprivation threshold seemed best suited to achieving the stated EU objective of assessing the scale of exclusion from minimally acceptable standards of living in individual countries while also measuring the extent to which the whole population of Europe is sharing in the benefits of high average prosperity (European Commission, 2004).

This approach involves a fairly restricted extension of the one dimensional income poverty approach. In this paper we explore further the possibilities afforded by the

EU-SILC data set to implement a multidimensional approach to the measurement of social exclusion; understood as exposure to a set of interrelated risks. We do so by employing a multidimensionality approach to identify ‘economically vulnerable’ groups.

In relation to issues concerning EU enlargement, the availability of data from EU-SILC allows us to go significantly beyond earlier efforts. Whelan and Maitre’s (2005a) analysis, employing the ECHP, covered thirteen EU countries but included no representatives of the New Member States (NMS). Whelan and Maitre’s (2008a) analysis extended the measurement to cover a period of five years but at the cost of reducing the number of countries covered to nine of which only five were located outside southern Europe. Whelan and Maitre (2005b) covered 28 countries using the European Quality of Life Survey (EQLS) However, in order to overcome difficulties associated with small sample sizes and variable response rates, Whelan and Maitre (2005b) operated at a high level of aggregation that involved identifying four clusters adapted from a classification used by DG REGIO Furthermore, because of the rather crude nature of the income measurement procedures, it was not possible to calculate income poverty lines and analysis was conducted at the level of within cluster income quartiles.

The EU-SILC data set offers the first opportunity to conduct an analysis covering the full range of EU countries that allows us to compare multidimensional outcomes with those deriving from the conventional relative income poverty approach. On the basis of previous work, we hypothesise that the successful implementation of a strategy that captures both multidimensionality and risk will reveal a picture of variation across welfare regimes and socio-economic groups considerably more in line with our

expectations relating to valid measures of poverty and social exclusion. In relation to socio-economic variation, we will concentrate on the impact of social class because of our conviction that the ongoing dispute relating to its importance<sup>i</sup> can be further clarified by comparative analysis that combines a relational conceptualisation of social class with an appropriate multidimensional analysis of social exclusion<sup>ii</sup>.

As knowledge of the limitations of relying solely on income to measure poverty and social exclusion has become more widespread, attention has been increasingly focused on multi-dimensional approaches (Bradshaw and Finch, 2003, Halleröd, 1995, Gordon *et al*, 2000, Kangas and Ritakallio, 1998, Whelan *et al* 2001). At the level of conceptualisation, the case for a multi-dimensional approach to understanding what it means to be socially excluded is compelling. However, as Nolan and Whelan (2007) argue, its value needs to be empirically established rather than being something that can be read off the multidimensional nature of the concept.

At the national level, where the data available tend to be considerably more comprehensive than at the EU level, a variety of sophisticated analytic strategies have been employed to explore such issues. These include latent class analysis (De Wilde 2004, Grusky and Weeden, 2007, Moisio 2004, Whelan and Maître 2005 a & b), structural equation modelling (Carle *et al* 2009 and Tomlinson *et al* 2008), item response theory (Capellari and Jenkins, 2007) and self-organising maps (Pisati *et al* 2009). However, the data currently available at the EU level is considerably less comprehensive and is substantially more restricted for EU-SILC than for the ECHP. This creates difficulties for the application of such methods on a comparative European basis.

Beyond data issues, one of the problems with the manner in which the concept of social exclusion has been used is that by indiscriminate use it can be extended to describe every kind of deprivation: 'the language of exclusion is so versatile and adaptable that there may be a temptation to dress up every type of deprivation as exclusion' (Sen, 2000:9). For our present purposes it is crucial to clarify the distinctions between the notions of social exclusion as multiple deprivation and alternatively as a set of interrelated risks.

Kronauer (1998) notes that the emergence of the concept of social exclusion was directly related to the renewed emergence of the threat: of high unemployment and the threat it posed to national modes of integration. Paugam (1996) captures this focus on processes leading from precariousness to exclusion in the sense of exposure to cumulative disadvantage and a progressive rupturing of social relation. However, as Atkinson and Davoudi (2000:434) observe, the pursuit of these issues can lead to a focus on the sense of solidarity within groups involving reciprocity and mutual aid or on the other hand 'societal solidarity'.<sup>iii</sup> One of the difficulties with the former emphasis and with a focus on social cohesion, involving social connectedness and communal identification (Friedkin, 2004), is that the evidence relating to the impact of factors such as unemployment and material deprivation on such outcomes is extremely modest (Gallie *et al* 2003 and Whelan *et al* 2002).

An alternative conception of social exclusion, such as that proposed by Levitas *et al* (2007), focuses on multidimensional deprivation involving a wider restriction of access to commodities and services necessary for full participation in the society.<sup>iv</sup>

Adopting this broader focus on multiple deprivation, problems arise from the fact that correlations between deprivation dimensions tend to be a good deal more modest than is often imagined. This is true even in relation to income and consumption deprivation but the observed overlap becomes considerably lower if concern with multidimensionality encompasses factors such as housing, neighbourhood environment, health and, indeed, social and political participation. This difficulty is recognised in the Levitas *et al* (2007) distinction between social exclusion and ‘deep exclusion’. The latter refers to exclusion across more than one dimension of disadvantage, resulting in severe negative consequences for quality of life, well-being and future life chances. However, unless such negative consequences are demonstrated, labelling as ‘social exclusion’ deprivation in relation to any one or, indeed, combination of a wide range of dimensions is problematic. On the other hand, an emphasis on ‘deep exclusion’ runs the risk of being interpreted in an ‘underclass’ terms.<sup>v</sup>

Because of the foregoing difficulties we focus initially on economic vulnerability involving exposure to a set of restricted but key risks. This leaves open the issue of the relationship between such vulnerability and multiple deprivation understood as simultaneous experience of a range of deprivation dimensions.

Following Chambers (1989:1), we can define vulnerability as not necessarily involving current deprivation but rather insecurity and exposure to risk and shock. In considering the factors contributing to such vulnerability, Bradshaw *et al* (2004) suggest that it is useful to distinguish between *risk factors*, which signal the greater

vulnerability of a category of individuals, and *triggers* which have a direct causal impact.

It is on the former that we focus.

Our analysis will proceed as follows:

- Making use of a statistical procedure known as latent class analysis we will seek to identify ‘economically vulnerable’ groups<sup>vi</sup>
- We proceed to provide a detailed account of levels and patterns of economic vulnerability across welfare regimes and of the relationship between such vulnerability and a restricted form of multiple deprivation
- Our analysis will be extended to a comparison of relative risk of poverty and economic vulnerability across social classes within and between welfare regimes.<sup>vii</sup>

### ***Latent Class Analysis***

Our objective is to identify groups who are vulnerable to economic exclusion in the sense of being distinctive in their risk of falling below a critical resource level, being exposed to life-style deprivation and experiencing subjective economic stress. Usually the groups into which researchers classify their observations are known in advance and correspond to the values taken by particular variables or combination of variables. In some cases, however, the groups of interest are not known *a priori* and must be discovered using suitable classification techniques. Latent class analysis assumes that each individual is a member of one and only one of N underlying classes and that, conditional on membership of an unobserved class, the observed variables are mutually independent of each others. Conditional independence is a version of the



familiar idea that the correlation between two variables may be a result of their common dependence on a third variable.

The basic notion is that there are underlying processes that result in distinct clusters of individuals. Within those groups, indicator outcomes are independent of each other because the factors that lead to individuals being located there are those that accounted for the original correlations. The question is then whether such simplifying assumptions allow us to identify clusters of individuals in a manner that leads to the predicted outcomes from this model closely matching the observed profiles. The contrast between clusters is in terms of risk profiles rather than existing patterns of deprivation. In the analysis that follows we specify that individuals are allocated to one of two classes. However, neither the size of the underlying clusters nor the risk profiles are specified *a priori* but are determined by the objective of finding the closest possible fit to the observed data consistent with the simplifying assumptions of our model.

## **Data and Measures**

### ***Sample***

The Eurostat User Database EU-SILC 2006 covers 26 countries, 24 EU member states as well as Norway and Iceland. The household survey is made of 202,978 households which is a total of 536,993 individuals. The sample sizes across countries range from 8,598 individuals in Iceland to 54,512 in Italy. The unit of analysis is the individual, where appropriate household attributes and characteristics of the household reference person (HRP) have been allocated to the individual. Significance levels have been adjusted for the clustering of individuals within households.

## ***Income Measure***

The income measure we employ is the annual total household disposable income adjusted for household size using the OECD modified equivalence scale. The reference period is the 12 months prior to date of interview. Poverty is defined in terms of levels of median equivalent income. In our subsequent latent class analysis we distinguish four categories of income.

- Those below national 70% of equivalent median income lines.
- Those between the 60% and 70% lines.
- Those between the 50% and 60% lines.
- Those below the 50% line.

## ***Measure of Consumption Deprivation***

Our analysis focuses on a 7-item index of ‘consumption deprivation’ that comprises items ranging from enforced absence relating to current requirement such as food and heat to more general consumption items such as being able to afford a holiday, a car or a PC, as well as experiencing arrears on regular bills such as rent or utilities. Full details of the items are provided in Table 1. Confirmatory factor analysis reveals that this dimension emerges as a distinct factor, and reliability analysis confirms that it can be employed for comparative purposes.<sup>viii</sup> The version of this measure that we use in our subsequent analysis is a dichotomous one in which the threshold is chosen so the proportion of individuals above it corresponds as closely as possible to that below the income poverty based on 60% of EU median equivalent income. This may appear to combine an absolute approach to material deprivation with a relative approach to income. At a particular point in time, this is true. Thus for the EU-SILC 2006 data set,

an individual will be defined as experiencing mixed consistent poverty if they fall below 60 per cent of national relative income and has a raw mean score of 2.8 or above on the 7-item index. However, given the manner in which we have defined the deprivation threshold it will change as the number below the ‘at risk of poverty line’ declines or rises.

‘TABLE 1 ABOUT HERE’

### ***Economic Stress***

The subjective measure of economic stress we employ is based on the following question asked to all household reference persons:

“Thinking now of your household’s total income, from all sources and from all household members, would you say that your household is able to make ends meet?”

Respondents were offered six response categories ranging from ‘with great difficulty’ to ‘very easily’. Our analysis focuses on a comparison between those in households experiencing “great difficulty” and “difficulty” and all others.

### ***The European Socio-economic Classification***

We make use of a slightly aggregated version of the European Socio-economic Classification (ESeC).<sup>ix</sup> . As Goldthorpe (2002: 213), observes, one of the primary objectives of schemas such as ESeC is to bring out the constraints and opportunities typical of different class positions particularly as they bear ‘on individuals’ *security*,

*stability and prospects*'. Economic vulnerability provides a particularly appropriate outcome indicator in examining the impact of social class defined in this manner. A failure to observe systematic variation by social class in exposure to economic vulnerability would seriously undermine claims that social class remains fundamental to the distribution of life chance. Our analysis employs a seven-category aggregated version of the ESeC. We have used information relating to current and previous employment and a 'dominance' procedure for partners in assigning a social class to all household members. <sup>x</sup>

The seven classes with which we operate are as follows:

- Large employers, higher grade professional, administrative & managerial occupations: "the higher salariat" (ESeC Class 1).
- Lower grade professional, administrative & managerial occupations: "the lower salariat" (ESeC Class 2).
- Intermediate occupations and lower supervisory & technician occupations 'higher grade white & blue collar" (ESeC Classes 3 & 6).
- Small employer and self employed non-professional occupations: 'petit bourgeoisie' (ESeC Class 4).
- Farmers (ESeC Class 5).
- Lower services, sales & clerical occupations & lower technical occupations – 'lower white collar & skilled manual' (ESeC Classes 7 & 8).
- Routine occupations – 'semi-unskilled manual' (ESeC Class 9).

## **Welfare Regimes**

Our analysis is based on data from EU-SILC 2006 covering 26 countries. However, since our purpose is to facilitate evaluation of the relative merits of the conventional income poverty measure and our indicator of economic vulnerability, rather than to provide a descriptive account of European poverty and deprivation patterns<sup>xi</sup>, our focus will be at the level of welfare regime.

As Esping-Andersen and Myles (2009) note, the welfare state influences life-course risks, intergenerational risks and class risks each of which has its own redistributive logic. While some studies such as Smeeding (1997) show an association between levels of welfare spending and redistribution, both Palme (2006) and Esping-Andersen and Myles (2009) conclude that the available evidence provides little support for any straightforward link between GDP or higher levels of social spending and reduced inequality and rather suggests that the most important effects derive from the institutional design of welfare states. Such design effects can take complex forms. Thus while targeted welfare states are more biased in favour of redistribution, Korpi and Palme's (1998) 'paradox of redistribution' directs attention to the fact that universal benefits are both more generous and reach the needy with greater certainty.. As Esping-Andersen and Myles (2009: 655) stress, since the redistributive role of services varies so much across societies that an exclusive focus on money incomes inevitably provides an incomplete and potentially distorted picture.

Gallie and Paugam's (2000) 'employment regime' typology focuses on the degree of benefit coverage and level of financial compensation for the unemployed and the scale of active employment policies. Bukodi and Róbert (2007) add a related concern with the strictness of employment protection legislation (EPL) comprising a set of

rules governing the hiring and firing process. Combining these criteria with those reflected in the standard Esping-Andersen categorisation they distinguish six welfare regimes<sup>xii</sup>, which we employ in our subsequent analysis, as follows:

- The *social democratic regime* is characterised by its emphasis on universalism. A high level of employment flexibility is combined with high security in the form of generous social welfare and unemployment benefits to guarantee adequate economic resources independently of market or familial reliance. We have included Sweden, Denmark, Iceland, Finland, Norway and Netherlands in this cluster.<sup>xiii</sup>
- The *corporatist regime* involves less emphasis on redistribution. The dominance of insurance implies an accent on horizontal redistribution. Entitlements depend primarily on life long employment and such regimes are generally transfer heavy and service-lean. This cluster includes Germany, Austria, Belgium, France and Luxembourg.
- The *liberal regime* assumes that the role of government is to nurture rather than replace the market. Social benefits are typically subject to a means test but there has been a shift in recent years towards work-conditional, negative income tax policies. These countries exhibit levels of flexibility coupled with limited measures to actively sustain employment.<sup>xiv</sup> The UK and Ireland constitute this group. As Esping-Andersen and Myles (2009:646) observe, this combination of policies should in principle lead to contradictory outcome but in practice the redistributive effort is likely to be undermined by the ‘paradox of redistribution’

- The *southern European regime* is distinguished by the crucial role of family support systems. Labour market policies are poorly developed and selective. The benefit system is uneven and minimalist in nature and lacks a guaranteed minimum income provision. This group comprises Cyprus, Greece, Italy, Portugal, and Spain.
- Low levels of spending on social protection and weakness of social rights are common on post-socialist societies. Bukodi and Róbert (2007) observe that there has been a general increase in employment flexibility with most transition countries displaying a level of labour market flexibility significantly less than the UK but significantly greater than in southern European. They distinguish two clusters. The *post-socialist corporatist* regime comprises the central European countries, with mostly transfer oriented labour market measures and a moderate degree of employment protection. The Czech Republic, Hungary, Poland, Slovenia and Slovakia are included in this cluster.
- The *post-socialist liberal cluster* comprises the Baltic countries which are characterised by a more flexible labour market, with employers unwilling to abide by legal regulation of the market, and an absence of policies aimed at sustaining employment. Estonia, Latvia, Lithuania are included in this group.

### ***Levels and Patterns of Economic Vulnerability by Welfare Regime***

Our analysis focuses on explaining the distribution of individuals across a 4\*2\*2 tabulation comprising four categories of income poverty by the dichotomous consumption deprivation and economic stress variables. Our objective is to find a

parsimonious model of the underlying processes producing an allocation of individuals to the sixteen cells of this table that generates a close fit between observed and expected frequencies. In Table 2 we display the results for model fit, size of the vulnerable class and conditional probabilities. Given large sample sizes, ranging from 33,665 in the post-socialist liberal regime to 132,111 in the Southern European regime, any parsimonious model is unlikely to produce a satisfactory fit to the observed data by strict statistical criteria. Nevertheless, the latent class model with two classes does remarkably well across all six welfare regimes in accounting for patterns of association. The  $G^2$  likelihood ratio chi-square is a measure of goodness of fit. The lower its value the more closely the expected frequencies correspond to the observed. The size of the  $G^2$  for the independence model provides one benchmark against which to assess the fit of the latent class model. The latent class model reduces this by a level of from 99.6 % to 99.9 % for the six welfare regimes. Focusing on the criterion of proportion of cases misclassified, this runs from 0.003 for the social democratic to 0.018 % for the post-socialist conservative. In each case the latent class model comes close to reproducing the observed data.

A systematic pattern of variation in the size of the vulnerable class is observed across welfare regimes. The lowest level of 12.6 per cent is observed for the social democratic regime. It rises to 15 per cent and 20.3 per cent respectively for the corporatist and liberal regimes. It increases to 28.2 per cent for the southern European regime. Finally it rises to 34.6 per cent and to 40.1 per cent respectively for the post-socialist corporatist and liberal clusters. This sharp pattern of differentiation can be contrasted with restricted differentiation found in Table 3 in relation to national income poverty at 60% of median income averaged across the countries making up



the regimes. The mean level ranges between 10.3 per cent and 19.9 per cent and very similar outcomes are observed for the social democratic and post-socialist corporatist clusters on one hand and the liberal regimes on the other.

‘TABLES 2 & 3 HERE’

A graphic illustration of the factors differentiating the vulnerable from the non-vulnerable is provided in Figure 1. For the income poverty the contrast takes a rather similar form across regimes. For the social democratic regime the numbers below 50% of equivalent median income are respectively 0.037 and 0.168. For the 60% line they rise to 0.071 and 0.341. Finally for the 70% line they increase to 0.129 and 0.551. The profile for the corporatist group the figures are very similar with the main difference being that the figures for the vulnerable are higher and the contrast is therefore sharper. For the liberal and southern European regimes poverty rates are higher for both the vulnerable and non-vulnerable. For the 60% line the rates for vulnerable and non-vulnerable rises to 0.483 and 0.119 respectively for the former and to 0.414 and 0.102 for the latter. For the post-socialist regimes the extent to which poverty rates are higher than for the southern European regime depends on the line on which one focuses but the differences in each case are rather modest. Overall we observe sharp differentiation between the vulnerable and non-vulnerable clusters with variation across regimes in such differentiation being highly restricted.

Differentiation in terms of vulnerability is least on income poverty.. When we focus on subjective economic stress, as captured by the indicator relating to difficulty in making ends meet, we find that for the vulnerable cluster the number reporting such

difficulties ranges from 58 per cent in the social democratic regime to 95 per cent for the post-socialist liberal cluster; with both liberal regimes being closer to the former and the southern European cluster being close to the latter. For the non-vulnerable clusters, on the other hand, the level of economic stress ranges in the social democratic and corporatist regimes is less than 4 per cent. It then rises to just less than 6 per cent in the two liberal regimes. It then rises substantially to 13.4 per cent for the post-socialist conservative cluster before peaking at 15.7 per for the Southern European regime.

However, economic stress is not the main differentiating factor. Instead the variable playing this role is consumption deprivation. For the social democratic regime such deprivation is close to zero for the non-vulnerable cluster but rises to 64 per cent for the vulnerable class. For the corporatist group the respective figures are 1.4 and 74 per cent and for the liberal regime 1.4 and 61 per cent. For the Southern European cluster the figure for the non-vulnerable rises to 2.4 per cent compared to one of 63 per cent for the vulnerable class. These four regimes can be contrasted with the post-socialist clusters where deprivation levels are substantially higher for both vulnerable and non-vulnerable groups. For the conservative group the respective figure for vulnerable and non-vulnerable clusters are 90.0 and 14 per cent and for the liberal group the corresponding figures are 17 and 94.6 per cent

‘FIGURE 1 ABOUT HERE’

In order to make clear the scale of disparities between the vulnerable and the non-vulnerable and to facilitate comparison within and between welfare regimes, in Table 4 we set out the relevant odds ratios. Focusing first on income poverty at the 60% line, we can see from column 1 that economic vulnerability raises the odds on such poverty by a factor of 6.8. The magnitude of this disparity varies little across welfare regimes. It rises to 9.3 for the corporatist regime but ranges between 6.2 and 7.4 for the remaining clusters. For subjective economic stress the scale of differentiation is much sharper with the odds ratio for the social democratic regime reaching 38. However, once again variation in the size of the effect across regime is modest running from a low of 29 to 48 and reveals no systematic pattern. The largest odds ratios are associated with the two corporatist clusters and the lowest with the liberal and southern European regimes.

The contrast with the results relating to consumption deprivation is quite striking. Outside the post socialist regimes the odds ratios are considerably higher. In addition, a clear pattern of differentiation in the magnitude of the odds ratio is observed across welfare regimes. The largest value of almost 300 is associated with the social democratic regime. It falls to 210 for the corporatist cluster reflecting a somewhat sharper proportionate increase in level of risk for the vulnerable group rather than the non-vulnerable in comparison with the social democratic regime. A further decline to 110 is observed for the liberal regime; arising from the fact that, while the deprivation risk rates for the vulnerable are identical for the liberal and corporatist clusters, the level for the non-vulnerable is lower in the former producing a less sharp pattern of polarization. A further fall in the value of the relevant odds ratio to 72 is observed for the southern European cluster, largely reflecting a doubling of the levels for the non-

vulnerable group; although the absolute levels remains low. For the post-socialist group we observe a decline in the odds ratio to 47. This occurs even though the risk level for the vulnerable group reaches 0.90 because the proportionate increase for the non-vulnerable is a good deal sharper. The further slight fall to 32 for the post-liberal socialist regime arises for similar reasons.

Table 4 ABOUT HERE

Overall for economic vulnerability we observe a pattern of differentials between welfare regimes whereby polarization is sharper in the more generous and comprehensive regimes. Thus while the absolute risk of being economically vulnerable and experiencing deprivation if one is in the vulnerable class is least in such regimes, the contrast between vulnerable and non-vulnerable classes degree is sharpest in the less generous and comprehensive regimes.

The conditional probabilities from the latent class model allow us to consider the picture deriving from a focus on interrelated risks compared with an emphasis on point in time multiple deprivation. As a consequence of the fact that the risk levels for each of our three indicators are independent within latent classes, calculation of the likelihood of simultaneously experiencing income poverty, consumption deprivation and economic stress can be calculated by multiplying through the conditional probabilities for each outcome. In Table 5 we report multiple deprivation levels broken down by welfare regime. For the non-vulnerable groups we can see that for all six clusters the rate is effectively zero. For the vulnerable group the lowest level of multiple deprivation of 12.7 per cent is observed for the social democratic regime.

This rises to 18.9 per cent for the liberal regime and to 20.1 for the corporatist cluster. It then increases gradually to 22.2, 23.5 and 25.6 per cent, respectively, for the southern European, post socialist liberal and corporatist clusters. Thus the economically vulnerable are least exposed to multiple deprivation in the social democratic regime and most subject to such deprivation in the two corporatist regimes.

Clearly economic vulnerability does not necessarily imply multiple deprivation. Only one in eight of the vulnerable group in the social democratic regime are so deprived and for the remaining regimes it ranges between just below one in four and one in five. Given the minimal levels of multiple deprivation among the non-vulnerable groups, calculating overall levels of such exposure reduces to multiplying the rates for the economically vulnerable by the proportion vulnerable. For the social democratic regime the proportion multiply deprived is lowest at 1.6 per cent. It rises to 3.0 and 3.8 per cent for, respectively, the corporatist and liberal regimes. As for the economically vulnerable, the lowest level of multiple deprivation is observed for the social democratic regime. However, the ranking of the liberal and corporatist regimes is reversed. This occurs because, while the rate of multiple deprivation for the vulnerable is lower in the former, the level of vulnerability is higher. The scale of multiple deprivation rises gradually from 6.3 to 9.0 and 14.2 per cent as one moves from the southern European to the post socialist corporatist and liberal regimes. Once again we see the reversal of the rankings of the liberal and corporatist regimes.

Overall level of multiple deprivation are considerably more sharply differentiated by comprehensiveness and generosity of welfare regimes that are the corresponding rates

for the vulnerable. However, only for the post-socialist clusters does the figure rise above 6 per cent of the population. This is true despite the fact that the correlations between the three dimensions we have considered are substantially higher than those involving other dimensions of deprivation. Adopting a more encompassing definition of multiple deprivation would lead us to observe substantially lower levels and ones that would be of negligible magnitude in the more affluent regimes.

TABLE 5 ABOUT HERE

,

## **Relative Risk of Poverty and Economic Vulnerability by Social Class and Welfare Regime**

In this section we consider the consequences of opting for income poverty or economic vulnerability as a dependent variable for conclusions relating to the impact of social class. In Table 6 we set out the results from a set of logistic regressions relating to variation in the relative risk of income poverty at 60% by social class by welfare regime.<sup>xv</sup> With the higher salariat as the benchmark, for every regime the odds on being poor is most strongly influenced by membership of the farming class. For the social democratic regime the odds on farmers being poor are higher than those for the higher salariat by a factor of 7.5. This rises to 10.5 for the corporatist cluster and 11.5 for the two liberal regimes. It increases further to 13.2 for the post-socialist corporatist cluster and finally to 14.4 for the southern-European. The next strongest average effect is observed for the petit-bourgeoisie. The weakest effect is observed for the post-socialist liberal and liberal cluster with odds ratios of 3.5 and 5.4 respectively. For the remaining clusters, the figure ranges between 7.3 and 8.8.

The differential between the higher and lower salariat is positive in every case, positive but modest. It ranges from a low of 1.1 in the social democratic and southern-European Regimes to 1.7 in the liberal regime. The impact increases for the higher white and blue collar and runs from 1.7 for the social democratic cluster to 3.2 for the liberal regimes. A significant strengthening of the class effect is found for the lower white collar and skilled manual. Once again the lowest value of 3.5 is found for the social democratic regime. The highest value of 8.1 is associated with the corporatist regime. The remaining values range between 4.7 for the post-socialist liberal regime to 6.5 for the liberal. For the semi-unskilled class a further increase in the odds ratio is observed in each case. Once again the lowest and the highest odds ratios are observed in the social democratic and corporatist regimes with respective values of 3.8 and 9.6. The remaining values run from 6.5 in the post-socialist corporatist cluster to 8.2 for the southern-European regime.

In general, we observe strong class effects relating to classes involved in self-employment with weaker but systematic class hierarchy effects.

‘TABLE 6 HERE’

In Table 7 we report the results from the corresponding set of logistic regressions relating to economic vulnerability.<sup>xvi</sup> In contrast to the situation for poverty, by far the strongest differential is associated with the semi-skilled manual class. Two of the three lowest odds ratios are observed for the post-socialist regimes with the respective values for the liberal and corporatist variants being 6.9 and 8.3, These values are

lower than in a number of other regimes despite the high absolute levels of economic vulnerability of the semi-skilled manual in such regimes,. They reflect the relatively higher exposure of the higher salariat in these regimes to vulnerability.. The next lowest value of 7.0 is observed for the social democratic regime. It arises for a quite different reason relating to the distinctively low level of vulnerability among those in the semi-unskilled manual class in this regime. The odds ratio rises gradually as one moves from the liberal to the corporatist and finally to the southern-European regimes from 9.6 to 11.0 and 12.7.

A similar pattern, although involving slightly weaker effects, is observed for the lower white collar and skilled manual class. For the post socialist cluster the weakest effect of 4.7 is again observed for the liberal variant while that for the corporatist group reaches 6.4. A similarly relatively low value of 5.3 is associated with the social democratic regime. We again observe a gradual increase from 7.9 to 8.3 to 11.5 as we move from the liberal to the corporatist and the southern-European regime. For the higher white & blue collar class the odds ratio varies between 2.9 and 3.1 for the post-socialist clusters and the social democratic regime. This rises to 3.9 and 3.3 respectively for the corporatist and liberal regimes and to 4.5 for the southern-European cluster. Differentiation relating to the impact of membership of the lower and higher salariat across regimes is relatively slight.

The impact of being member of either the petit bourgeoisie or the farming class is substantially weaker in the case of economic vulnerability but variation across regimes is considerably greater. For the petit bourgeoisie we see that the weakest effects are observed for the liberal regimes and the highest for the corporatist and



southern European clusters. For farming the post-socialist and southern European regime have distinctively high odds ratios of 7.8 and 12.3 while in no other case does the value rise above 3.6. The scale of the observed effects for the propertied classes is generally substantially weaker than for poverty.

‘TABLE 7 HERE’

## **Conclusions**

While entirely persuaded by the theoretical arguments relating to the virtues of a multidimensional approach, we have stressed the need for methodological progress that allows us to fruitfully explore key issues relating to poverty and social exclusion. Our analysis provides a comparison of levels and socio-economic patterns of disadvantage in relation to income poverty and social exclusion. Given the variety of meanings attributed to both social exclusion and multidimensionality, we have sought to clarify the distinction between social exclusion understood as heightened risk in relation to a number of outcomes and social exclusion and alternatively as multiple deprivation involving point in time overlapping deprivations.

We have sought to do so by applying latent class analysis to distinguish groups of economically vulnerable individuals. Our analysis was then extended to provide estimates of multiple deprivation both for vulnerable groups and the population as a whole.

Contrary to the situation with national income poverty measures, levels of economic vulnerability vary systematically across welfare regimes in line with the comprehensiveness and generosity of such regimes. Levels of vulnerability increase as

we move from the social democratic to the corporatist to the liberal to the southern European and finally post-socialist regimes corporatist and liberal. Within each regime the economic vulnerability approach identifies a group of individuals that exhibit a distinctive multidimensional profile. Consumption deprivation is the key differentiating factor. While levels of such deprivation are substantially higher in the more limited and less generous welfare regimes, polarization between the vulnerable and non-vulnerable is sharpest in the more comprehensive and generous regimes.

Multiple deprivation is concentrated almost entirely in the economically vulnerable class. However, in every welfare regime a substantial majority of the vulnerable are not currently exposed to such deprivation. Extending the definition of multiple deprivation to encompass dimensions such as housing, health and neighbourhood environment would lead to further very substantial reductions in estimates of such levels.

The latent class approach to economic vulnerability enables us to provide a coherent account of patterns of social exclusion within and across welfare regimes. Despite the scale of variation across welfare regimes, the numbers above the vulnerability threshold in the post-socialist regimes are considerably lower than the corresponding figures employing a European level relative income approach. It shares with an EU level 'at risk of poverty' approach the capacity to reveal the expected differentiation between welfare regimes without resulting in a situation where the contrast between the post-socialist regimes and all others comes to entirely dominate results.<sup>xvii</sup>

The latent class approach also reveals striking patterns of differentiation by social class within welfare regimes.<sup>xviii</sup> Unlike the national relative income approach the latent class approach produces a pattern of class differentiation that is not dominated by the contrast between the self-employed and the remaining social classes. At the same time, it uncovers important variations in such effects across regimes. In contrast to a European-wide relative income approach, it also simultaneously captures the fact that while *absolute* levels of vulnerability are distinctively high among the lower social classes in the less generous and comprehensive welfare regimes class *relativities* are sharper at the other end of the spectrum.<sup>xix</sup>

No single indicator is likely to prove adequate in capturing the diversity of experience of poverty and social exclusion in an enlarged European Union. In light of this we have considerable sympathy with those who argue for the need to supplement nationally based indicators with EU-wide indicators. However, in this paper we have sought to demonstrate that a more effective strategy may be to take more seriously the need to invest greater effort to translating the conceptually compelling case for a multidimensional approach to social exclusion into an appropriate set of operational alternatives.

## References

Atkinson, R. and Davoudi, S. (2000), 'The Concept of Social Exclusion in the European Union': Context, Development and Possibilities', *Journal of Common Market Studies*, 38,3: 427-448

- Atkinson, W. (2008) 'Beck, Individualization and the Death of Class', *The British Journal of Sociology* 58, 3: 349–66.
- Beck, U. (2007), 'Beyond Class and Nation: Reframing Social Inequalities in a Globalizing World', *The British Journal of Sociology* 58(4): 679–705.
- Bradshaw, J. and Finch, N. (2003). Overlaps in dimensions of poverty., *Journal of Social Policy*, 32, 513-525.
- Bradshaw, J., Kemp, P., Baldwin, S. and Rowe, A. (2004) *The drivers of social exclusion: A review of the literature for the Social Exclusion Unit in the Breaking the Cycle series*, Office of the Deputy Prime Minister, London.
- Bukodi, E. and Robert, P. (2007) *Occupational Mobility in Europe*, European Foundation for the Improvement of Living and Working Conditions, Luxembourg, Office for Official Publications of the European Communities.
- Cappellari, L. and Jenkins, S.P. (2007). 'Summarising Multiple Deprivation Indicators' in J. Micklewright and S.P. Jenkins, eds., *Poverty and Inequality: New Directions*. Oxford: Oxford University Press.
- Carle, A. C., Bauman, K. J. and Short, S. (2009), 'Assessing the Measurement and Structure of Material Hardship in the United States', *Social Indicators Research*, 92:35-51

Chambers, R. (1989) 'Vulnerability: How the Poor Cope: Editorial', *IDS Bulletin* 20: 2.

Dewilde, K, (2004)., The multidimensional measurement of poverty in Belgium and Britain: A categorical approach., *Social Indicators Research* 68, 331-369.

Esping-Andersen, G. and Myles, J. (2009), 'Inequality and the Welfare State' in Salverda, W., Nolan, B. and Smeeding, T. M., *The Oxford Handbook of Economic Inequality*, Oxford: Oxford University Press.

European Commission (2004). *A New Partnership for Cohesion. Convergence Competitiveness and Cooperation*. Third Report on Economic and Social Cohesion. Luxembourg: Office for Official Publications of the European Communities.

Fahey. T. (2007), 'The Case for an EU-wide measure of Poverty', *European Sociological Review*, 23, 1, 35-47.

Fenger, H.J.M. (2007), 'Welfare Regimes in Central and Eastern Europe: Incorporating post-Communist Countries in a Welfare Regime Typology', *CIISS*, August; 1-30

Friedkin, N.E. (2004) 'Social Cohesion', *Annual Review of Sociology* 30: 409–25.

Gallie, D. and Paugam, S. (2000), 'The Experience of Unemployment in Europe', in D. Gallie and S. Paugam (eds) *Welfare Regimes and the Experience of Unemployment in Europe*, Oxford: Oxford University Press.

Gallie, D., Paugam, S. and Jacobs, S. (2003) 'Unemployment, Poverty and Social Isolation', *European Societies* 5 (1): 10/31.

Goldthorpe, J.H. (2002), 'Occupational Sociology, Yes: Class Analysis, No. Comment on Grusky and Weeden's Agenda', *Acta Sociologica*, 45: 211–25.

Goldthorpe, J.H. (2007a), 'Globalisation and Social Class' in J.H. Goldthorpe, *On Sociology Second Edition, Volume One: Critique and Programme*, Stanford: Stanford University Press.

Goldthorpe, J.H. (2007b), 'Social Class and Differentiation of Employment Contracts' in J.H. Goldthorpe, *On Sociology Second Edition: Volume Two Illustration and Retrospect*, Stanford: Stanford University Press.

Goldthorpe, J. H (forthcoming), 'Analysing Inequality: A Critique of Two Recent Contributions from Economics and Inequality', *European Sociological Review*

Gordon, D., Adelman, L., Ashworth, K., Bradshaw, J., Levitas, R., Middleton, S., Pantazis, C., Patsios, D., Payne, S., Townsend, P. and Williams, J. (2000), *Poverty and Social Exclusion in Britain*. York: Joseph Rowntree Foundation.

Grusky, David B., Weeden, Kim A., (2007) Measuring poverty: The case for a sociological approach. In: Kakawani, N., Silber, J. (Eds.), *The Many Dimensions of Poverty*. Palgrave Macmillan, Basingstoke.

Guio, A-C (2005a), Income Poverty and Social Exclusion in the EU25, *Statistics in Focus* 13/2005, Eurostat

Guio, A-C., (2005b), Material Deprivation in the EU, *Statistic in Focus*, 21/200, Eurostat.

Halleröd, B. (1995). The Truly Poor: Direct and Indirect Measurement of Consensual Poverty in Sweden, *Journal of European Social Policy*, 5, 111-129.

Kangas, O. and Ritakallio, V. (1998). Different Methods – Different Results? Approaches to Multidimensional Poverty. in Andress, H.-J., (ed), *Empirical Poverty Research in a Comparative Perspective*, Aldershot: Ashgate.

Korpi, W. and Palme, J. (1998), ‘The Paradox of Redistribution and Strategies of Equality’, *American Sociological Review*, 63: 661-87.

Kronauer, M. (1998) “ ‘Social Exclusion’ and ‘Underclass’ - New Concepts for the Analysis of Poverty’ in Andres, H. J. (ed), *Empirical Poverty Research In a Comparative Perspective*, Aldershot, Ashgate.

Levitas, R, Panatzis, Fahmy, E, Gordon, D, Lyod and Demi Patios (2007), *The Multi-Dimensional Analysis of Social exclusion, Social Exclusion Unit, United Kingdom*

Lockwood, D. (1964) 'Social Integration and System Integration' in Zollschan, G.K. and Hirsch, W. (eds) *Explorations in Social Change*. London:Routledge

Moisio, Pasi (2004) 'A latent class application to the multidimensional measurement of poverty' *Quantity and Quality* 38, 703-717.

Muffels, R.J.A. and Luijkx, R., (2006), 'Globalisation and male job mobility in European welfare states', in Blossfeld, H.-P., Mills, M. and Bernardi, F. (eds.), *Globalisation, uncertainty and men's careers: An international comparison*, Cheltenham, UK and Northampton, MA, Edward Elgar.

Nolan, B. and Whelan, C T. (2007), 'On the multidimensionality of poverty and social exclusion', In: Micklewright, J., Jenkins, S. (Eds.), *Poverty and Inequality: New Directions*. Oxford University Press, Oxford.

Palme, J. (2006), 'Welfare States and Inequality: Institutional Designs and Distributive Outcomes', *Research in Social Stratification and Mobility*, 24: 387-403

Paugam. S (1996), 'The Spiral of Precariousness: A Multidimensional Approach to the Process of Social Disqualification in France', in Room, G. J. (ed.), *Beyond the Threshold*, Bristol Policy Press.

Pisati, M, Whelan, C. T., Lucchini, M. and Maître (2009), '*Understanding the Socio-Economic Distribution and Consequences of Patterns of Multiple Deprivation: An*



*Application of Self Organising Maps*, Economic and Social Research Institute, Working Paper, 302, Dublin

Rose, D. and Harrison, E. (2007), 'The European Socio-economic Classification: A New Social Class Schema for Comparative European Research', *European Societies*, 9(3): 459–90.

Rose, D. and Harrison, E. (2009), *The European Socio-economic Classification*, London, Routledge

Sen, A. (2000), *Social Exclusion: Concept, Application and Scrutiny*. Social Development Papers No. 1, Office of Environment and Social Development, Asian Development Bank, Manila.

Smeeding, T. (1997), *Financial Poverty in Developed Countries*. Luxembourg Income Study, Working Paper 115

Tomlinson, M., Walker, A. and Williams, G. (2008). 'Measuring Poverty in Britain as a Multi-dimensional Concept, 1991 to 2003', . *Journal of Social Policy*, 37, 597-620.

Whelan, C. T. and Maître, B. (2005a), "Vulnerability and Multiple Deprivation Perspectives on Economic Exclusion in Europe: A Latent Class Analysis", *European Societies*, 7 (3), 423-450.

Whelan, C. T. and Maître, B. (2005b), "Economic Vulnerability, Social Exclusion and Social Cohesion in an Enlarged European Community", *International Journal of Comparative Sociology*, 46, 3:215-239.

Whelan, C. T. and Maître, B (2008a), 'Social Class and Risk': A Comparative Analysis of the Dynamics of Economic Vulnerability', *The British Journal of Sociology*, 60, 4, 637-659.

Whelan, C. T. and Maître, B (forthcoming), 'Comparing Poverty Indicators in an Enlarged EU', *European Sociological Review*

Whelan, C.T., Layte, R., Maître, B., and Nolan, B. (2001),. 'Income, Deprivation and Economic Strain: An Analysis of the European Community Household Panel',. *European Sociological Review*, 17, 357-372.

**Whelan, C. T.**, Layte, R. and Maître, B. (2002), 'Multiple Deprivation and Persistent Poverty in the European Union', *Journal of European Social Policy*, 12:2:91-105

Whelan, C. T. , Nolan B. & Maître B. (2008b), 'Measuring Material Deprivation in the Enlarged EU', ESRI Working Paper 249 [www.esri.ie](http://www.esri.ie)

Wilkinson, R and Pickett, K. (2009), *The Spirit Level: Why More Equal Societies Almost Always Do Better*, Allen Lane.



---

<sup>i</sup> See Atkinson (2007), Beck (2007) and Goldthorpe (2007a, 2007b & forthcoming)

<sup>ii</sup> See Goldthorpe (forthcoming) for discussion of the contrast between ‘attributional’ and ‘relational’ approaches to social class

<sup>iii</sup> Difficulties arise from the fact that the term ‘social cohesion’ has partly assimilated older terms such as social solidarity and social integration (Lockwood, 1964) while frequently lacking clarity on the relationship between societal patterns of inequality and forms of such cohesion. See Wilkinson and Pickett (2009)

<sup>iv</sup> Levitas *et al* (2007) see such multidimensional deprivation as affecting both the quality of life of individuals and the equity and cohesion of society as a whole. However we would prefer to see such relationships between individual outcomes and societal characteristics as matters for empirical enquiry rather than definition.

<sup>v</sup> This tendency is also stressed in Room’s (1999: 171) discussion of notions of continuity and catastrophe in the social exclusion literature

<sup>vi</sup> Earlier implementations of this approach include Whelan and Maître (2005a & b). The current approach adds these early efforts in terms of the choice of indicators and in taking advantage of the opportunities offered by EU-SILC to develop a European wide analysis based on adequate national samples.

<sup>vii</sup> For convenience we will refer to national ‘at risk of poverty’ measures simply as indicators of ‘poverty’

<sup>viii</sup> See Whelan *et al* (2008) for further details.

<sup>ix</sup> See Rose and Harrison (2007 & 2009).

<sup>x</sup> Employing this procedure, the number of individuals classified as having ‘never worked’ is extremely modest and we have excluded them from our analysis.

<sup>xi</sup> For such accounts see Guio (2005 a & b).

<sup>xii</sup> Fenger (2007) employing a hierarchical cluster analysis identifies a similar set of regimes

<sup>xiii</sup> The proper allocation of the Netherlands is a matter for debate. We follow Muffels and Luijkx (2006) in locating it in the social democratic cluster.

<sup>xiv</sup> Although the latter is less true of Ireland.

<sup>xv</sup> Standard errors in Tables 5 and 6 have been calculated to take into account the clustering of individuals within households

<sup>xvi</sup> The estimates in Table 6 are based on employing the LEM modal class procedure for the identification of the dependent variable. Each observation is assigned to that latent class for which, given the manifest scores, the estimated classification probability is largest. Allocation to clusters is on the basis of modal assignment.

<sup>xvii</sup> See Whelan and Maître (forthcoming)

<sup>xviii</sup> It is clear, however, that efforts at targeting within post-socialist regimes would require supplementary measures.

<sup>xix</sup> As Whelan and Maître (2008a) demonstrate the economic vulnerability approach has significant advantages over income and deprivation measures in relation to problems of measurement error that arise in analysis of dynamics. As a consequence it proves considerably more effective in revealing the impact of social class on patterns of persistent disadvantage over time.