



Poverty, Deprivation and Time: A Comparative Analysis of the Structuring of Disadvantage

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The European Panel Analysis Group (EPAG) is a consortium of European social and economic researchers who have been collaborating since 1990 in the development and analysis of household panel surveys in the European Union. Most recently it has been engaged in the study of flexible labour and its impact on earnings and poverty under a Eurostat contract, and a programme of research on social exclusion as part of the EU's Targeted Socio-Economic Research programme. The group has set up new comparative datasets based on five-year sequences of the British, German and Dutch national household panels, and is analysing the early data from the European Community Household Panel (ECHP). Most of the research to date has been in the fields of family formation, employment, household income and 'deprivation'.

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ABSTRACT

In this paper we make use of the ECHP data-set to explore the structure and consequences of exposure over time to income poverty and life-style deprivation. Earlier work has provided evidence for a significant degree of uniformity across EU countries in the factors structuring deprivation. In this paper we show that both the scale and patterning of both types of persistence across country is very similar. However, although rates of volatility for income and deprivation measures are roughly similar, the processes of change themselves are actually rather different with deprivation structured more by factors related to socio-economic disadvantage, whereas persistent income poverty is influenced by factors which influence the income stream, but which do not necessarily substantially impact on current living standards. Shifting from a risk to an incidence perspective analysis, we show that conclusions relating to the composition of disadvantaged groups are substantially influenced by whether or not one takes deprivation persistence and its overlap with income persistence into account. When a multidimensional perspective on poverty dynamics is adopted very little support is offered for the argument that traditional inequalities based on class and the labour market are no longer major determinants of poverty and deprivation.

Introduction

In this paper we make use of the European Community Household Panel (ECHP) data-set to explore the structure and consequences of exposure over time to income poverty and life-style deprivation. Our analysis is both comparative, covering nine of the original EU-12, and dynamic in that it makes use of the first five waves of the ECHP. Earlier work has provided evidence for a significant degree of uniformity across EU countries in the factors structuring deprivation and in the relationship between exposure to poverty over time and life-style deprivation. (Whelan *et al* 2001, & 2003). In extending such analysis, our primary interest is in establishing the extent to which certain key relationships involving exposure to income poverty and life-style deprivation over time, and the subjective response to such exposure, are characterised by cross-national diversity or uniformity. Our major focus therefore is on process rather than levels. As a consequence, we can be seen as following the advice offered by Erikson and Goldthorpe (1992:389-391) in *The Constant Flux* that, in attempting to explain cross-country variation, we should not lose sight of the possibility of important phenomena whose significance lies precisely in their relative constancy across national boundaries.

Poverty and Deprivation Dynamics

Although most poverty research is cross-sectional, measuring the proportion of people or households below a set poverty line at a particular point in time, poverty itself is not a static phenomenon. In the population of people poor at any one time there will be some who have only recently dropped below the poverty threshold and whose living standards are almost identical to those of previous years. On the other hand there will be others who have been poor for a great deal longer, whose resources have been depleted over time and whose standard of living and future life chances are now at serious risk of being damaged. However unwelcome the temporary experience of low income is, it is much less likely to lead to such damage than is repeated or long-term exposure to low income. It is precisely this 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).

In developing such indicators researchers have also hoped to overcome some of the well-known limitations of cross-sectional income measures and poverty lines. Thus while the rationale of income poverty lines requires that they be accepted as indirect measures of exclusion from a minimally acceptable way of life, in practice the available evidence for a range of countries indicates that, at any given point in time, a substantial proportion of those on low incomes are found not to be experiencing deprivation while a significant number of households above the income poverty line do experience deprivation (Whelan, *et al* 2001). One of the key factors that we would expect to mediate this relationship is experience of poverty over time.

Whelan *et al* (2003) using the ECHP data set found that a measure of persistent income poverty, defined as number of years of exposure to income poverty over a three-year period, constituted a significant improvement over its cross-sectional counterpart in explaining current life-style deprivation. This was found to be true across the range of countries examined. They also found that the measure of persistent poverty conformed to expectations of how a measure of poverty should behave in that, unlike relative income poverty lines, defining the threshold more stringently made it possible to progressively identify increasingly deprived groups. Thus moving from point in time income poverty to measures that take into account experience over time does confer significant advantages.

In further work Whelan *et al* (2002) extended this analysis to take into account persistent deprivation, defined as number of years in a three-year period that respondents were found above a deprivation threshold corresponding to that identified for income poverty. Over this time period movement into and out of the higher ranges of the deprivation continuum was as frequent as movement into and out of income poverty. Furthermore, while there was a clear and systematic relationship between persistent poverty and persistent deprivation, the degree of overlap was far from perfect. Finally the net effect of persistent deprivation on subjective economic strain was substantially greater than the corresponding effect for persistent income poverty.

Thus, for both income poverty and deprivation, longitudinal measures proved to be superior to cross-sectional ones and the deprivation measure appeared to continue to capture something different from, and more important than income poverty, even when the observation period is extended to three years. However, if this is due to its ability to more accurately tap command over resources it comes as something of a surprise that the transient element of location above or below deprivation thresholds appears to be no less than that observed in the case of income poverty.

The approach adopted in the above research employs simple counts of the number of years poor over a given observation period and chooses a cut-off above which persistent poverty is said to have occurred, or creates a poverty profile combining both the length and number of poverty years. This is a simple, but effective approach, however, since it does not deal with 'censoring' issues it can not address issues relating duration of poverty or exit rates which must be addressed through a spell based approach (Bane & Ellwood 1986, Stevens 1995). However, while spell analysis has the potential to provide us with distinctive insights into the poverty process, analysis of individuals provides an important complement. Thus as Rodgers & Rodgers (1993: 1558) note, a conclusion that x% of poverty spells end within one year could mean that x% of poor people had one brief poverty spell or that a much smaller number of poor individuals had many short spells. Furthermore, as Ashworth, Hill, & Walker (2000: 210) observe, replacing the individual or the household as the unit of analysis makes it possible to lose sight of the severity of poverty of the characteristics of the poor. Here we focus on both of these issues but pay particular attention to the latter

In extending earlier research, we seek to address certain limitations that may have influenced the conclusions drawn. First we wish to extend the rather short observation period of three years by making use of the five-year User Data Base (UDB) of the ECHP. Secondly we wish to address a concern that the manner in which income and deprivation thresholds were defined has, to some extent, built in a relationship between the extent of poverty persistence and deprivation persistence. In this earlier work, the threshold above which deprivation was said to begin was set so that the same proportion of the population were deprived as were found below a comparable median equivalent household poverty line. This methodology allowed the overlap

between the measures to vary between zero and one hundred percent, but it also meant that the deprivation line would change if the income poverty line moved. Given the objective of examining the relationship between persistent income poverty and persistent deprivation we have chosen to avoid this approach. In the analysis that follows we will define a threshold that is constant across years in order to avoid this difficulty.¹

Employing a typology developed by Fouarge (2002) and following Fouarge & Layte (2003), we seek to address the limitations involved in defining persistent poverty as involving being below the poverty line for a set number of years out of the total observed. The main drawback of this method is that it does not allow one to examine recurrent poverty in the form of separate spells across the observation period. The time dependent nature of poverty is characterised by four dimensions:

1. The length of the observation period;
2. The extent of recurrent poverty;
3. The length of the poverty spell;
4. The volatility and stability of poverty statuses over time.

Together these four dimensions determine the pattern or profile of poverty for each individual over time (Ashworth, Hill, & Walker 1994). Given this, in the analysis that follows we make use of a typology of poverty profiles that will allow us to examine both the persistence and recurrence of poverty by distinguishing 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 consecutive period of at least three consecutive years

In previous research this notion of poverty profiles was applied by Fouarge (2002) to longer running panel data for three European welfare states with considerable success. While it may appear that the measure of poverty persistence employed is somewhat arbitrary, empirical research shows that the likelihood of escaping from poverty diminishes rapidly after having been poor for two or more years (Bane & Ellwood 1986; Stevens 1995).

The Impact of Traditional Forms of Stratification

We also wish to take advantage of the availability of both income poverty and deprivation measures over time to assess the thesis that traditional forms of social stratification have become less important as a consequence of a growing 'individualization' of social life. This argument was developed by Beck (1992), against a background of a rise in divorce, single parenthood, single person households and growing multi-ethnicity. His argument was that individual behaviour was becoming less bound by traditional norms and values and sources of collective identity such as social class, just at a time when the 'globalisation' of economic life was leading to the declining value of social class as a determinant of social and economic risk. (c.f. Goldthorpe 2002)

The notion of 'individualisation' has been pursued up by a number of Germany researchers in the area of poverty and disadvantage through dynamic methods of poverty analysis to argue against conclusions arising from previous cross-sectional poverty research which saw those in poverty as experiencing poverty careers built upon 'vicious circle' processes of cumulative disadvantage. For example, Leisering and Leibfried (1999) have argued that the majority of poverty spells are of a short duration and actively overcome by those who experience them (the 'temporalisation' of poverty), that poverty now reaches across social boundaries such as class (the 'transcendence' of poverty) and that it is now in fact associated far more with life cycle transitions such as leaving home, having a child or divorce and separation (the biographisation of poverty). In their book, they offer some evidence of these developments using German data on spells of social assistance and argue convincingly that the majority of poverty spells are short. This has been supported in other research

(Duncan et al. 1993; Goodin & et al 1999; Fouarge and Layte forthcoming). However, Layte and Whelan (2002) have suggested that tests of biographisation and transcendence are rather less than adequate. The availability of dynamic measures relating to both income and deprivation will hopefully allow us to shed some further light on these issues.

In pursuing this goal we seek to extend the argument of Nolan & Whelan (1996) that our understanding of the structuring of life-chances is substantially influenced by our choice of dependent variable. In particular, we wish to assess the extent to which combining information on income and deprivation persistence over time enhances our understanding of stratification processes. The conceptual argument underlying the development of such combined measures focused on the limitations of current income as an indicator of command over resources. In the absence of longer-term information relating to the accumulation and erosion of resources it was argued that we could benefit substantially from combining information on income and life-style deprivation. In the analysis that follows we will seek to establish the extent to which this argument can be extended employing dynamic measures across a range of EU countries.

Outline of the Analysis

In the analysis that follows we proceed in the following broad fashion. Having identified median income poverty lines for 1993, which is the in the first year for which we have data for each of the countries in our analysis, we then proceed to establish the proportion of respondents below such thresholds. We then establish corresponding thresholds in terms of the proportions identified for equivalent income in each of the following years running from 1994-1997 and for our deprivation measure for the five years running from 1994-1998. Thus, although poverty rates in each country in the first year determine the threshold we choose, the profiles we will present are not strictly income poverty profiles since the proportion falling below the threshold is fixed. For convenience of presentation we will continue to refer to poverty persistence, although what in fact we document is the degree of persistence in remaining below the relative position in the equivalent income hierarchy established

by the initial threshold. The major advantage of this approach is that we can establish a corresponding threshold fixed in relative terms for an appropriate deprivation measure for each of the years for which we have data. As a consequence we can compare income poverty and deprivation persistence profiles and consider the extent to which the latter is influenced by the former free of any concern that observed relationships have been affected by the definition of thresholds. Since our primary concern is with persistent deprivation this is of crucial importance.

Earlier work by Layte & Whelan (2003) and Fouarge and Layte (2003), employing Gallie and Paugam's (2000) variation on Esping-Andersen's regime typology, used ECHP data to address this issue in relation to income poverty dynamics and showed the pattern of poverty persistence to be broadly congruent with welfare regime theory. Thus levels of income poverty persistence run from lowest to highest in a continuum that goes from social democratic to corporatist, to liberal, and finally residualist welfare regimes. Because of the absence of data relating to deprivation in the fourth and fifth years in Germany and the UK our analysis has been restricted to nine of the countries that participated in the first wave of the ECHP. This makes it impossible to provide a systematic analysis by welfare regime, since we do not have multiple observations in each category. However, since it is of interest to observe what extent our results are at least consistent with expectations deriving from welfare regime theory we will make reference to such types. In so doing we will treat Denmark and the Netherlands as examples of the social democratic regime, Belgium and France as falling into the corporatist category, Ireland as an exemplar of the liberal regime and Italy Spain, Greece and Portugal as representatives of the residualist type.

The major focus of this paper, however, will be on the extent to which the relationship between persistent income poverty and persistent life-style deprivation, and the determinants and consequences of such outcomes are similar or different across countries. In so doing, it should be clear that, since the thresholds we define are purely relative, our analysis does not address issues relating to the determinants of gross

income and deprivation differences between countries, nor those arising if equal sized disadvantaged groups were to be identified in each country.²

Data

The results presented in this paper are based on the ECHP User Data Base (UDB) containing data from waves one to five (1994 to 1998) as released for public use by Eurostat.³ Since a given level of household income will support a different standard of living depending on the size and composition of the household, we adjust for these differences using an equivalence scale. The scale we employ is often termed the “modified OECD” equivalence scale where the first adult in a household is given the value 1, each additional adult is given a value of 0.5 and each child a value of 0.3.⁴ We calculate the number of equivalent adults in each household using this scale, and construct equivalised income by dividing household income by this number. The equivalised income of the household is then attributed to each member, assuming a common living standard within the household, and our analysis is carried out using the individual as the unit of analysis⁵. In our analysis of ‘persistence’ we use a balanced panel of ‘survivors’ who remained in the sample from 1994 to 1998 and use the ‘base weight’ for this group as specified by Eurostat. The income measure employed is total disposable income, including transfers and after deduction of income tax and social security contributions, with the household taken as the income recipient unit.

For the purposes of the analyses in this paper, we identified thirteen household items, which could serve as indicators of the concept of life-style deprivation, understood as involving being denied the opportunity to obtain goods, facilities and opportunities to participate in a manner generally identified as appropriate in the community in question. The items included in the scale are considered to cover a range of what we term Current Life-Style Deprivations (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 exclusion of these items will minimise the extent of income-deprivation mismatch found in the ECHP data. The format of the items varied, but in each case we seek to use measures which can be taken to represent enforced absence of widely desired items.⁶

For our present purposes we use a weighted version of this measure in which each individual item is weighted inversely to the proportion of households possessing that item in each country. The weighted CLSD measure makes it possible to identify for each country, and for each income poverty line, a corresponding deprivation threshold. This allows in principle for the mismatch between poverty defined in income and deprivation terms to vary from zero to one hundred per cent.

Profiles of Income Poverty persistence and Life-Style Deprivation Persistence

In Tables 1 and 2 we set out the distribution of respondents across the income poverty persistence and deprivation persistence profiles constructed in the manner outlined earlier. We have chosen the 70% median income line as the cut-off point for both substantive and methodological reasons. It seems to us important not to define a persistent poverty threshold that identifies substantially lower numbers of respondents than is the case with conventional cross-sectional poverty lines. By focusing on persistent income poverty at the 70% income line we identify groups that are relatively close in size to those found under the conventional cross-sectional threshold of 60% of median income. In that way we can ensure that our conclusions relating to the behaviour of this measure in comparison with conventional income poverty measures is not simply an artefact of the relative size of the groups identified. It also avoids the danger of becoming involved in a process of reducing poverty levels simply as a consequence of definition.⁷

The distribution of respondents across the income and deprivation profiles is remarkably similar.⁸ The observed level of persistence ranges from 10% to 24% for income poverty and from 11% to 24% for deprivation. The number entirely avoiding income poverty runs from 49% to 65% for income poverty and from 41% to 66% for deprivation but in the latter case eight of the nine countries are found between 46% and 66%. The transient income poor range from 10% to 15% while the corresponding figures for deprivation are 11% and 20%. Finally between 10% and 18% are found in the recurrent income poor category compared to 10% to 20% in the corresponding deprivation category. Thus there is no evidence that the scale of deprivation dynamics is any less than that for income poverty, or that our earlier conclusions relating to the latter were unduly influenced by the procedure involved. Not only are these overall ranges similar but the distributions within countries across income and deprivation categories display a striking similarity. The Netherlands provides an example where

the income and deprivation figures could be inter-changed without any distortion of the results. While there are slightly greater differences for other countries they remain on an extremely modest scale. As a consequence of the foregoing, in both cases there is fairly clear ordering in terms of level of persistence across countries and, bearing in mind the limitations acknowledged earlier, welfare regimes.

Table 1: Poverty Profiles at fixed 1994 poverty rate (70% of Median Equivalised Income), ECHP 94-98

	Persistent non-poor	Transient poor	Recurrent poor	Persistent poor	Total
Denmark	64.1	15.4	10.2	10.2	100.0
The Netherlands	64.9	11.3	10.2	13.7	100.0
Belgium	53.3	14.3	13.6	18.8	100.0
France	59.9	9.9	9.7	20.5	100.0
Ireland	54.3	10.0	11.6	24.2	100.0
Italy	49.5	14.2	13.2	23.1	100.0
Greece	48.8	13.0	15.8	22.5	100.0
Spain	49.7	12.4	17.5	20.4	100.0
Portugal	50.6	11.2	14.1	24.1	100.0

- The lowest levels are observed in the Social Democratic Countries – Denmark and the Netherlands.
- The next lowest level is observed in the corporatist representatives – Belgium and France.
- The sole representative of the Liberal regime Ireland displays high levels of persistence.
- As do the Southern European representatives of the residual regime. Although in the case of income persistence Spain does not differ from France.

Thus both the scale and patterning of income poverty and deprivation persistence across country are remarkably similar. We now turn to an examination of the relationship between the two types of persistence.

Table 2: Deprivation Profiles at corresponding fixed 1994 poverty rate (70% of Median Equivalised Income), ECHP 94-98

	Persistent non-deprived	Transient deprived	Recurrent deprived	Persistent deprived	Total
Denmark	66.2	11.2	11.2	11.4	100.0
The Netherlands	65.8	11.0	9.5	13.6	100.0
Belgium	49.5	20.1	12.4	17.9	100.0
France	57.9	12.1	12.6	17.4	100.0
Ireland	49.9	12.4	15.0	22.6	100.0
Italy	45.6	16.0	17.6	20.8	100.0
Greece	41.1	17.8	19.7	21.4	100.0
Spain	49.8	14.1	17.0	19.2	100.0
Portugal	49.8	12.1	14.6	23.5	100.0

The Relationship Between Income Poverty and Deprivation Profiles

In Table 3 we show a set of ordered logits covering each country and the sample overall with the persistent deprivation profile as the ordinal dependent variable and a set of dummy variables representing the persistent income poverty profile as the independent variables⁹ In calculating an overall equation we are not seeking to provide descriptive results for the population covered by these countries and we have not therefore adjusted for population size. Instead we wish to see what is the outcome of assuming that the impact of persistent income poverty is constant across countries so we can compare such an outcome with the results for the individual countries. When we examine the results set out in Table 3 we find that in every case there is a strong relationship between ordinal position on the persistent deprivation profile and extent of exposure to income poverty. Furthermore, this relationship is close to uniform across countries. The exception is Denmark where the relationship is weaker and where the strongest relationship

to persistent deprivation is found for the recurrent income poor rather than the persistently poor. In fact, in the case of Denmark inverting the recurrent and persistent income poverty categories would give an outcome a good deal closer to that observed for the other countries. Otherwise the coefficients of 0.939, 1.707 and 2.471, reported in the overall equation, as one goes from transient poverty to recurrent and finally to persistent poverty, are close to those of each of the individual country equations. The pseudo R^2 of 0.251 is close to that reported in most countries. The impact of persistent income poverty on persistent deprivation is one whose interest lies a good deal less in cross-national variation than in the underlying uniformity of the process.

Table 3: Ordinal Logit Coefficients for relationship Between Persistent Deprivation Profile and Persistent Poverty Profile¹⁰

	DK	NL	B	F	IRL	I	G	S	P	All
	β	β	β	β	β	β	β	β	β	β
Transient Poverty	0.679	1.11	0.53	0.94	1.17	0.67	0.84	1.17	0.93	0.939
Recurrent Poor	2.150	1.79	1.52	1.93	1.73	1.43	1.34	1.91	1.65	1.707
Persistent -poor	1.494	2.59	2.50	2.31	2.52	2.32	2.41	2.91	2.20	2.471
Likelihood Ratio	582	2012	1613	3412	2389	3950	2720	4923	2662	24,73
Df	3	3	3	3	3	3	3	3	3	3
Nagelkerke Pseudo R^2	.142	.228	.238	.256	.277	.228	.238	.311	.224	.251

*All coefficients significant at ,001

When we consider the issue in terms of the actual overlap between both types of deprivation, Denmark is once again the exception. Only 18% of the persistently income poor in Denmark are also persistently deprived. In fact it is among the recurrent poor that the highest proportion of persistently deprived individuals are found – 41%. Among the other countries the percentage of persistently income poor who are also persistently deprived ranges from 44% in France to 54% in Ireland. For seven of the nine countries the figure lies in the range running from 48% to 51%. In these same countries we find that the number of persistently poor who are persistently or recurrently deprived runs from 60% to 76% (six are covered by the range 65% to 76%). Thus the common situation is of a very substantial, but by no means perfect overlap. This raises the issue of the relative influence of both types of poverty and the extent to which we would benefit from taking both types into account in explaining other phenomenon.

The Determinants of Persistent Poverty and Persistent Deprivation

Since persistent poverty and persistent deprivation, while strongly related, are clearly not measuring identical phenomenon and have somewhat different consequences it would seem helpful to understand in what way their determinants differ. In what follows we consider two broad sets of factors. The first which we term ‘needs’ refers to the material obligations imposed on households by household structure, marital status, number of children, stage of the life cycle and key life events. In other words we seek to tap characteristics that increase the level of resources necessary for a household to maintain a given standard of living. The second set comprises determinants of the level of resources that a household can generate through participation in the labour market. Factors such as social class, educational qualifications and labour market experience are just three of the main indicators of one’s ability to command remuneration in the labour market, the main form of which is current income, the most general form of resource. We appreciate that the distinction between needs and resources involved here is a rather crude one. In particular we acknowledge that some of the household characteristics we include

under the heading of 'needs' also affect one's ability to generate resources in the market and that what is crucial is frequently a conflict between household/family responsibilities and ability to participate in the market.

As deprivation is measured at the household level, the characteristics of the household reference person are used alongside variables that express household structure. The household reference person is the person responsible for the accommodation, or if this involves more than one person, the oldest person with responsibility. Earlier work based on the three-wave UDB suggested that the following set of characteristics were of particular importance. In each case the respondent's position is defined in terms of their status in 1994 (Whelan, Layte, & Maître 2002)

Highest Education

Educational level is likely to have a large impact on available resources, but measuring this across countries in a consistent and valid manner is difficult. Within the ECHP, educational level is coded using the International Standard Classification of Education (ISCED) grouped into third level (ISCED 5-7), second stage of secondary education (ISCED 3-4) and all those with less than second stage of secondary level (ISCED 0-2). The two lower categories are compared with those having third level education.

Present and Recent Employment Status

Employment status is likely to be one of the best predictors of deprivation level, but knowing someone is presently employed may miss much of the variation within this group based on their past employment record. Unfortunately, the ECHP only asks respondents for their employment status at interview, whether they were unemployed in each of the months in 1993 and whether they have experienced unemployment in the last five years. Since most will have been interviewed in the second half of 1994, this means that we are not sure of their employment status between the end of 1993 and interview. Nevertheless, we make six categories from those self-defining as employed, unemployed or inactive. The currently unemployed are divided between those who were unemployed for more than six months in 1993 and those for less than

6 months in 1993. The currently employed are divided into those who experienced unemployment in 1993, those who did not experience unemployment in 1993, but who did so in the last five years before interview, and those with no unemployment experience. Lastly we have a category for those currently defining themselves as inactive. The reference category contains those currently in employment who have not experienced unemployment in the last five years.

Social Class Position

The final independent predictor is the social class position of the household reference person. Social class refers to a set of locations (rather than persons) identifiable by their relationship to dimensions of advantage and disadvantage in the labour market, and thus more widely. Class allows us to sum up a number of other forms of disadvantage in a manner that tends to be stable across time. Presence in a more disadvantaged social class tends then to constrain mobility into a more advantaged position. The classification we have constructed on the basis of the ECHP data is an aggregated version of the CASMIN class schema. We distinguish between non-manual and manual workers, between the self-employed with and without employees and small-holders.

Household Type

Earlier analysis suggested that the most important distinctions were between lone parents and households with three or more children.

Marital Status

Persistent deprivation is also likely to be influenced by life events relating to marital status. The crucial distinction for our present purpose is between being divorced or separated and all others.

Illness

The illness variable distinguishes between Household Reference Persons (HRP) reporting very bad health and all others.

In Table 4 we presents for ordered logits showing the impact of such variables on an individuals location in our income poverty and deprivation profiles. The results are presented for an analysis that includes all nine countries. This again involves the simplifying assumption that relationships are constant across all nine countries. Undoubtedly a formal statistical of this hypothesis would show it not to be true. However, with one exception, examination of the individual country equations shows little in the way of systematic variation that is relevant to the issue at hand, which is the extent to which the determinants of both types of persistence differ. The exception relates to the differential effect of the reference person being a smallholder for Southern European countries compared with Northern European. The results reported in Table 4 might lead us to be as much impressed by the similarities as the differences. The employment precarity effects are strikingly similar. For deprivation the largest coefficient of 2.08 is observed for the group currently unemployed and unemployed more than six months in 1993. The coefficient then gradually declines across categories achieving its lowest value for the inactive. The pattern for persistent income poverty is almost identical with the exception of the fact that the position of the inactive and employees with some experience of unemployment in the past five years is reversed. The coefficients for education are also very similar although they are slightly stronger for deprivation..

<i>Table 4: Ordered Logit Coefficients for Determinants of Income Poverty and deprivation Profiles</i>		
	Income Poverty Persistence	Deprivation Persistence
	β	β
Employment Precarity		
Unemployed > 6 months 1993	1.994	2.080
Unemployed < 6 months 1993	1.482	1.493
Employee and unemployed in 1993	1.161	1.134
Employee and unemployed in past five years	0.607	0.839
Inactive	0.904	0.687
Social Class		
Manual	0.537	0.568
Small Holders	1.028	0.293
Small-Holders*Southern European	1.056	0.978
Self-employed without employees	1.480	0.412
Self-employed with employees	1.008	-0.297
Education		
2 nd stage of 2 nd Level	0.311	0.203
Less than 2 nd stage of 2 nd Level	0.979	0.821
III	0.191	0.810
3 or more children	1.347	0.904
Separated/divorced	0.298	0.482
Single parent	-0.063*	0.341
Female	0.206	0.358
Likelihood ratio	25035	21262
Df.	18	18
Nagelkerke Pseudo R ²	.251	.216
*All coefficients significant except those indicate by *		

Being ill has a particularly strong impact on deprivation persistence. Separation and divorce, being a being a female reference person and single parenthood also impact more strongly on deprivation. On the other hand, having three or more children has a stronger impact on income poverty persistence. With the exception of being a single parent, which is insignificant for the income dimension, each of these variables has a significant effect on both types of persistence. Taking together, however, they do seem to have a stronger influence on deprivation persistence, suggesting that they are capturing, in particular, the distinctive burdens of such households.

Such differences, however, are modest when placed in the context of what emerges as the major contrast relating to the impact of social class and, most strikingly, the results relating to smallholders and the self-employed. In Northern European countries the impact of being a smallholder is almost four times as important for income as for deprivation while for Southern European countries it comes close to being twice as important. For self employment with employees the ratios is of order of 3:1 and in the case of self employed without employees there is a substantial positive effect for deprivation but a more modest negative effect for deprivation. Thus self-employment it appears to be a much poorer indicator of command over resources than its relationship to income based measures would suggest because such income is substantially influenced by short-term influences on income streams and because the self-employed have more options on the manner in which they take occupational rewards.

Analysing the Determinants of a Combined Income Poverty and Deprivation Persistence Profile

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. Therefore at this point, in order to develop our understanding of the determinants and impact of both types of deprivation, we use a variation of a strategy employed by Nolan and Whelan (1996) with cross-sectional data. This involves cross-classifying both types of persistence in order to produce a

combined profile. The distribution across this profile is set out in Table 5. Somewhere between two-thirds and four-fifths of respondents have experienced neither persistent income poverty nor persistent deprivation throughout the period under examination. Between 8% and 12% have experienced persistent poverty only. Between 7% and 11% have experienced deprivation persistence only.

Finally, apart from Denmark, which has an exceptionally low rate of 2%, between 6% and 12% of respondents report both types of persistence. The ordering of countries is very much as before. In order to develop our understanding of the factors contributing to the location in one or other category of the profile we seek to establish the extent to which these groups are differentiated by the resource and need factors we outlined earlier.

Table 5: Distribution Across Combined Income Poverty and Deprivation Persistence Variable by Country

	Neither Persistently Income Poor nor Deprived	Persistently Income Poor Only	Persistently Deprived Only	Persistently Income Poor and Deprived
Denmark	80.2	8.4	9.6	1.8
The Netherlands	79.2	7.1	7.1	6.5
Belgium	72.5	9.6	8.6	9.3
France	71.1	11.5	8.4	9.0
Ireland	66.3	11.0	9.5	13.1
Italy	67.6	11.6	9.3	11.5
Greece	67.3	11.3	10.3	11.1
Spain	70.9	10.4	8.7	10.4
Portugal	64.6	12.2	11.3	12.2
All	70.1	10.1	9.2	10.1

We do by using a multinomial logit procedure that allows us to establish how each of the remaining three categories is differentiated from those avoiding both types of deprivation and, by implication, each other. The results of this analysis are set out in Table 6. Once again we are assuming common processes across countries and thus erring significantly on the side of parsimony. We allow for two types of interactions. The first allows the category of shareholder to interact with Spain, Greece and

Portugal. The second allows for interaction between Italy and the education categories because, for reasons that we confess to not yet understanding, the education coefficients for Italy differ from those for all other countries in being negative rather than positive.

The broad pattern of results, with the reference category being exposed to neither type of persistence is as follows. The group experiencing both types of persistence is sharply differentiated from the reference category by level of employment precarity. This effect gradually weakens as one moves from both types of persistence to deprivation only and then income poverty only. However, in all cases each category remains significant and the rank order remains broadly the same. Manual class has a positive and fairly similar effect across the categories. The effect of self-employment without employees has by far its strongest effect for income persistence only, remains highly positive for consistent persistence only and weakest for deprivation only. Self-employed with employees is negative for the consistent category and deprivation only but highly positive for the income only category. For the Northern countries the impact of being a smallholder is insignificant for the consistent category and for the deprivation only group, but highly significant for the income only group. For the Southern European countries the impact of smallholding is highly significant for the consistent category, slightly less so for income poverty, and a good deal weaker for deprivation only.

With the exception of the Italian case, the impact of education is positive for all comparisons with the reference category but the scale of the effect is a good deal more modest than in the case of employment precarity. Illness has its strongest effect for deprivation only and is insignificant for income. Having three or more children and separation/divorce are strongest for consistent persistence and single parent and female for deprivation only. Overall the consistent category is particularly strongly structured by the sort of factors that we might expect to be predictive of poverty such as employment precarity, manual class, large family and separation/divorce. The deprivation category occupies an intermediate position being influenced by much the same factors as the consistent category but less strongly. However, being ill has a

stronger influence. For the income the effects are generally weaker with the important exception of the self-employment variables.

Thus consistent persistence, and more generally persistent deprivation, appears to be more socially structured than income persistence. How does this square with our finding that deprivation persistence is no more common than income persistence? One part of the answer may be that deprivation movements are more socially structured and connected to command over resources and demands, while in both cases the particular individuals who are income poor or deprived at any point in time changes at a similar rate for both, differences in the socio-demographic makeup of the different groups remains relatively constant.

Table 6: Multinomial Logit Coefficients for Determinants of Combined income Poverty and Deprivation Persistence Variable

	Both		Persistently Deprived Only		Persistently Income Poor Only	
	β	se	β	se	β	Se
<i>Employment precarity</i>						
Unemployed > 6 months 1993	3.146	.069	1.859	.056	1.562	.061
Unemployed < 6 months 1993	2.150	.063	1.213	.065	0.713	.083
Employee and unemployed in 1993	1.868	.061	0.920	.062	0.749	.067
Employee and unemployed in past five years	1.092	.053	0.958	.062	0.309	.053
Inactive	1.258	.033	0.480	.031	.908	.028
<i>Social Class</i>						
Manual	0.635	.032	0.486	.029	0.492	
Small Holders	0.133	.105	0.134	.095	1.224	.063
Small Holder*(Greece)	2.668	.127	.129	.144	1.066	.094
Small Holder*(Spain)	1.948	.135	1.118	.136	0.200	0.111
Small Holder*(Portugal)	2.358	.132	0.570	.149	0.647	.105
Self-employed without employees	0.974	.058	0.084	0.062	1.626	.043
Self-employed with employees	-0.365	.078	0.042	.058	0.886	.047
<i>Education</i>						
2 nd stage of 2 nd Level	0.160	0.066	0.275	.050	0.696	.052
Less than 2 nd stage of 2 nd Level	1.430	.060	0.995	.048	1.354	0.116
2 nd stage*Italy	-1.374	.121	-0.982	.112	-1.933	.116
Les than second stage*Italy	-1.604	.093	-0.988	.093	-1.402	.089

lll	0.601	.066	0.972	.061	-0.036	.078
3 or more children	1.919	.032	0.677	.036	1.064	.032
Separated/divorced	0.911	.056	0.373	.054	-0.116	.072
Single parent	0.178	.053	0.420	.048	-0.314	.061
Female	0.326	.038	0.424	.035	0.180	.036
Intercept	-6.883		-3.720		-5.088	
Likelihood ratio	24313					
Df.	87					
Nagelkerke Pseudo R ²	.266					

What is clear is that ones conclusions about the importance of specific influences, and in particular social class and labour market experience will be substantially influenced by whether one focuses on persistent income poverty or the overlap of these forms of persistence. While we cannot comment on changes over time in the impact of such variables the scale of impact of factors such as long-term unemployment and manual class on exposure to overlapping persistence and more generally to persistent deprivation provides no encouragement for arguments relating to increased individualization and a decline in the role of traditional stratification factor. The policy implications of basing ones conclusions regarding the distribution of disadvantage on one rather than another or overlapping forms of persistence can perhaps be further illustrated by switching our focus from a risk to an incidence perspective. At this we examine the composition of each of the categories of the deprivation profile and we do so in terms of 1998 characteristics rather than those relating to 1994 since we are interested in outcomes rather than determinants. In Table 7 we display some key findings in this regard relating to employment status and social class composition. Directing our attention to the former first, we find that the reference category who experience neither type of persistence contains less than two per cent of respondents who had been unemployed this rises to 4 per cent for the persistently income poor and 7 per cent for the persistently deprived before peaking at 12 per cent for those experiencing both types of persistence. In contrast while almost six out of ten of the reference group are drawn from employees with no unemployment experience in the past five years. This figure declines to four out of ten for the income poor category and to one in four for those expose to both types of

Tables 7: Employment Status and Social Class Composition in 1998 by Combined Income Poverty and Deprivation Profile

	<i>Employment Status</i>		<i>Social Class</i>	
	Unemployed > 6 Months in 1997 %	Employee and no unemployment in past five years %	Manual %	Non-Manual %
Neither	1.6	58.4	41.2	41.8
Persistently Income Poor Only	4.0	40.2	42.0	21.1
Persistently Deprived Only	6.6	35.6	66.1	20.1
Both	11.6	25.4	68.7	8.8

persistence. Thus while all other categories are significantly differentiated from the reference category the extent of such differentiation increases sharply as one moves from income to deprivation to their combination. Focusing on social class, we find that the reference category contains equal numbers of manual and non-manual workers with each comprising just over forty per cent of the category. The same is true for manual workers among those persistently income poor only but in this instance they outnumber non-manual workers by two to one. For those persistently deprived only the share of manual workers rises to two-thirds while non-manual respondents make up one-fifth of the group. Finally, among those exposed to both types of persistence, over two-thirds are drawn from the manual class while less than one in ten come from the non-manual class. Thus as we move across the categories of the combined income and deprivation profile we go gradually from a position of parity between manual and non-manual classes in the privileged reference category to one of overwhelming manual dominance among those who are doubly disadvantaged.

Analysing the Impact of a Combined Income Poverty and Deprivation Persistence Profile

Our previous analysis has demonstrated significant differences in the determinants of persistent income poverty and life-style deprivation. In order to improve our understanding of the respective roles of such persistence, in this section we focus on their consequences for respondents' subjective responses to economic circumstances. Our subjective indicator relates to the experience of economic strain and is captured by whether the respondent's household was reported to be experiencing difficulty in 'making ends meet' on their current income. Given our interest in the consequences of the extremes of income poverty and deprivation, we distinguish between those experiencing extreme difficulty and all others. Economic strain is measured on the basis of the information given in the fifth wave of the ECHP relating to the situation in 1998.

In Table 8 we display the results of a logistic regression examining the relationship between economic strain and positions in the joint persistence profile. Preliminary analysis suggested taking into account North-South difference. Thus the equation in Table 8 allows for North-South interactions. Looking first at the Northern results we find that there is a clear hierarchy of effects running from the persistently income poor only to the persistently deprived only and peaking for those who are both. The respective coefficients are 1.71, 3.13 and 3.85. Thus there is a substantial contrast between the persistently income poor only and the other two groups, although they in turn are sharply differentiated from those exposed to neither type of persistence. The rank order of effects is identical for the Southern European countries although the size of the effects is almost half the Northern European ones. The corresponding coefficients are 0.87, 1.62, and 2.23.

*Table8: Logistic Regression of Impact of Persistent Income Poverty and Persistent Deprivation On Economic Strain**

	β
Persistently Income Poor Only	1.713
Persistently Deprived Only	3.125
Both	3.851
Persistently Income Poor Only* Southern Europe	-0.847
Persistently Deprived Only* Southern Europe	-1.509
Both* Southern Europe	-1.626
Southern Europe	2.062
Constant	-4.631
Likelihood Ratio	11,860
Df	7
Nagelkerke Pseudo R ²	.243
*All coefficients significant at .001	

In Table 9 we attempt to bring out the implications of these finding for the observed variation of economic strain across categories of the profile across countries. It is evident that the much stronger effects for Northern European countries arise largely as a consequence of the fact that in those countries those who avoid both types of deprivation display very low levels of economic strain, with the relevant figure never exceeding two percent. For the Southern European countries on the other hand it ranges between 5% and 12%. A similar although less pronounced pattern is found for those persistently income poor only. For three of the Northern countries the figure still remains below 2% while for Ireland it rises to 9% and for Belgium to 11%. For the Southern countries the lowest level of 9% is found in Italy. The figure then rises to the mid-teens for Portugal and Spain and finally to almost 30% for Greece. In fact it is the extreme value for this group that sharply differentiates Greece from all other countries. When we focus on those persistently deprived only, the North South contrast, although still relevant, is again less sharp. The figures for the Northern countries range from a low of 7% for the Netherlands to a high of 38% for Denmark, while ranging between 15% to 20% for the remaining three countries. For the Southern European countries, it runs from 20% in Italy to 36% in Portugal. It is among those persistently deprived on both dimensions that the least variation is observed. The Southern European countries are all found in the relatively narrow

range running from 34% to 47% and, with the exception of Portugal, they all report values running from the low to the mid-forties. Among the Northern European countries, Belgium and Ireland are found in the low forties, while in Denmark the observed value falls to thirty per cent and in France and the Netherlands to the low twenties.

Table 9: Percentage Experiencing Economic Strain by Combined Income Persistence and Deprivation Persistence Profile

	DK	NL	B	F	IRL	I	GR	S	P
Neither	1.0	0.2	1.1	1.5	1.0	5.0	8.3	5.2	11.7
Persistently Income Poor Only	1.1	1.8	11.0	2.7	9.0	9.1	27.8	15.0	13.7
Persistently Deprived Only	37.8	7.1	15.8	20.1	14.9	19.7	31.1	26.3	36.4
Both	30.0	21.6	42.0	21.1	41.4	43.5	46.5	41.9	34.0

Conclusions

In this paper we have sought to develop an understanding of the determinants and consequences of persistent poverty and persistent deprivation. Through the development of profiles for both types of persistence we confirmed, for the five-year window with which we were concerned, that there was a remarkable similarity in the profiles for both dimensions for the nine countries included in our analysis. Not only was the scale of persistence and recurrence similar across dimensions but so too was the patterning across countries and welfare regimes. This, in both cases, the lowest level of persistence was observed for Denmark and the Netherlands and the highest for the Southern European countries.

While important differences were observed across country, in this paper we have been anxious to draw attention to striking uniformities in underlying processes that were also evident. In general we have been more impressed by the degree of uniformity across countries of the processes with which we have been concerned than with

country differences. This is reflected in the fact that in the conclusions that follow little reference will be found to national exceptions. Thus, with the exception of Denmark, there was a remarkable similarity in the strength of the relationship between the two profiles and in the extent of the overlap between both forms of persistence.

Extending our analysis to the determinants of both dimensions, we found that there was a significant overlap in the factors with which they were associated. However, the impact of self-employment was quite different in both cases with a much stronger relationship to income persistence being observed. This was also true for being a smallholder, although this was somewhat less true in the Southern European countries. This analysis suggests that although rates of volatility for income and deprivation measures are roughly similar, the processes of change themselves are actually rather different with deprivation structured more by factors related to socio-economic disadvantage, whereas persistent income poverty is influenced by factors which influence the income stream, but which do not necessarily impact on living standards.

By cross classifying both types of persistence we also sought to establish which factors discriminated across dimensions or rather between combinations of dimensions. At this point a much sharper pattern of differentiation emerges than when we look separately at the two types of persistence. Our classification identifies those experiencing one or other form and those avoiding both types. These groups are sharply distinguished in terms of exposure to economic strain. Furthermore, a clear pattern of differentiation emerges in which position on the continuum running from exposure to both types of persistence, to deprivation only, to income only and finally to exposure to neither is substantially influenced by, in particular, labour market precarity but also by family circumstance and life-events such as illness, separation/divorce, single parenthood and large families. Of such life events, only that relating to family size has a substantial effect on income poverty only. On the other hand, location in this category is very strongly associated with self-employment and smallholding. It is clear that persistent income poverty without a corresponding degree of deprivation is a very different phenomenon from the simultaneous experience of both types of persistence or even from exposure to deprivation persistence alone.

Moving from risk to incidence analysis and from 1994 to 1998 characteristics we showed that conclusions relating to the composition of disadvantaged groups are substantially influenced by whether or not one takes deprivation persistence and its overlap with income persistence into account. When a multidimensional perspective on poverty dynamics is adopted very little support is offered for the argument that traditional inequalities based on class and the labour market are no longer major determinants of poverty and deprivation.

End Notes

¹ However, as will become clear it seems unlikely that pursuing the earlier procedure would have much impact on our results.

² For an analysis addressing cross-sectional between country differences in deprivation see Layte et al. (2001a).

³ For a discussion of the quality of the ECHP data see (Whelan et al. 2000).

⁴ The level of measured income inequality can vary depending on the choice of equivalence scale (see e.g. Buhmann et al., 1988).

⁵ In sections five and six of this paper we use a balanced panel of respondents present in all five years and the 1997 base weight as recommended by Eurostat. The analyses in sections seven and eight use controls for censoring and so here we use an unbalanced panel without weighting choosing instead to control for all relevant variables that would be adjusted for in a weighting schema.

⁶ Full details of the CLSD measure and of other dimensions of deprivation in the ECHP data-set are provided in Whelan *et al* 2001)

⁷ However, analysis using the 60% threshold shows that our important conclusions relating to underlying processes, derived from our multivariate analysis would be unaffected by changing the threshold. The results of analysis employing the 60% line are available from the authors.

⁸ Focusing on income it also turns out that the distribution adopting the procedure adopted here, involving affixed relative threshold, is almost identical to that found by Fouarge and Layte (2003) using conventional income poverty thresholds. In both cases the evidence also shows that results for the UK are close to those for Ireland, while those for Germany indicate that it displays lower levels of persistence than other countries in the corporatist category.

⁹ This ordinal logit involves a parallel slopes cumulative model for the J-1 cumulative logits that can be formed from a variable with J categories.

¹⁰ All coefficients are significant at <.001

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