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# Validating the European Socio-economic Classification: Cross-Sectional and Dynamic Analysis of Income Poverty and Lifestyle Deprivation

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# Validating the European Socio-economic Classification: Cross-Sectional and Dynamic Analysis of Income Poverty and Lifestyle Deprivation

## Introduction[1]

This paper uses data from the European Community Household Panel (ECHP) Survey to validate ESeC in terms of poverty and deprivation in the countries of pre-enlargement Europe.[2] The purpose of ESeC, and other social class schemes in the same tradition, as Goldthorpe (2002:213) observes, is to bring out the constraints and opportunities typical of different class positions particularly as they bear "on individuals *security, stability and prospects* as a precondition of constructing explanations as of empirical regularities". A major concern of such class analysis is with the association between class and differential life-chances (Goldthorpe, 2002:21).

A number of papers in this volume focus on criterion validation of ESeC, which requires demonstrating that employment relationships vary in the hypothesised fashion across the categories of the proposed class schema (Evans, 1993). Our focus is on construct validity, which "is concerned with the extent to which a particular measure relates to other measures consistent with theoretically derived hypotheses concerning the concepts (or constructs) that are being measured' (Carmines and Zeller, 1979, p. 23).

In a context where critics of class analysis have been ready to pronounce the "death of social class", empirical demonstration that social class continues to play a crucial causal role in the determination of life chances must form a central part of the class analysis agenda.[3] Our analysis takes as its starting point earlier work relating to income poverty and deprivation based on the analysis of the European Community Household Panel Survey (ECHP) in its User Data Base (UDB) format (Whelan *et al*

[1] Detailed appendices relating to the analysis reported in this chapter are available fro the authors. Contact www.esri.ie

[2] See Rose and Harrison (forthcoming) for a detailed discussion of the rationale underlying the development of ESeC and details of the operationalisation procedures.

2001, 2003, 2004). However, comparative analysis focusing on social class effects using the UDB was possible only at the price of utilising a rather crude version of class schema. Our objective in this chapter is to provide a substantially more differentiated account of the impact of social class on income poverty and deprivation but also to demonstrate that the pattern of differentiation observed using the ESeC schema is consistent with its theoretical underpinnings.

The key relationships on which we focus are those relating to income poverty and material deprivation. A substantial literature has emerged in recent years relating to the measurement of such phenomena and our understanding of their socio-economic determinants. By drawing on this literature and that relating to the conceptualisation and measurement of social class we can develop the framework for a set of empirical analyses that can provide one crucial stream of evidence regarding the merits of the ESeC class schema.

One of the major justifications for devoting attention to the conceptualisation and measurement of social class is the argument that such measures provide us with a better understanding of the determinants of longer-term command over resources and exposure to deprivation (Breen and Rottman, 1995). To assess the validity of such claims we need to conduct analysis that is both dynamic and multidimensional. The ECHP data set provides this opportunity. The availability not only of income and income poverty measures, but also a range of indicators relating to material deprivation, fulfils the multi-dimensionality criterion. The dynamic perspective can be achieved by considering persistent income poverty and material deprivation. Such analysis can be extended to incorporate the experience of subjective economic strain, which provides a valuable additional layer in any process of validation. Depending on the particular measures incorporated in the analysis, it is possible to report results for EU-14 countries ranging from a maximum of 14 countries to a minimum of nine.

## Approach

Given the manner in which employment relations vary across classes, and the associated differences in reward packages both current and prospective, we anticipate

[3] See Goldthorpe and Marshall (1992), Liesering and Liebfried (1993), Chauvel (2001), Goldthorpe (2002a & b), Layte and Whelan (2002), Whelan and Maître (2005).

that class position will provide a relatively stable indicator of command over resources and related life-chances. Such variation in economic resources and life chances does not constitute part of our *definition* of class. Rather such regularities must be empirically established. While the scale and pattern of such inequalities will vary across country we also anticipate that broad regularities will emerge.

We anticipate that class relationships will be stronger the more the indicator with which we are concerned relates to stability or persistence. Research using panel data has drawn attention to the limitations of a static perspective on poverty. Among those poor at any point in time there will be some who have only recently dropped below the threshold and whose living standards have been as yet unaffected. In contrast, there will be those who have been poor a good deal longer, whose resources have been depleted over time and whose standard of living has been significantly eroded (Fouarge and Layte, 2003). It is precisely the distinction between the transitional poor and the persistently poor that has motivated recent attempts to develop social indicators that go beyond cross-sectional measures of poverty and take into account the experience of poverty over a period of time (Atkinson *et al* 2002). By extending our measure of income poverty and deprivation over time we hope to provide a clearer picture of sustained impact of class position.

Based on a range of earlier work, our fundamental hypotheses are that the impact of social class will become progressively stronger as one moves from a focus on low income to a concern with life-style deprivation and as one moves from point-in-time poverty or deprivation to persistent poverty or deprivation. In addition, where we identify the 'consistently poor' – those who are both below an income and a deprivation threshold – we anticipate that membership of this group will be more closely related to social class than either income poverty or material deprivation taken on their own. As between the latter groups, we expect that social class will be more strongly associated with persistent income poverty than with persistent deprivation.[4]

The ESeC class schema is not intended to constitute a straightforward hierarchy of classes. However, in testing the forgoing hypotheses we take advantage of the fact that it does have a hierarchical component. We anticipate that those operating under a

service class relationship will have substantially lower exposure to poverty and deprivation that those governed by a labour contract arrangement, with those operating under modified forms occupying intermediate positions. In addition to such gradation, we also anticipate that self-employment is likely to have different implications in relation to income poverty as opposed to life-style deprivation. We also expect that, while the strength of particular social class associations will vary across countries, the overall pattern of associations will display considerable similarity across countries.

To summarise, we hypothesise that differences between classes will become more clear-cut:

- as we move from income levels to deprivation levels
- as we move from income poverty to lifestyle deprivation
- as we move from income poverty to consistent (income plus deprivation) poverty
- as we move from point-in-time poverty to persistent poverty
- as we move from point-in-time deprivation to persistent deprivation
- as we move from persistent income poverty to persistent deprivation, and
- as we focus on groups who experience *both* persistent poverty and persistent deprivation.

## Methodology

### *The ECHP data*

The strength of the ECHP data for the purpose at hand is that it allows us to construct a harmonised version of ESeC for a broad range of European countries and examine differentials in income and deprivation, both cross-sectionally and dynamically, according to the classification.

### *Operationalising ESeC on the ECHP*

Because of some limitations in the data we needed to make some compromises, compared to the 'blueprint' ESeC. Chief among these are the following:

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[4] As noted below, those who are persistently deprived but *not* persistently income poor are a difficult group to understand. They may be vulnerable to unusual demands on their income due to a lack of accumulated economic resources and social supports.

It was not possible to differentiate employers and managers based on the *size of establishment* in accordance with the ESeC specification. The categories for numbers employed were 0, 1-4 and 5-19, whereas the ESeC cut-off for large and small employers was under 10 and 10 or more. Earlier analyses suggested that using 5 as the threshold was too low: it resulted in a very broad ESeC 1 (Higher Salariat), including many relatively small employers, particularly in the Southern Countries. In this paper, therefore, we use 20+ as the threshold for 'large employers' and to distinguish the two groups of managers.

In *identifying supervisors*, we made use of an item that distinguishes those with supervisory authority into two groups: those supervisors who have a say in the pay and promotion of the people supervised, and supervisors with no say in pay and promotion. Both groups are treated as supervisors.

The *level of detail available for occupation* in the ECHP data set is less than ideal for the construction of ESeC. Version 4 of ESeC is based on a 3-digit ISCO code. A two-digit version of the ISCO 88 (Com) was provided to Eurostat by the National Data collection Units (NDUs), and Eurostat further anonymised the codes, reducing further some of the detail, in constructing the User Database. As an NDU, the Irish team had access to the full two-digit version of the ISCO codes for all the countries at the exception of Germany. For Germany, we use the less detailed occupational coding scheme distributed with the UDB. Where we could check the UDB version against the two-digit version, the ESeC classification was identical in 99 per cent of cases.

*ESeC 10* is intended for those who do not have an employment relationship, those who never worked and the long-term unemployed. The retired, other inactive and more recently unemployed are classified according to the occupation in their previous job. In this implementation, we have reserved ESeC 10 for those who have never worked only. We would argue that unemployment is an outcome of the unfavourable employment relations experienced by those in the less advantaged class locations. As such, to group the unemployed in a separate class would result in an underestimation of the impact of class structure on outcomes such as poverty and deprivation. It would also have the perverse effect of making the gap between the labour contract and service classes appear narrower in periods or places with high levels of unemployment, as the burden of economic downturn is likely to fall most heavily on

the weaker occupants of labour contract positions. The impact of classifying the long term unemployed on the overall distribution of ESeC is rather modest in the present context. The long-term unemployed account for only three per cent overall, but rising to 9 per cent in Ireland[5].

### *The Unit of Analysis*

The analysis is conducted at the level of the person (of all ages) but with household characteristics (such as ESeC of reference person, poverty and deprivation)[6] assigned to each household member. Thus, for example, household income is calculated by taking account of all income sources in a household, with equivalisation to account for differences in household size and composition. This 'equivalised income' is then assigned to all household members. Median equivalised income is calculated as the median over persons.

Likewise, we assign ESeC at the *household level* and take the person as the unit of analysis. The ESeC of the household reference person is assigned to all household members. In the ECHP, the household reference person is the person in whose name the title to the property or rental agreement is. Where the couple is jointly responsible, we use a dominance rule to decide which person's class to use. The idea behind the dominance rule is that each person is assigned the same class position as the household member whose occupation and employment conditions are most likely to affect household circumstances (Erikson, 1984). Higher socio-economic positions dominate lower ones and self-employment dominates employee status. For socio-economic position those associated with a lower risk 'dominate' those with a higher risk[7]. The effect of using the dominance rule is to increase the proportion of individuals assigned to the more advantaged ESeC classes.

### *Measuring Income Poverty and Deprivation*

In the analysis that follows we will focus first on the relationship between income and deprivation before extending our analysis to income poverty, corresponding deprivation thresholds and consistent poverty. Our analysis will proceed to take into

[5] Figures for the first wave of the ECHP, 1994 in most countries.

[6] This allows us to include all persons (not just interviewed adults).

[7] The dominance order adopted for ESeC was: 1,2,3,4,6,7,8,9,5,10

account outcomes summarising the consequences of income poverty and deprivation dynamics. Our starting point is the accumulated evidence relating to the relationship between household income and life-style deprivation. Poverty is now widely conceptualised in relative terms. The view that poverty has to be seen in terms of the standard of living of the society in question has led to the framing of poverty lines explicitly, and purely, in terms of relative income lines. The general rationale is that those falling more than a certain distance below the average or median are excluded from the minimally acceptable way of life of the society (Townsend, 1979). However, as is now well known, major difficulties arise from the fact that low income turns out to be a quite unreliable indicator of exposure to extreme deprivation in the sense of exclusion from customary living standards (Ringen, 1987, Perry, 2002, Whelan *et al* 2001). Understanding the relationship between income and deprivation requires locating it in the broader context of the accumulation and erosion of household resources (Nolan and Whelan, 1996).

This approach has allowed significant progress to be made. However, as Whelan *et al* (2002) and Layte and Whelan (2002) observe, while an increasing proportion of the literature is characterised by a multidimensional perspective, conclusions arising from key theoretical debates relating to the influence of factors such as social class and the increasing 'individualisation' of social inequality appear to be substantially influenced by the choice of indicator. It is important therefore that we justify the indicators incorporated in our analysis, whether this takes a cross-sectional or a longitudinal form.

In measuring income in the ECHP an annual accounting period is adopted, covering income received in the previous calendar year. Household income is adjusted to take differences in size and composition by equivalisation using the modified OECD equivalence scale[8]. Our unit of analysis throughout in relation to income and deprivation is the person with, as noted above, the income poverty and deprivation level of the household assigned to all household members. For income poverty line purposes, the poverty threshold is calculated at 50%, 60% and 70% of median equivalised income.

[8] The modified OECD equivalisation scale is widely used in comparative research. It gives a 'weight' of 1 to the first adult in the household, 0.5 to subsequent adults and 0.3 to children under age 14

The ECHP supplies information about the living condition of the households and Whelan *et al* (2001) identified thirteen household items, which can serve as indicators of a concept of life-style deprivation. These items are considered to cover a range of what we term Current Life-Style Deprivation (CLSD). A further eleven items relating to housing and the environment, which in principle meet our definition of deprivation, have been excluded because they have been shown to form quite distinct clusters to the CLSD measure and to have significantly weaker correlations with income (Whelan *et al*, 2001). The format of the items varied, but in each case we seek to use measures that can be taken to represent enforced absence of widely desired items. Respondents were asked about some items in the format employed by Mack & Lansley (1985): for each household it was established if the item was possessed/availed of, and if not, a follow-up question asked if this was due to inability to afford the item. The following six items took this form:

- A car or van.
- A colour TV.
- A video recorder.
- A microwave.
- A dishwasher.
- A telephone.

In these cases we consider a household to be deprived only if absence is stated to be due to lack of resources.

For some items the absence and affordability elements were incorporated in one question, as follows: The following six items were administered in this fashion:

- Keeping your home adequately warm.
- Paying for a week's annual holiday away from home.
- Replacing any worn-out furniture.
- Buying new, rather than second hand clothes.
- Eating meat chicken or fish every second day, if you wanted to.
- Having friends or family for a drink or meal at least once a month.

The final item relates to arrears; we consider a household as experiencing deprivation in terms of this item if it was unable to pay scheduled mortgage payments, utility bills or hire purchase instalments during the past twelve months. An index based on a simple addition of these thirteen items gives a reliability coefficient of 0.80. For our present purposes we use a weighted version of this measure in which each individual

item is *weighted by the proportion of households possessing that item in each country*. As a consequence deprivation of an item such as a video recorder will be counted as a more substantial deprivation in Denmark as compared to Greece.

The weighted CLSD measure makes it possible to identify for each country and for the 70% median income poverty line a corresponding deprivation threshold. This deprivation threshold is simply the level at which a similar percentage of individuals who are defined as income poor are also deprived. For instance, if in Denmark we have identified 18% of individuals as income poor, the deprivation threshold in Denmark is the score value that identified 18% of individuals as 'deprived'. The weighted CLSD is intended to capture differences across countries in material standard of living.

## ESeC Distribution by Country

In this section we examine the distribution of ESeC by country. As noted above, the analysis is conducted at the level of the person but with the same ESEC class, that of the household reference person, assigned to all household members. Where a couple is jointly responsible for the accommodation, the dominance rule described earlier was used to determine which ESeC to assign to the household.

Figure 1 and Table 1 show the distribution of all persons in each country by the ESeC of the household. The countries are ordered according to the proportion of persons in ESeC 1. The highest proportion of persons in ESeC 1 is found in the United Kingdom and the Netherlands (25 per cent) and the lowest proportion in Portugal and Austria (8-9 per cent), followed by Greece, Italy and Spain (9-10 per cent). Austria, Portugal and Greece also tend to have a relatively high proportion of persons in households where the reference person is self-employed in agriculture, while Italy, Spain, Greece and Portugal have a high proportion of self-employed and small employers outside of agriculture.

The ESeC for self-employed in agriculture is extremely small in several countries (1-2 per cent in the UK, Belgium, Germany and Denmark). For the Netherlands data problems make it very difficult to identify the self-employed in agriculture.

The ESeC 6 (Lower supervisory/technician) accounts for less than 5 per cent of persons in Greece, Portugal and the Netherlands.

The size of ESeC 10 (Never worked) varies depending of the extent of labour force participation (where the reference person has never worked). It is lowest in Denmark and Finland (1.5 per cent) and highest in Austria (9.5 per cent).

The final column in the table shows the percentage of persons where the ESeC class of the household could not be assigned. This often arose in older households where the reference person was retired, as details on the previous occupation were not collected if the person had last worked more than ten years before the survey. The percentage is highest in Belgium and the Netherlands (10 per cent) and is lowest in Luxembourg and Finland (6 per cent).

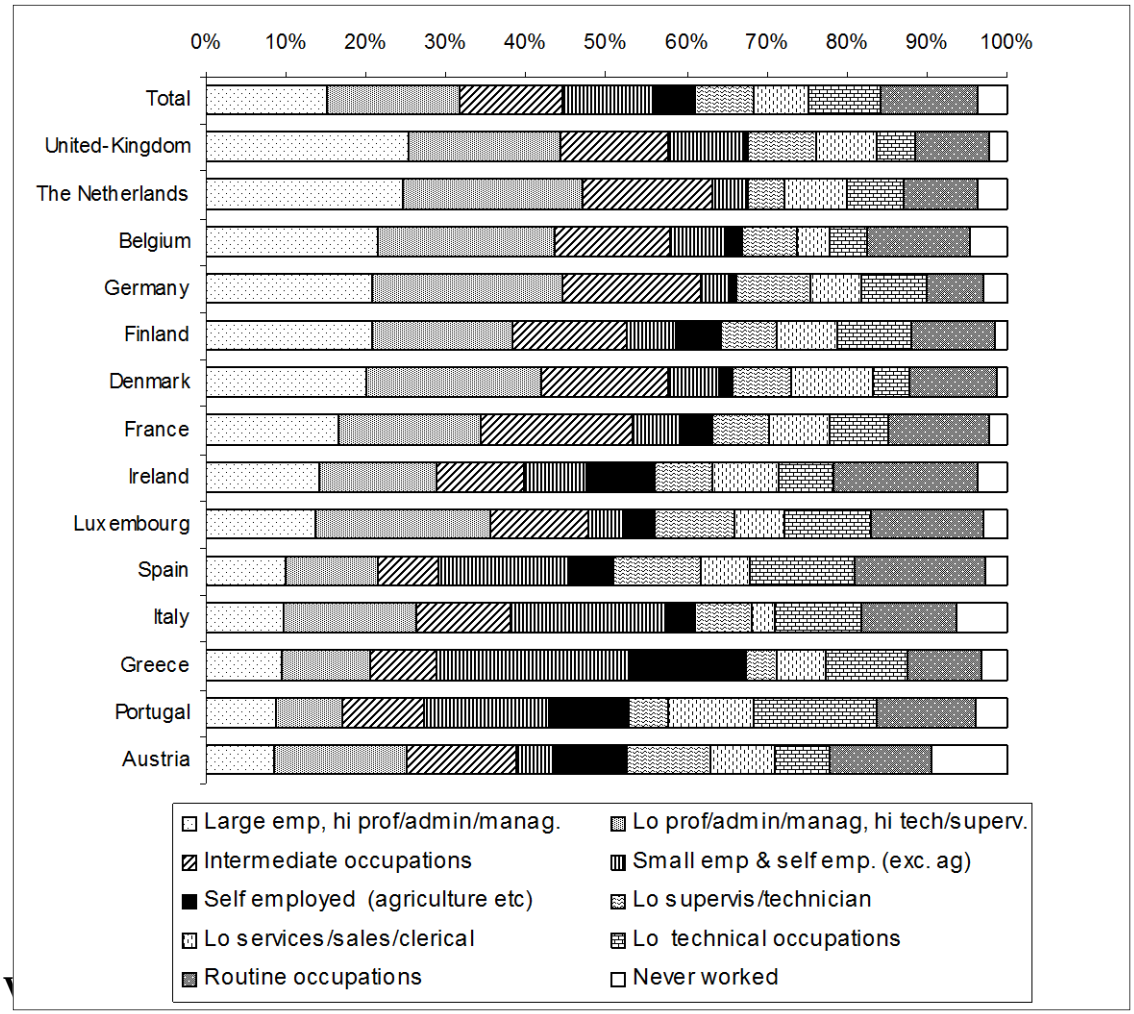
***Table 1: ESeC by Country (All Persons, weighted, first wave; row percentages)***

| | *ESeC v4 of household, dominance rule* | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Large emp, hi prof/ admin /man-ag.* | *Lo prof/ admin/ manag, hi tech/ superv.* | *Inter-med-iate occ-upat-ions* | *Small emp & self emp. (exc. ag)* | *Self em-ployed (agri-culture etc)* | *Lo supe-rvise /tech-nician* | *Lo ser-vices/ sales/ clerical* | *Lo tech-nical occ-upat-ions* | *Rou-tine occ-upat-ions* | *Never work-ed* | *Pct. Not ass-igned* |
| Total | 15.2 | 16.5 | 12.8 | 11.3 | 5.3 | 7.4 | 6.9 | 9.0 | 12.1 | 3.6 | --- |
| *Country* | | | | | | | | | | | |
| UK | 25.2 | 19.1 | 13.4 | 9.5 | 0.4 | 8.5 | 7.5 | 4.8 | 9.3 | 2.2 | 6.9 |
| Netherlands | 24.6 | 22.3 | 16.4 | 4.2 | 0.0 | 4.6 | 7.8 | 7.1 | 9.4 | 3.6 | 9.9 |
| Belgium | 21.3 | 22.3 | 14.4 | 6.9 | 1.9 | 6.9 | 4.1 | 4.6 | 13.1 | 4.5 | 10.4 |
| Germany | 20.8 | 23.8 | 17.1 | 3.7 | 0.7 | 9.3 | 6.3 | 8.1 | 7.2 | 2.9 | 8.4 |
| Finland | 20.8 | 17.5 | 14.3 | 6.1 | 5.6 | 7.2 | 7.4 | 9.3 | 10.6 | 1.4 | 5.5 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Denmark | 19.9 | 21.8 | 15.9 | 6.2 | 1.7 | 7.3 | 10.3 | 4.6 | 11.0 | 1.3 | 7.4 |
| France | 16.5 | 17.8 | 18.9 | 6.0 | 4.2 | 7.0 | 7.6 | 7.2 | 12.5 | 2.3 | 8.1 |
| Ireland | 14.2 | 14.6 | 10.7 | 8.0 | 8.4 | 7.4 | 8.2 | 6.7 | 18.1 | 3.6 | 8.8 |
| Luxembourg | 13.7 | 21.7 | 12.4 | 4.4 | 3.8 | 10.0 | 6.1 | 10.8 | 14.2 | 2.9 | 5.6 |
| Spain | 9.9 | 11.5 | 7.5 | 16.6 | 5.4 | 10.8 | 6.1 | 13.1 | 16.4 | 2.7 | 7.9 |
| Italy | 9.8 | 16.5 | 11.7 | 19.5 | 3.6 | 7.0 | 3.0 | 10.7 | 11.9 | 6.2 | 9.1 |
| Greece | 9.5 | 11.0 | 8.1 | 24.3 | 14.6 | 3.9 | 6.0 | 10.3 | 9.3 | 3.1 | 5.7 |
| Portugal | 8.7 | 8.5 | 10.1 | 15.5 | 10.1 | 4.8 | 10.6 | 15.2 | 12.5 | 3.9 | 6.5 |
| Austria | 8.4 | 16.6 | 13.8 | 4.6 | 9.1 | 10.7 | 8.0 | 6.8 | 12.5 | 9.5 | 4.1 |

*Revised April 2006. ESeC v4 defined at household level using dominance rule*

***Figure 1: ESeC by Country (All Persons, weighted, first wave)***




In this section we provide a description of the relationship between ESeC class position and equivalent household disposable income and Current Life-style Deprivation. In order to facilitate comparison between our income and deprivation results we present our findings in terms of the log ratios for each class compared to the national average. Since the manner of weighting the deprivation variable within countries makes an analysis of the overall sample inappropriate, the results reported below referring to the countries as a whole are simply averages of the results for the individual countries.

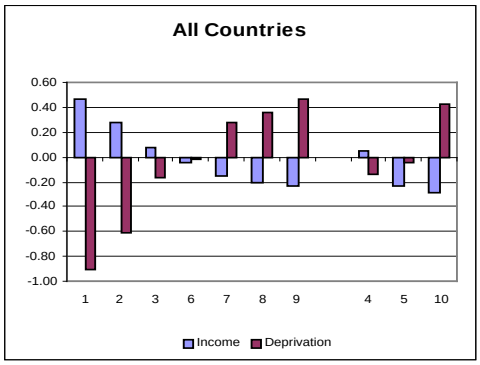
In Figure 2 below, for each country, we compare the situation of each class with the national average. The actual statistic reported in each case is the log of the ratio of the relevant class to the national mean. In the case of income, positive scores represent a desirable position but for deprivation, negative scores constitute a desirable outcome.

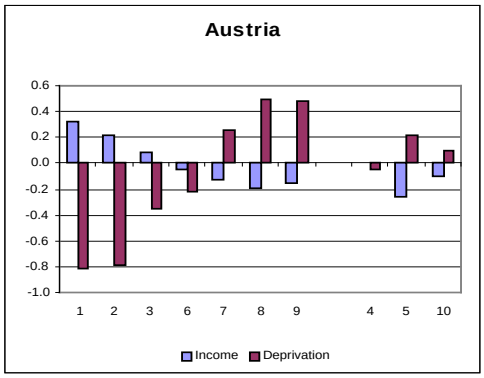
Focusing first on income we find that overall ESeC class 1 is the most favourable position in relation to household income situation, with a log ratio of 0.46, then followed by Class 2 with 0.27. At the other extreme is a cluster of class comprising classes 5, 9 and 10 with values ranging between –0.23 and -0.28. However, the latter differentiation is less apparent in Germany and some Southern European countries. On average, the gap between classes 10 and 9 is greater in the Northern rather than the Southern European countries; perhaps reflecting lower wage levels in the latter. Class 3 occupies an intermediate position between Classes 1 - 2 and Class 6. Variation across Classes 6, 7 and 8 (lower supervisory/technicians, services/sales/clerical and technical) is of a modest nature.

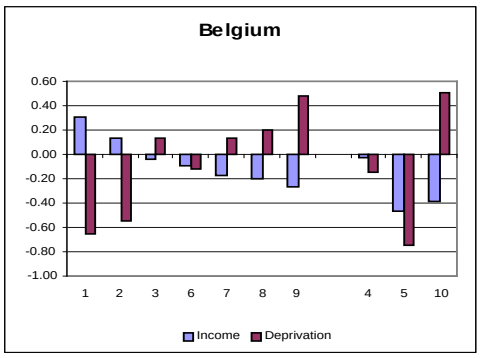
Overall, ESeC Class 1 occupies the most favourable position in relation to current life-style deprivation with a log ratio of –0.90. The next most favourable location relates to those in Class 2. For classes 4 and 5 their relative position in relation to deprivation is significantly better than that relating to income. Thus for income the deviations from the overall average for Classes 4 and 5 are respectively 0.05 and –0.24. For deprivation, on the other hand, the corresponding coefficients are –0.14 and -0.04. In deprivation terms ESeC Class 9 is sharply differentiated in most countries from all classes other than Class 10. The respective coefficients for classes 9 and 10 are 0.47 and 0.42. Classes 7 and 8 consistently occupy relative positions between classes 6 and 10. However, their ranking varies across countries.

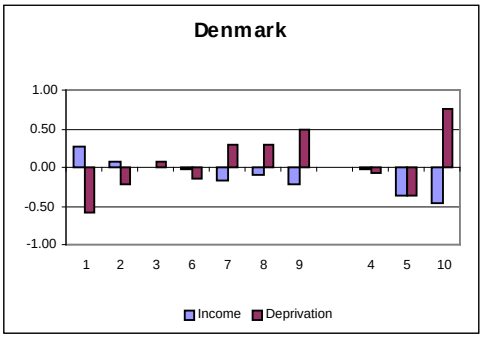
Comparing the results for income and deprivation it is clear that ESeC class differentials are a great deal sharper in relation to the latter. Thus for income the difference in log ratios between ESeC classes 1 and 10 is 0.74 while between Classes 1 and 9 it is 0.69. For deprivation the corresponding figures are 1.32 and 1.37. Focusing on Classes 2 and 10 gives figures of 0.55 and 1.03 respectively for income and deprivation. The corresponding figures for classes 2 and 9 are 0.50 and 1.08. Similar, if sometimes less striking, differences are observed across the class spectrum.

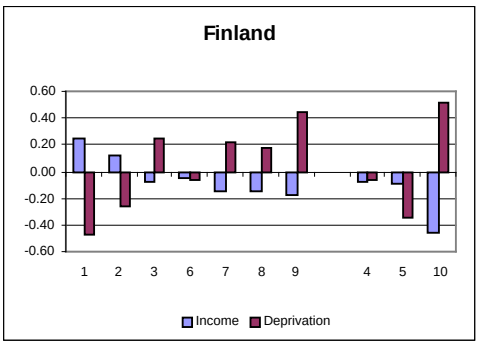
*Figure 2: Income and Deprivation by Country: Log of the odds of Income and Deprivation relative to the National Average*

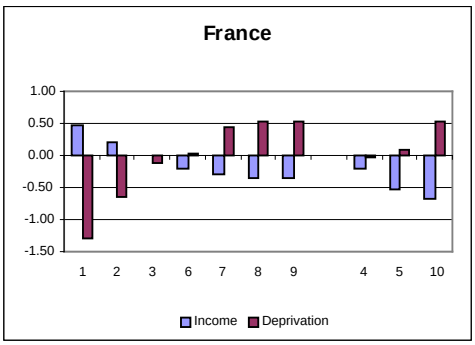


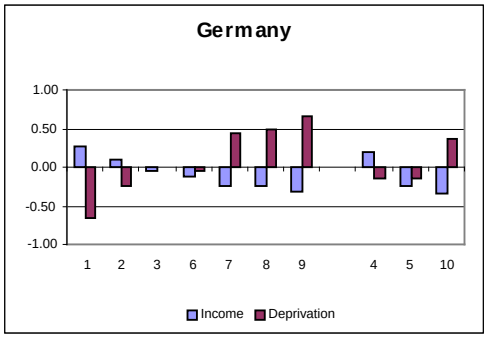



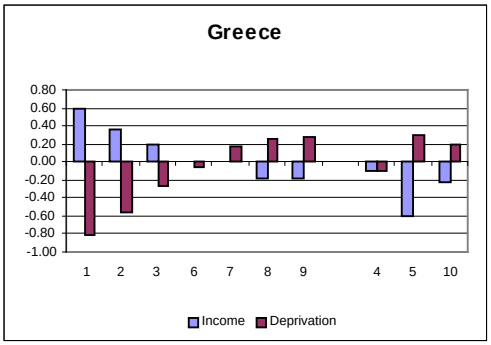



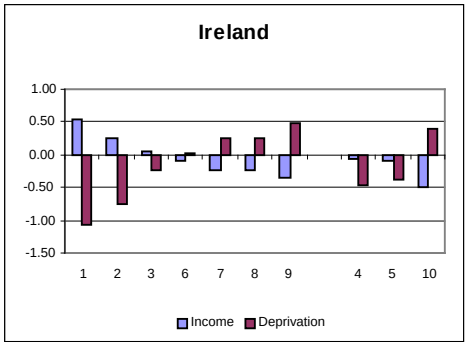

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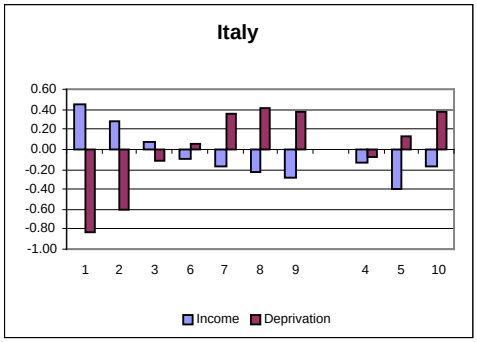
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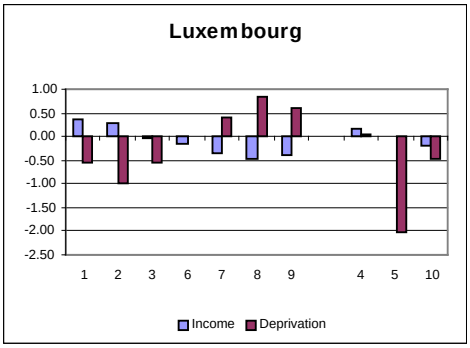
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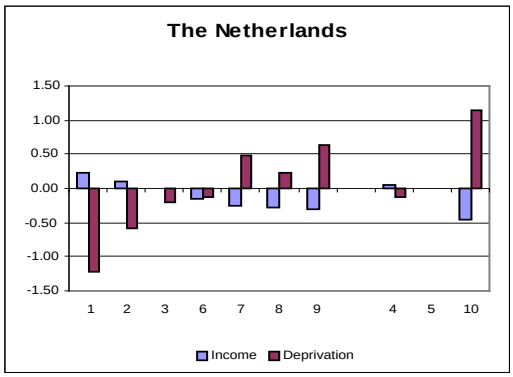
Income
Deprivation


The Netherlands
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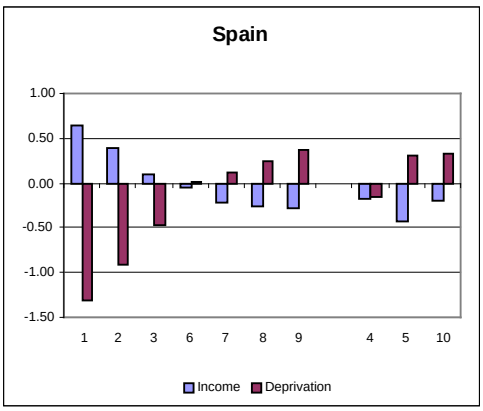
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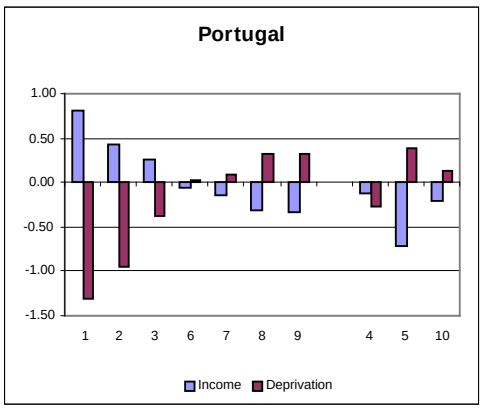
Portugal
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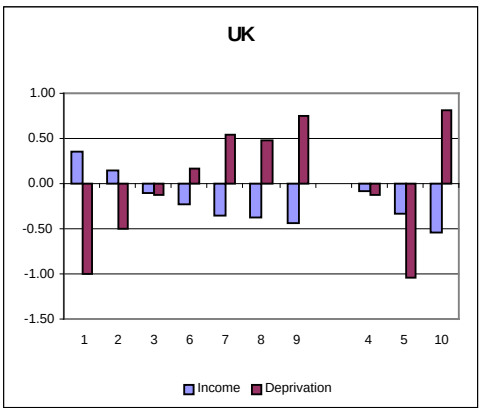
UK
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Income
Deprivation

## Risk of Poverty and Deprivation

In this section we report the poverty and deprivation risk of persons in each ESeC class relative to the risk of those in all classes within the country. Figure 3 shows the log of the odds of poverty for each ESeC class (from 1 to 10 on the horizontal axis), with the national average taken as the reference category. Three different measures of income poverty are shown for each country, using the 50, 60 and 70 per cent of median equivalised (using the modified OECD scale) household income. The figures also show the risk of material deprivation in terms of being located above the weighted CLSD deprivation threshold corresponding to 70% of median income; and a consistent poverty measure that identifies those below *both* the 70 per cent income threshold *and* the 70 per cent deprivation threshold. In the analysis that follows, the 'All country' results are not weighted by population size. Thus they provide a picture of the average country pattern rather than an average over persons in Europe.

In general, the relationship between position on the ESeC class schema and the poverty and deprivation measures follow the expected pattern, with higher risks of poverty among those in ESeC 8 and 9 and much lower risks among those in ESeC 1 (large employers, higher professional/managerial/administrative employees) and ESeC 2 (lower professional/managerial/administrative employees; higher technicians/supervisors). Overall the gaps between the least and the most favoured classes are largely unaffected by the particular income line on which we focus. However, the gap widens as we shift our attention from income poverty to deprivation and consistent poverty. The strongest and clearest pattern of class differences between the professional and managerial classes and others emerges in relation to consistent poverty.

Classes 4 (Small employers and self employed, excluding agriculture), 5 (small employers and self employed in agriculture) and 10 (never worked) are shown in a separate block in the charts, since these groups do not fit neatly into the implied hierarchy in employment relations that applies to classes dominated by employees. In general, the poverty risk of classes 4 and 5 are above average in income terms, but are pulled back towards the average when deprivation is taken into account. This is consistent with previous findings that the self-employed enjoy a somewhat more favourable situation in terms of material possessions than their current income would suggest. Class 4 tends to be close to the average in consistent poverty terms, while

the farmers in class five and those who never worked show the highest risk of consistent poverty.

As expected deprivation and consistent poverty rates tend to be significantly higher for ESeC 5 in the Southern European countries. In Greece and Portugal, in particular, ESeC Class 5 continues to display a significant degree of disadvantage even when we shift our focus to deprivation and consistent poverty. In all countries, the position of the non-agricultural self-employed is close to average in terms of risk of consistent poverty. These findings illustrate the particular difficulty in relying solely on current income as a measure of resources for the self-employed and farmers.

There is some variability across countries in the relative position of ESeC Classes 1 and 2. In Austria and Luxembourg Class 2 appears to fare 'better' than Class 1, even in terms of deprivation and consistent poverty[9], while in Finland, Italy, Greece and Portugal they look about the same.

On the other hand, consistent with our expectations from previous research, Ireland displays sharp disparities in consistent poverty between ESeC class 1 and Class 9.

As expected, ESeC classes 3, 6 and 7 tend to occupy intermediate positions between ESeC Classes 1 and 2 and ESeC classes 8 and 9 for both income and deprivation indicators.

Taking the findings overall, differences between ESeC classes are more pronounced as we move from income poverty to deprivation and, finally, to consistent poverty. This lends weight to the view that the ESeC classes are capturing a dimension of life chances that is more enduring and consequential than point-in-time income differences.

[9] However, this variability is much less than in a previous analysis where the threshold of 5 or more employees was used to distinguish large employers.

*Figure 3: Relationship between ESeC and Income Poverty, Deprivation and Consistent Poverty*

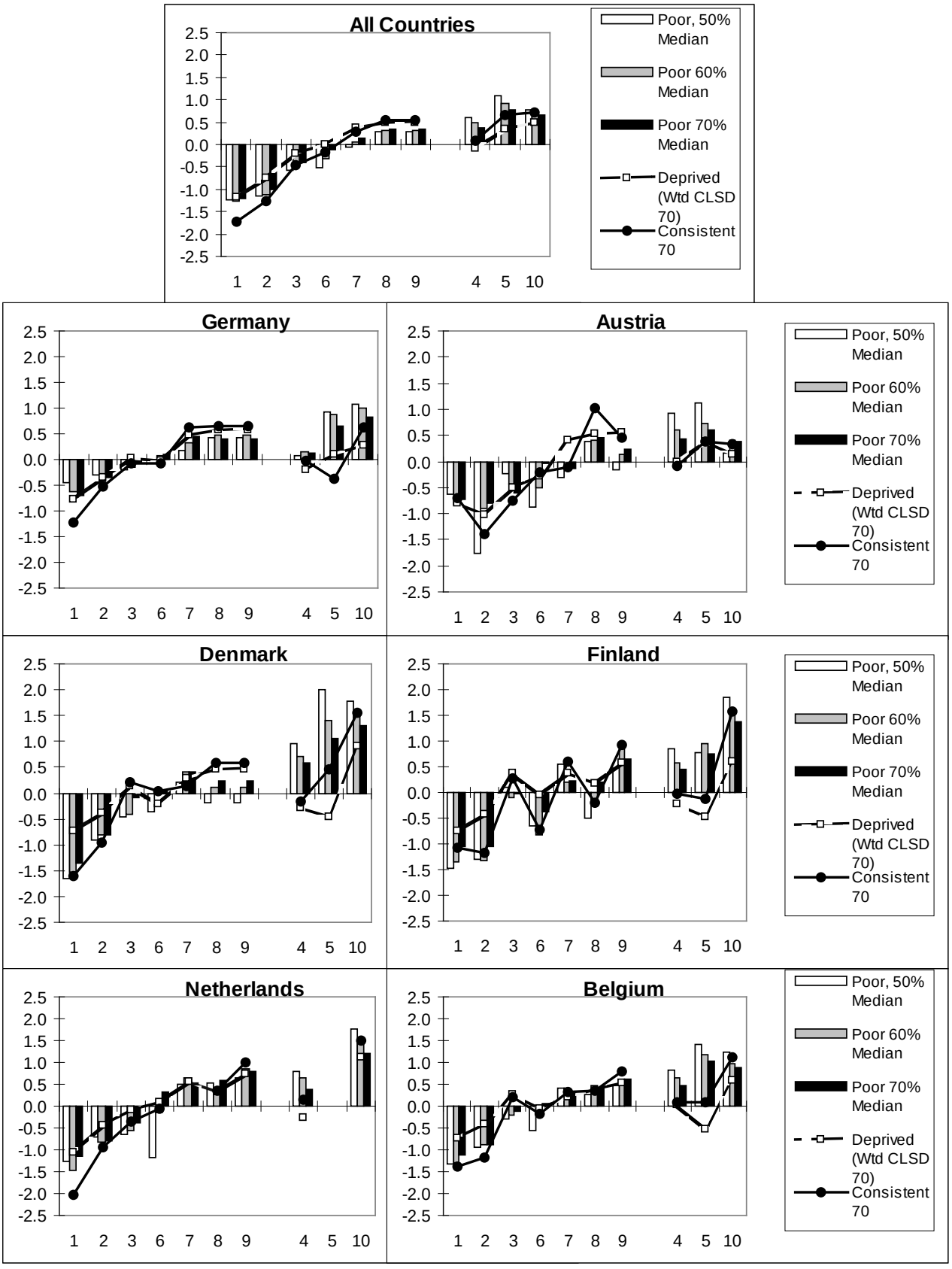
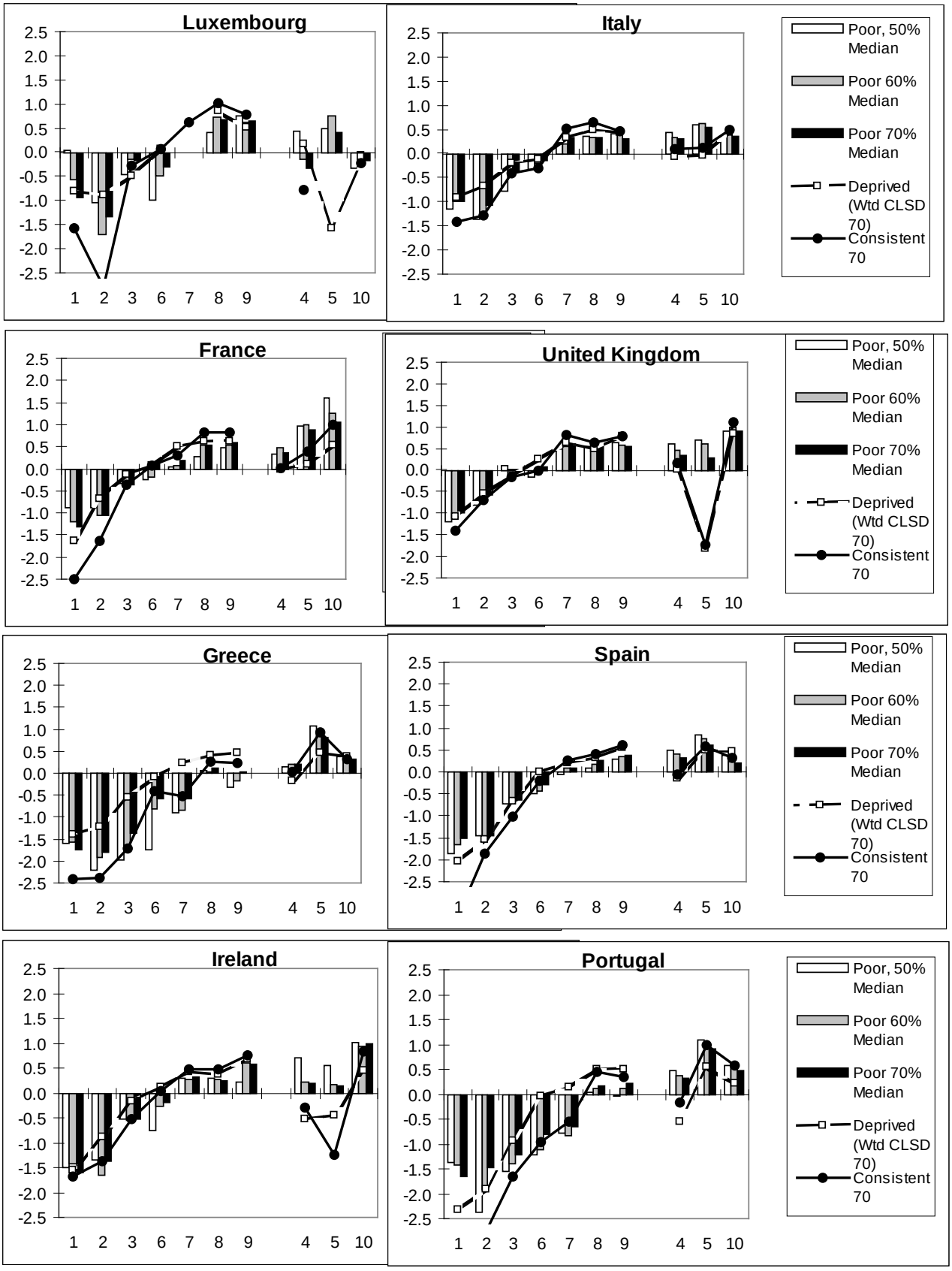


*Figure 3: (continued)*



## Persistent Poverty, Persistent Deprivation and ESeC

We can extend the period over which poverty and deprivation are observed by using the first five waves of the ECHP and examining persistence of poverty and deprivation. Following Layte and Fouarge (2005) we construct poverty profiles that allow us to examine both the persistence and recurrence of poverty by distinguishing at 70% of median income between:

- The persistent non-poor – never poor during the accounting period
- The transient poor - poor only once during the accounting period.
- The recurrent poor – poor more than once but never longer than two consecutive years.
- The persistent poor – poor for a period of at least three consecutive years.

A corresponding typology is also constructed in relation to Current Life-style Deprivation.

The main results are shown in Figure 4. In general, as we move from transient through recurrent to persistent income poverty (from the lighter to the darker bars in Figure 4) the class pattern becomes more pronounced. As with cross-sectional income poverty, ESeC classes 4 and 5, and particularly, the latter do relatively badly. The greatest overall gap in terms of persistent income poverty is between ESeC Classes 1 and 5. Overall, ESeC classes 1, 2 and 3 and 6, 7 8 and 9 form a fairly regular hierarchy in terms of persistent income poverty risk.

While there is obviously a degree of cross-national variation in such patterns there is little in the way of systematic differences. In Portugal, Class 3 (Intermediate Occupations) faces an unexpectedly low risk of persistent income poverty, and in Greece, Class 2 faces a somewhat lower risk of persistent income poverty than Class 1.

*Figure 4: Persistent Income Poverty and Persistent Deprivation by ESeC Class and Country (5 waves of ECHP)*

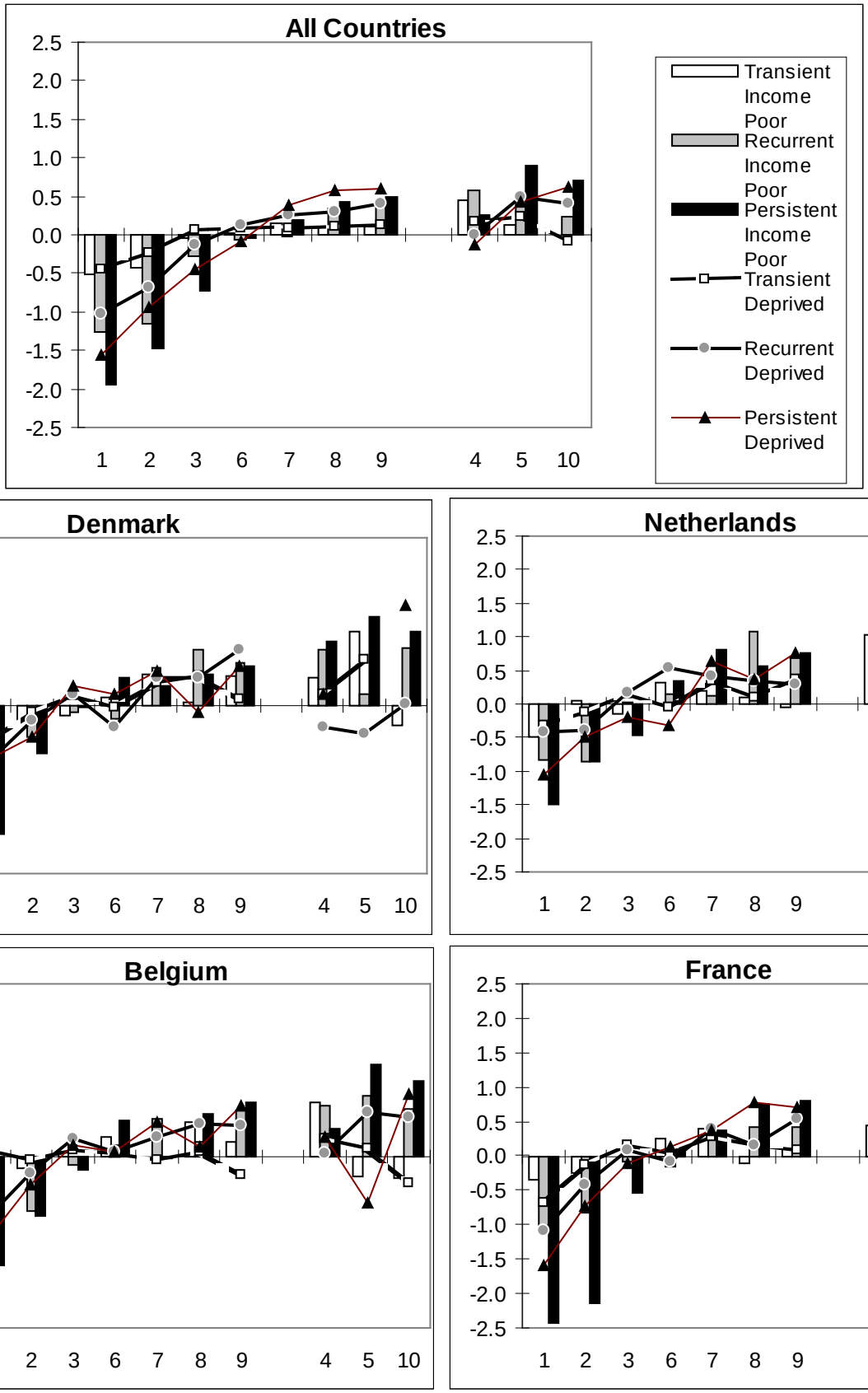
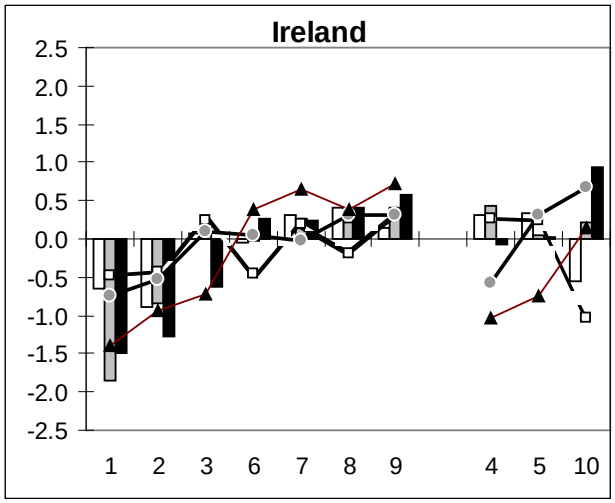
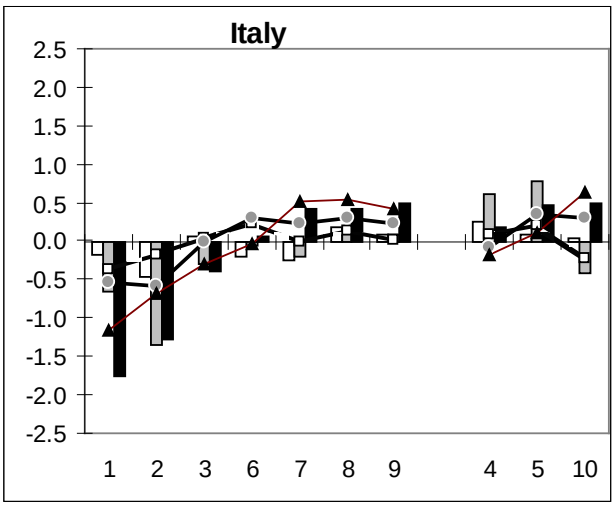
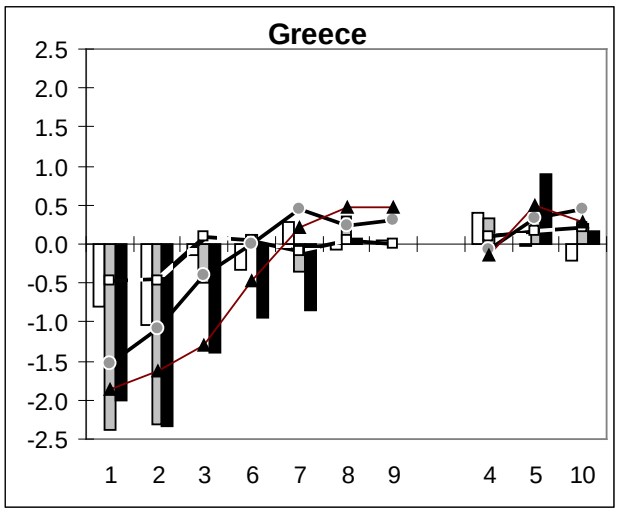
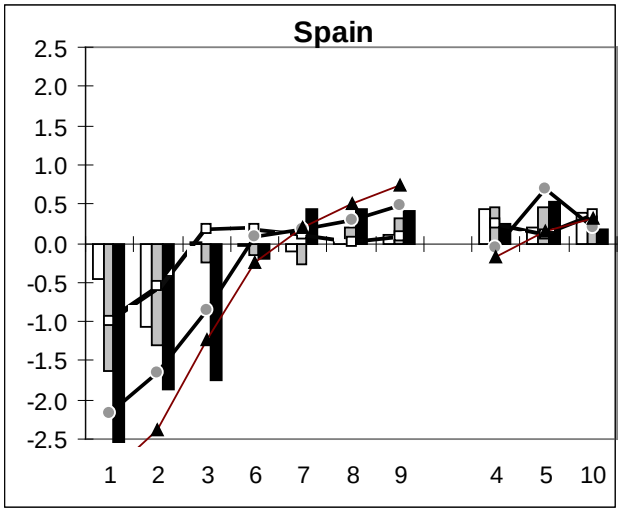


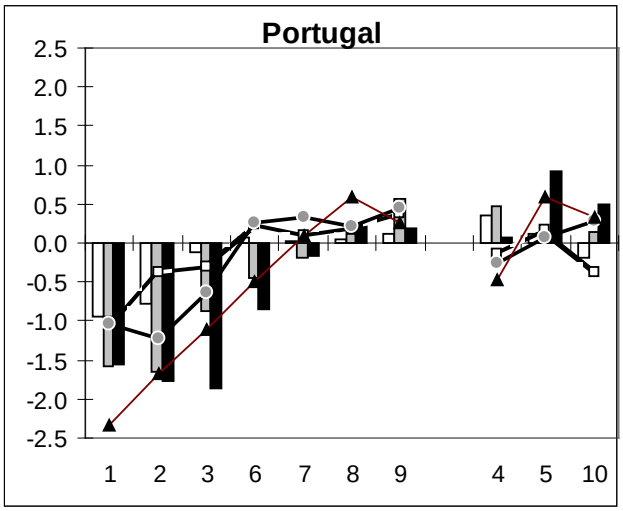
*Figure 4 (continued)*



Turning to persistent deprivation we again observe a pattern of increasing differentiation by social class as we move from transient, through recurrent to persistent deprivation (the lighter to the darker lines in Figure 4). In this case the greatest contrast overall is between ESeC class 1 classes 8, 9 and 10. Once again ESeC classes 1, 2 and 3 and 6, 7 8 and 9 form a fairly regular hierarchy in terms of persistent deprivation risk, but with the level of persistent deprivation being very close for classes 8, 9 and 10.

While the position of the self-employed and farmers in ESeC classes 4 and 5 is somewhat variable across countries, overall these classes are somewhat less disadvantaged in relation to persistent deprivation than was the case for persistent income poverty.

Overall, Class 8 (lower technical occupations) faces a higher risk of persistent deprivation than Class 7 (Lower services, sales and clerical) but the reverse is true in several countries (Denmark, the Netherlands, Belgium, Ireland and Italy).

The risk of persistent deprivation experienced by Class 3 is about what we would expect it to be (between Classes 1 and 2 on the one hand, and Classes 6, 7, 8 and 9, on the other). The persistent deprivation risk of Class 6 (Lower supervisory/technician) falls between that of Class 3 on one hand and Classes 8 and 9 on the other in all countries except Belgium, the Netherlands and Denmark where Class 6 fares better.

Overall, one is struck a great deal more by the similarities in the manner in which social class is related to persistent income poverty and persistent deprivation, rather than by the differences. This finding is in line with earlier research by Whelan *et al* (2004) employing a much cruder class variable based on an aggregation of the EGP schema. However, following on from this research, in the section that follows we will create a typology based on cross-classification of types of persistence and explore the manner in which the ESeC class schema differentiates between categories of this profile.

## Cross-classifying Forms of Persistence

One of the problems with the analysis reported in the previous section is that, as our earlier analysis has shown, we are attempting to differentiate between two substantially overlapping groups: the income poor and the deprived. Therefore at this

point, in order to develop our understanding of the determinants and impact of both types of disadvantage, we use a variation of a strategy employed by Whelan *et al* (2001 & 2004). This involves cross-classifying both types of persistence in order to produce a combined profile. We thus distinguish the following categories.

1. *Neither* persistently income poor nor persistently deprived.
2. Persistently income poor but *not* persistently deprived.
3. Persistently deprived but *not* persistently income poor.
4. Persistently income poor *and* persistently deprived.

In Figure 5 we report for each class the log-odds ratios for outcomes two to four relative to the average in the country. The group that is persistently income poor *only* may be capturing those whose income fluctuates from year to year, but whose longer-term command of resources enables them to maintain a satisfactory standard of living. Those in ESeC Class 1 face the lowest risk of being in this situation followed by Class 2 and Class 3. There is then a sharp contrast between these upper white collar groups and all others. Classes 4 and 5, which contain most of the self-employed, have above average risks of being found in this category. This is particularly true of the latter. Once again we observe that among the self-employed low income needs to be interpreted cautiously, as it tends to be a poorer overall measure of command over resources than it is for employees. The group with the next highest risk is Class 10 (never worked). Classes 6 and 7, as expected, occupy an intermediate position between Classes 1 to 3 and Classes 8 and 9.

At this point we focus on those who report persistent deprivation but not persistent income poverty. This is the most difficult group to understand and consequently we anticipate that the extent of class differentiation will be rather less than for the other outcomes. For this group income, even over a period of time, seems not to capture adequately their situation in relation to the resources on which they can draw. A longer-term perspective is necessary to understand the trajectories that result in such persistent deprivation. However, it seems likely that such individuals may be vulnerable, in the sense of lacking the economic reserves and social support systems to cope with a range of stresses arising from scheduled and unscheduled events and demands.

*Figure 5: Income and Deprivation Persistence Combination by Country: Log of the odds of Persistence Type relative to the National Average*

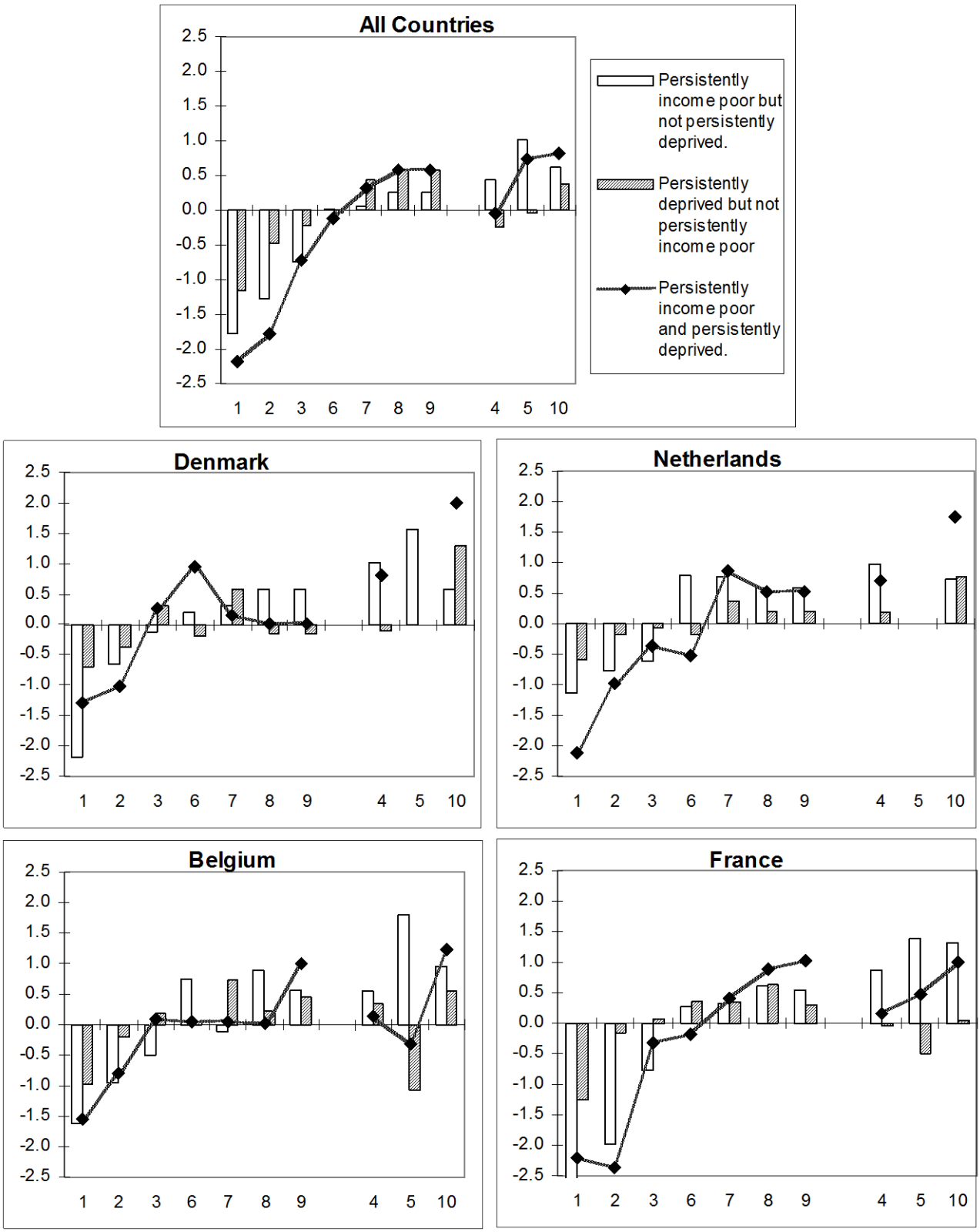
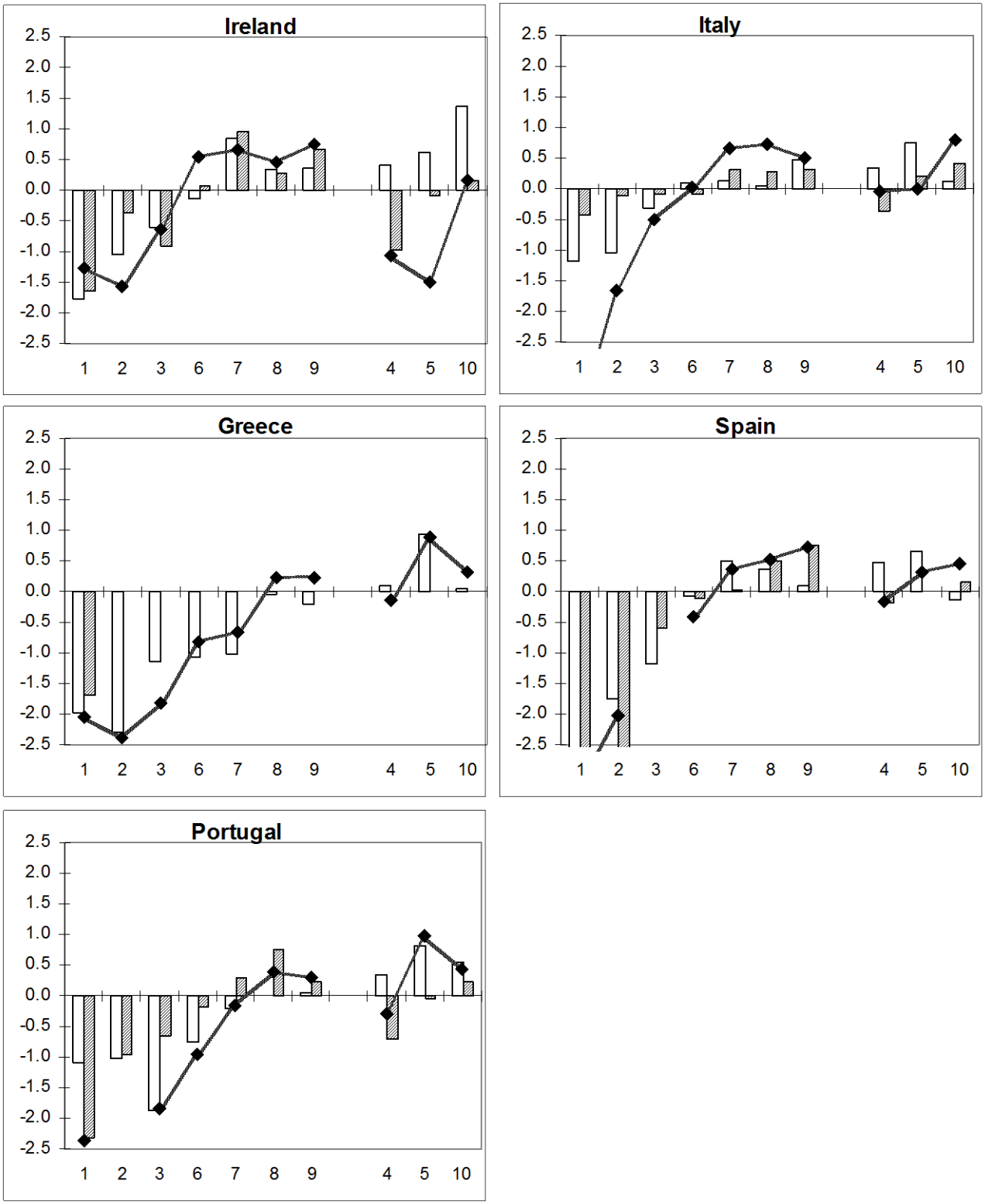


*Figure 5 (continued)*



The pattern is broadly consistent with this set of expectations. The group least likely to be found in this category are ESeC Class 1. The self-employed groups Classes 4 and 5 are a good deal less likely to be found in this category that in the persistently income poor only group. While Class 4 has an average risk of being in the latter group its probability of being found in the former group is below average. Class 5, which has the highest risk of being in the income poor only group, exhibits a close to average risk for the deprivation only group.

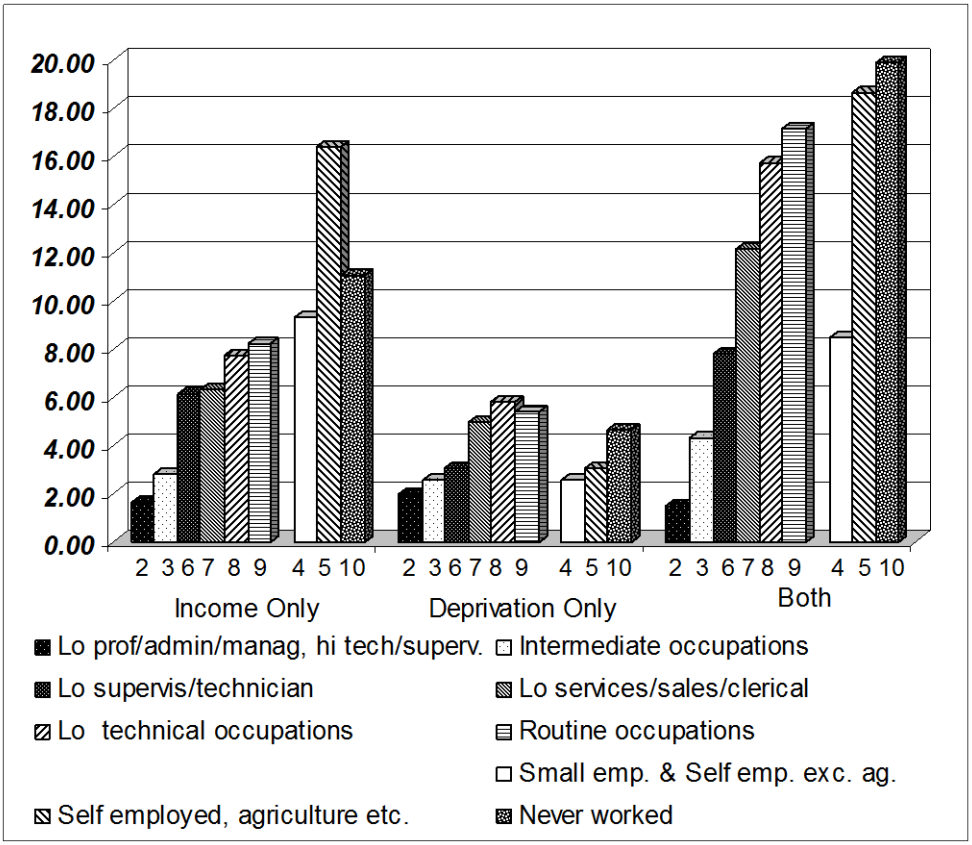
With the exception of Class 10, the remaining employee classes all display a higher risk of being in the persistently deprived only category than was the case with persistent income poverty only suggesting that they are less advantaged compared to the self-employed in terms of permanent income than current income. However, the pattern of relative advantage between Classes 1,2 and 3 and Classes 7,8,9 remains relatively similar to that observed in the income poverty only case. The fact that there is substantially less variation within classes 7 to 9 suggests the impact of a broader 'working class' vulnerability to deprivation.

Finally, since the combination of both types of disadvantage seems likely to provide the greatest contrast in terms of command over resources, we would expect to observe the sharpest pattern of differentiation in term of social class in relation to this outcome. Our expectations in this regard are confirmed. The group with the least risk of being found in this category are ESeC Class 1. They are followed closely by Class 2 and at some distance by Class 3. Classes 4 and 6 are close to the national averages in terms of the risk of being both persistently poor and persistently deprived, while the risk is above averages for classes 7 to 9 and for classes 5 and 10.

There are some national differences in pattern, but, apart from the tendency of risk to be higher for farmers in Southern than in Northern countries, these do not appear to be systematic. In several countries (Greece, Portugal, Ireland and France) the relative positions of Classes 1 and 2 are reversed, while Class 3 faces a lower risk than Class 2 in Spain. The relative position of Class 6 is rather variable across countries, with well above average risk in Denmark and Ireland, and at or below average risk elsewhere. In several countries, there is little difference in the relative risk of being both persistently poor and deprived between classes 7,8 and 9 (Denmark, the Netherlands, Ireland, Italy and Spain).

Finally we wish to focus on the hierarchical element of the ESeC class scheme. When we do so it is evident that this effect is most pronounced in the case of combined income and deprivation persistence. In order to illustrate this in Figure 6 we show the ratios to the ESeC Class 1 level for each of the Classes 2 to 10 for the three persistence profiles we have discussed. On this occasion we are reporting ratios rather than log ratios.

Figure 6: *Overall Difference in Ratios between ESeC Classes 1 and Classes 2 to 10 for Categories of the Combined Persistence Profile*




Focusing first on persistent income poverty *only*, there are four broad groups. Classes 2 and 3 are closest to Class 1; Classes 6 and 7 (lower supervisory/technical and lower services/sales/clerical) show a higher level of deprivation, followed by Classes 4, 8 and 9 (non-agricultural self-employed, lower technical and routine occupations) and finally Classes 5 and 10 (farmers and never worked).

For persistent deprivation only, quite a different pattern emerges. Class 1 remains clearly distinguished from all other classes, but the gap between Classes 2,3,4 and 6 is quite small; Classes 7,8, 9 and 10 appear quite similar and Class 5 appears to fare better then when the focus is on income. The gap between Classes 2,3,4 and 6, on the

one hand, and classes 7,8,9 and 10, on the other, is more pronounced than for the measure focusing on income.

When we turn to the overlapping forms of persistence we observe a much sharper pattern of hierarchical differentiation, with classes 8,9, 5 and 10 having risk levels over 15 times those of class 1. The most pronounced form of hierarchical class differentiation is observed in relation to overlapping income poverty and deprivation persistence.

## Conclusions

In this paper we have examined how income poverty and deprivation are distributed across the categories of the ESeC class schema. We have taken advantage of recent work relating to poverty dynamics and the multidimensional nature of social exclusion to specify a set of hypotheses with regard to such outcomes. The results of our analysis employing the ECHP dataset have been broadly in line with our expectations.

In general the relationships we observe involve two distinct influences. The first is what we might be labelled the 'hierarchical' component of the ESeC. This involves, the fact that among employees the classes take on a relatively consistent rank order corresponding to the continuum running from the pure service class relationship to the pure labour contract. The second is the impact of employment status, which seems particularly sensitive to whether the outcome examined is income-based or deprivation-based. Thus small employers and the self-employed fare worst in relation to income poverty but fare substantially better in relation to measures of deprivation and consistent poverty, suggesting that income serves as a poorer measure of command of resources for these groups than deprivation or the combined income-deprivation measure.

Outcomes relating to Classes 4 and 5 are the most variable across countries. In the case of Class 5 in particular these is a contrast between Northern and Southern European Countries with generalised disadvantage being more common in the latter. Another way of expressing these findings is that if we locate Class 5 between Classes 9 and 10 the ESeC schema comes much closer to taking a hierarchical form but this conclusion will still need qualification in particular countries because of the different circumstances associated with forms of self-employment.

Taking these factors into account, there remain a number of unambiguous conclusions that emerge from our analysis. At the cross-section levels variation across the categories of the ESeC class schema is substantially stronger in relation to life-style deprivation than income. Consistent with this finding the strength of the association with social class increases as one moves from income poverty to deprivation to consistent poverty.

Introducing a temporal dimension also strengthens the class effect with cross-class variation in both persistent income poverty and persistent deprivation being stronger than for their cross-sectional counterparts. A full understanding of these relationships requires that we take into account both the hierarchical and non-hierarchical dimensions of the class schema and the manner in which the impact of the latter varies across countries. Even where we take a longitudinal perspective, income proves to have limitations as an indicator of command over resources for owners or the self-employed.

Overall, however, one is struck more by the similarities involved in the relationship of social class to persistent poverty and persistent deprivation than by the differences. By cross-classifying forms of persistence we gain further insight into the impact of social class. Classes 1 and 4 fare better in relation to the experience of persistent deprivation only than persistent income poverty only. Finally the most striking pattern of differentiation across the categories of the ESeC class schema is observed in relation to overlapping persistence, involving both income and deprivation. In line with the earlier results, this finding support for that view that by capturing variation in employment relationships, and the associated differences in reward packages both current and prospective, the ESeC class schema also succeeds in capturing significant variation in long-term command over economic resources.

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*Gavin Murphy* and *Iulia Traistaru-Siedschlag*

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*Martin O'Brien*

182 Can Small Firms' Perceived Constraints Help Explain Survival Rates?
*Seán Lyons*

181 Understanding the Implications of Choice of Deprivation Index for Measuring Consistent Poverty in Ireland
*Christopher T. Whelan*

180 Economics in Ireland
*Frances Ruane* and *Richard S.J. Tol*