

**Levels and Patterns of Material Deprivation in Ireland:
After the 'Celtic Tiger'**

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Abstract

In this paper we use the first full wave of the Irish component of the EU Statistics on Income and Living Conditions survey to evaluate conflicting interpretations of levels and patterns of material deprivation in Ireland after the 'Celtic Tiger'. Radical critics of Irish economic policies have seen the Irish case as a particularly good illustration of the tendency for globalization to be accompanied by widespread economic vulnerability and marginalization. Here, employing a multidimensional perspective we identify one fifth of the population as being economically vulnerable and one in fourteen as vulnerable to maximal deprivation; in that they exhibit high risks of deprivation across a range of life-style deprivation dimensions. Current levels and depth of material deprivation are a good deal more modest than suggested by radical critics of the Irish experience of economic globalization.

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Introduction

Over the past decade, Ireland has experienced an unprecedented surge in economic growth that has brought levels of average income to among the highest in the world.¹ An uninterrupted strategy of increasing integration into the global economy over the past four decades and the consequent opening up of labour, goods and capital markets resulted in Ireland being ranked first on the A.T. Kearney/Foreign Policy index of globalization between 2002-2004. As O'Sullivan (2006:34-35) notes, this index accords particular weight to economic integration and our focus will be on the consequences of such integration.

While there is broad agreement on the scale of globalization experienced by the Irish economy, what remains hotly disputed is who has benefited from the associated economic 'miracle'. The predominant view among Irish sociologists has been that the experience of globalization fuelled economic inequality. Kirby (2002, 2006, one of the leading proponents of this view, treats the Irish case as an example of the general tendency for globalization to create increased vulnerability. Global economic integration is considered to have led to increased poverty levels and left a broad stratum of the population vulnerable and insecure. The argument is linked to the case made by Giddens (1999) and Beck (2000) that not only have the risks to which we are exposed become more unpredictable but the institutional arrangements of the welfare state that served to buffer us against such risks have been eroded. The globalization thesis asserts that contemporary processes of market

liberalization and cross-border economic activity have diminished the power of nation states with the need to prevent haemorrhaging of investment finance or social dumping leading to a race to the bottom.²

From this perspective, the benefits of the 'Celtic Tiger' are largely illusory and a focus on conventional economic indicators conceals a picture of increased inequality, erosion of employment security and marginalisation.³ The need to confront the more radical claims relating to the consequences of economic globalization with detailed empirical assessment is shown by a number of recent critiques of the globalization perspective from authors whose conclusions are more strongly rooted in empirical analysis of welfare state developments. Castles (2004:6-7) observes that most crisis arguments in relation to the welfare state are endowed with a mythic quality as a consequence of their denial of the complexity of the policy context of advanced, democratic, capitalist societies; their failure to take into account national variations related to economic, social and political circumstances; and the mismatch between their claims to universal applicability and the extreme narrowness of the empirical evidence on which they rely.

Ferrera and Rhodes (2000:2) acknowledge that, not only globalization but more importantly European integration and monetary union ensure that all European welfare states must become competitive to the extent of meeting their fiscal, solidarity and employment objectives.⁴ However, they conclude that various types of institutional settings and forms of social security and labour market policy may be equally compatible with competitiveness and

there is little evidence of convergence neo-liberal solutions.⁵ Consistent with this argument Brady *et al* (2005) in a recent review conclude that the evidence that globalization has had a significant impact on the welfare state is sparse.

Globalization is not an entirely new phenomenon and, as Katzenstein (1984) argued some time ago, extreme vulnerability to international forces was precisely what led small European nations to develop distinctive strategies to preserve sufficient autonomy and a capacity to pursue national agendas. More recently, Ross (2000) concluded that the changing politics of the welfare state has been conditioned more by interest, choices and ideas than has been allowed for and that neo-corporatist tools of Golden age welfare governance have continued to play an integral role in welfare state reform.⁶

The development of distinctive neo-corporatist arrangements in Ireland provides a striking example of such a strategy. The Irish 'social model' involves, as Hardiman (2004) notes, a new mix of market oriented competitiveness, active labour market policy involving an emphasis on incentives rather than changing the behaviour of claimants⁷ and sustained welfare provision accompanied by a social partnership at the heart of which lies a pay-tax trade off. It was associated with a dramatic increase in levels of employment and the virtual elimination of unemployment; a substantial upgrading of the occupational structure; increasing levels of absolute social mobility and a modest decrease in inequality of opportunity accompanied by a sharp decline in proportion of households with no one in paid work.⁸ While Irish income distribution remains among the more unequal in the EU it has

remained relatively stable over time with no suggestion of the marked increase in inequality seen in the US and the UK. ⁹ Brady *et al* (2005:943), note that Ireland has increased its trade and reduced its social welfare expenditure, in part due to an expanding GDP, while at the same time raising its level of decommodification. An analysis of the Irish case requires that we move beyond notions of convergence or inexorable accommodation. ¹⁰

While substantial disagreement exists regarding the consequences of economic globalization for inequality, a consensus is emerging that evaluation of levels and patterns of risk/insecurity issues can take place only on the basis of a genuinely multidimensional approach. In particular, it is becoming accepted that measures based solely on disposable income are too restricted both in principle and in practice. ¹¹ Our approach is based on the available evidence that non-monetary indicators have two complementary advantages in the analysis of economic exclusion. The first is that they help to do a better job than income on its own in identifying those who experience such exclusion. The second is that they can also be used to identify dimensions of deprivation and exclusion and to estimate levels and patterns of multiple deprivation.¹² The importance of developing such indicators and estimates is reflected in the fact that, as Goldthorpe (2002:14) observes, there is a general absence of efforts to translate such concerns with notions of risk/vulnerability into measurement procedures that would allow us to establish even a broad consensus on how to enumerate those vulnerable or at risk.

An additional difficulty is provided by the fact that such concepts are employed simultaneously to refer to both economic insecurity and notions of overlapping multiple deprivations. A related issue concerns the implications of such imprecision and lack of interest in appropriate operationalisation for our understanding of the manner in which exposure to risk is structured. Thus as Goldthorpe (2002:14-15) notes, when the claim is made that exposure to risk has become more pervasive and less structured there is a lack of clarity as to whether these conclusions apply to economic exclusion considered more narrowly or to more extreme forms of multiple disadvantage.

In pursuing these issues in the Irish case, we proceed as follows. In Section 2 we discuss the need to go beyond income based measures and adopt a multi-dimensional approach. We go on to distinguish between a relatively restricted conception of economic vulnerability and a wider notion of multidimensional profiles relating to vulnerability to distinctive patterns of life-style deprivation.

The approach we develop will be implemented using data from the Irish component of EU-SILC 2004 and in Section 3 we provide a description of that data and an overview of the indicators that enter in our analysis. We make use of four types of indicators.

- Relative income poverty measures
- 42 indicators of life-style deprivation
- A measure of subjective economic stress that relates to household difficulties in making ends meet

- Measures of economic pressure that do not enter directly into our analyses of vulnerability but are employed in the validation of such measures

In relation to the 42 indicators of life-style deprivation measures we adopt a two-stage approach in order to facilitate substantive interpretation and avoid technical difficulties arising from sparse data. We first draw on earlier work that has consistently identified distinct dimensions of deprivation or clusters of variables. Having achieved such parsimony, we then focus on such dimensions rather than individual items in seeking to identify clusters of individuals characterised by distinct vulnerability profiles.

In the case of economic vulnerability, we proceed in Section 4 to use latent class analysis to identify clusters of individuals characterised by distinctive patterns of risk in relation to income poverty, rather basic life-style deprivation and subjective economic stress. Our analysis of the consequences of such vulnerability and the manner in which it is socially structured takes the following form. Having identified an economically vulnerable class, we consider the extent of overlap between such vulnerability and income poverty. In order to establish the extent to which the former provides information additional to and different from the latter, we consider the impact of different combinations of vulnerability and income poverty for a range of indicators of economic pressure. We then proceed to examine the social patterning of different combinations of economic vulnerability and income poverty.

In Section 5 our attention shifts to levels and patterns of multiple life-style deprivation and we make use of latent class analysis to identify clusters of individuals differentiated in terms of their deprivation profiles across a range of distinct deprivation dimensions. We then proceed to consider the socio-economic patterning of multiple life-style deprivation.

In our conclusions we locate our findings in the context of the Irish experience of globalization and spell out the implications for our understanding of the Irish case and more general issues relating to the consequences of economic globalization.

Data and Measures

The Irish EU-SILC survey is a voluntary annual survey of private households conducted by the Central Statistics Office (CSO). In 2004 the total completed sample size was 5,477 households and 14,272 individuals (CSO, 2005).¹³

The analysis reported here refers to all persons in the EU-SILC. Where household characteristics are involved these have been allocated to each individual. Where more than one person answered a question, the response of the household reference person (HRP) has been allocated to each individual in the household. The HRP is the one responsible for the household accommodation. Where this responsibility was shared the oldest person was chosen.

Income in the Irish component of EU-SILC is defined as equivalised household disposable income. The at-risk-of poverty-rate is the share of

persons with an equivalised income below a given percentage of the national median income.

Our analysis makes use of forty-two life-style deprivation indicators. Full details of these items are provided in Appendix A. Our first step in the investigation of the dimensionality of deprivation for the EU-SILC set of items involves draws on the results of a factor analysis of the forty-two life-style deprivation items. The following five relatively distinct life-style deprivation dimensions were identified.¹⁴ These comprise:

1. Economic strain – consisting of 11 items relating to food, clothing, furniture, debt and minimal participation in social life.
2. Consumption deprivation – comprising 19 items.
3. Housing facilities – is a 4-item index comprising basic facilities such as bath, toilet etc.
4. Neighbourhood environment – is a 5-item index encompassing pollution, crime/vandalism, noise and deteriorating housing conditions.
5. Health status of the HRP. This dimension comprises 3 items relating to overall evaluation of health status, having a chronic illness or disability and restricted mobility.

In order to confirm that the constituent items are in each case tapping the same underlying dimension, we have estimated Cronbach's alpha. For the economic strain measure the alpha value is 0.86, for consumption deprivation it is 0.88 and for the health dimension it is 0.83. These measures thus constitute extremely reliable indices. The values for the housing and

neighbourhood environment dimensions are somewhat lower at 0.58 but are reasonably satisfactory given the small number of items involved.

Analyzing Economic Vulnerability

While the globalization literature has been characterized by a failure to grapple with measurement issues relating to concepts such as vulnerability, elsewhere a number of efforts to tackle such issues have emerged. This objective is combined with a concern to develop a genuinely multidimensional perspective. The IMF (2003), the UN (2003) and the World Bank (2000) have developed a range of approaches to measuring vulnerability at the macro level. The World Bank (2000) sees vulnerability as reflecting both the risk of experiencing an episode of poverty over time but also a heightened probability of being exposed to a range of risks.

Here, following Whelan and Maître (2005 a & b), we implement an approach to the measurement of vulnerability at the micro level through the use of latent class analysis.¹⁵ The basic idea underlying such analysis is that the associations between a set of categorical variables, regarded as indicators of an unobserved typology, are accounted for by membership of a small number of underlying classes. Latent class analysis assumes that each individual is a member of one and only one of N latent classes and that, conditional on latent class membership, the manifest variables are mutually independent of each other. Conditional independence is a version of the familiar idea that the correlation between two variables may be a result of their common dependence on a third variable. In estimating latent class models the logic is

identical but the explanatory variable is unobserved and must be identified statistically.¹⁶

Significant discontinuities are involved in the measurement of material deprivation in EU-SILC in comparison with its Irish predecessor – the Living in Ireland Survey. Our focus is therefore not on the issue of trends over time, which has been discussed elsewhere¹⁷, but rather to address issues relating to enumeration raised by Goldthorpe (2002) by providing a comprehensive account of patterns and levels of deprivation at a point in time where the impact of the unprecedented period of growth can be taken fully into account.

We commence by focusing on the measurement of economic vulnerability, which is understood to go substantially beyond being at risk of income poverty while remaining focused on a restricted range of deprivations. In order to identify an underlying economically vulnerable class we apply latent class analysis to a set of manifest indicators. Any dichotomisation of the population into vulnerable and non-vulnerable clusters is inevitably an oversimplification. However, in light of the prominence that such concepts have achieved in the globalizations literature, it remains an important question as to what extent such characterisations of key aspects of social differentiation provide a reasonable representation of the observed empirical regularities. In our later analysis of broader patterns of multiple deprivation we will hypothesise a more complex underlying structure.

Our focus initially is on three key indicators - household income poverty, economic strain and reporting that one's household experiences difficulty in making ends meet. In order to provide us with sufficient degrees of freedom our income poverty variable has four categories distinguishing between those below 50 per cent of median income, between 50-60 per cent, between 60-70 per cent and above 70 per cent. Our analysis is thus based on the distribution of frequencies in a 4x2x2 table.¹⁸ For income poverty we report the conditional probabilities of being below each of the three median income lines. The economic strain dichotomy distinguishes those experiencing an enforced absence of two or more of the rather basic life-style items comprising this index.¹⁹ The economic stress variable distinguishes those households that have difficulty or great difficulty in making ends meet. Our objective is to identify a group who are vulnerable to economic exclusion in being distinctive in their risk of falling below a critical resource level, in their chances of being excluded from access to widely available items such as food, clothing and household items and from participation in family and social life and in their probability of experiencing high levels of subjective economic stress.

Given three variables the latent class specification for variables A, B, C is

$$\pi_{ijkt}^{ABCX} = \pi_t^X \pi_{it}^{\bar{A}X} \pi_{jt}^{\bar{B}X} \pi_{kt}^{\bar{C}X}$$

where π_t^X denotes the probability of being in latent class $t=1\dots T$ of latent variable X ; $\pi_{it}^{\bar{A}X}$ denotes the conditional probability of obtaining the i th

response to item A, from members of class t , $l=1\dots l$; and $\pi_{jt}^{\bar{B}X}$, $\pi_{kt}^{\bar{C}X}$ denote the corresponding probabilities for items B and C respectively.²⁰

In Table 1 we show the results of fitting such a model to the income poverty, economic strain and subjective economic stress indicators. The goodness of fit indicators include the index of dissimilarity and the reduction in the deviance level compared to the independence model. Comparing the observed and expected frequencies for the 4*2*2 table we find that index of dissimilarity has a value of .005. The G^2 measure of goodness of fit returns a value of 11.3 with 4 degrees of freedom. This involves a reduction in the value of the benchmark independence model of 99.7%.

Application of the model identifies one in five of the population as being economically vulnerable. Consistent with our earlier theoretical discussion of economic vulnerability, clusters are distinguished not by means of their current status on each of the three indicators but rather in terms of their risk of exposure to such disadvantages.²¹ At all three income poverty lines the economically vulnerable are, approximately, four times more likely to be below the relevant threshold. At the 50 per cent line the respective percentages are 30% and 7% and these rise to 70% and 18% at 70 per cent of median income.

The economically vulnerable are also sharply differentiated from the non-vulnerable in terms of their exposure to subjective economic stress with the respective figures being 78% and 12%. However, while these disparities are

substantial, the primary factor distinguishing the economically vulnerable from the rest of the population is the risk of experiencing an enforced lack of two or more of the items making up the economic strain index. While 65% of the former fall into this category this is true of only 1% of the latter.

Table 1 : Latent Class Analysis of Vulnerability to Economic Exclusion

Vulnerable Class Size		0.202
G ²		11.27
Degrees of freedom		4
%r G ² of independence model		99.7
% of case misclassified		0.43
Conditional Probabilities		
	Non-Vulnerable	Vulnerable
Income		
< 50% of median	0.065	0.303
< 60% of median	0.117	0.499
< 70% of median	0.182	0.700
Economic Strain (2+)	0.013	0.645
Economic Difficulty	0.116	0.779

The percentage of the population we identify as economically vulnerable is practically identical to that found below 60 per cent of median income. However, even though income poverty constitutes one of the component elements of economic vulnerability, close to one in two of this group is not income poor and vice-versa. In order to illustrate the consequences of focusing on one rather than the other distinction, we begin by constructing the four-fold typology resulting from cross-classifying the economic vulnerability dichotomy with the dichotomy relating to being in household whose equivalent disposable income is above or below 60% of median variables.²² In Table 2 we then break down a set of variables relating to subjective economic pressures that were not incorporated in our latent class analysis, by the categories of this typology. The four indicators comprise inability of the

household to cope with unanticipated expenses, debts relating to routine expenses, arrears in connection with mortgage, rent, hire purchase payments etc and experiencing housing costs as a great burden. A consistent pattern emerges whereby those vulnerable but not income poor at 60 per cent of median

Table 2: Economic Pressures by Income Poverty and Economic Vulnerability Typology

	<i>Both Income Poor & Economically Vulnerable</i>	<i>Non-Income Poor & Economically Vulnerable</i>	<i>Income Poor & Not Economically Vulnerable</i>	<i>Neither Income Poor Nor Economically Vulnerable</i>
	%	%	%	%
Inability to pay unexpected expenses	67.2	62.0	13.2	10.0
Debt problems arising from ordinary living expenses	29.8	29.2	3.2	3.6
Housing costs a great burden	58.2	58.2	10.9	15.2
Arrears	35.9	30.0	6.2	3.3
% of Population	10.5	9.2	8.9	71.4

income report levels of economic pressure that are remarkably similar to those who are both income poor and vulnerable. Similarly, those who are income poor and non-vulnerable are barely distinguishable from those who are neither income poor nor vulnerable. Thus it is economic vulnerability rather than income poverty *per se* that serves as a powerful predictor of economic pressures.

In Table 3 we focus on the manner in which membership of the various combinations of economic vulnerability are socially structured. The

multinomial regression analysis set out in this table takes the cluster of individuals experiencing neither vulnerability nor poverty as the reference category and seeks to identify the socio-economic characteristics of the household and household reference person that differentiate the remaining three categories from those who are neither income poor nor economically vulnerable.²³ The socio-economic factors on which we focus include a range of variables related to household resources and needs. These include employment status – with employees having no experience of unemployment in the previous year as the reference category- marital status, number of children, being a lone parent, age group, education urban-rural²⁴ location and housing tenure. Because of problems of multicollinearity and the fact that key factors mediating its influence are already in the equation we have not included social class. However, given the importance of the debate concerning its impact we shall focus directly on this issue in Table 4.

The coefficients reported in Table 3 are the odds on being in the category in question rather than that comprising those neither income poor nor vulnerable. It is immediately clear from column 1 of Table 3, that contrary to the case made by authors such as Leisering and Liebfried (1999) that exposure to risk has become more pervasive and less structured and inequality has become individualised, those who are both vulnerable and poor are sharply differentiated from those who are neither in terms of a range of socio-economic influences. By far the most important influence is labour market status. The reference category is being an employee with no experience of unemployment in the previous twelve months. Being inactive in

every case substantially increases the risk of being in the most disadvantaged cluster. However, the extent of the disparity varies depending on the reason for being inactive. The odds ratio reaches its highest value of 23:1 for the ill/disabled. It falls to 16:1 for the unemployed and to 15:1 for those in full-time education. For being in home duties it falls to close to 9:1 and for the retired to 6:1. The strength of these influences is reflected in the fact that while one in four of the non-vulnerable/non-poor are inactive this is true of three out of four of the vulnerable/poor.

A range of other factors contributes to a heightened risk of being in the least favoured group. An odds ratio of 4:1 is observed for the self-employed without employees and employees with experience of unemployment and one of 5:1 for farmers. Lack of educational qualifications also increases risk with the odds ratio reaching 6:1 for those with only primary education. Not being a homeowner also plays a role with an odds ratio of 4:1 being observed for public sector tenants. Rural location has a more modest but significant effect. Marital status and household type also contribute to heightened risk with separation/divorce, lone parenthood and more than two children in the household having significant net effects.

The observed pattern involves a range of influences that are likely to impact on both current and permanent income and household needs. The picture that emerges for the non-income poor and vulnerable is somewhat different. With the exception of retirement, being inactive in the labour market continues to have an impact but on a significantly reduced scale with the relevant odds

ratios being in each case approximately one-fifth of those in the previous case. Employment precariousity has no significant effect.²⁵ Farming has a statistically significant, but much reduced impact, while self-employment without employees has no effect and with employees has a negative association. Education and marital status also have weaker effects but home ownership has a stronger impact. This cluster is one whose situation appears to have less to do with their current income situation than with their longer – term command over resources. Consistent with interpretation is the fact that if one takes a composition rather than a risk perspective, this is the cluster in which the self-employed with employees are least likely to be found; those with employees are no more likely to be found here than in non-vulnerable/non-poor group and for farmers this is only marginally more likely to be the case. Homeowners are also least likely to be found in this cluster. In composition terms, it is characterised by a more equal mixture of employees and the inactive than any of the remaining clusters. In that sense it is most accurately represented as being characterised by heterogeneity of risk but even so the degree of social structuring is inconsistent with any notion of individualisation of risk.

Table 3: Multinomial Regression of Income Poverty at 60% of median Income and Economic Vulnerability Typology on Household and Household Reference Person Socio-Economic Characteristics

	<i>Both Income Poor & Economically Vulnerable</i>		<i>Non-Income Poor & Economically Vulnerable</i>		<i>Income Poor Not Economically Vulnerable</i>	
	Odds ratio	sig	Odds ratio	sig	Odds ratio	sig
<i>Employment Status</i>						
Self-employed with employees	1.107	n.s.	0.414	***	1.380	n.s.
Self-employed without employees	3.621	***	0.963	n.s.	1.568	*
Farmer	5.303	***	1.868	***	5.735	***
Employee – unemployed in previous 12 months	3.856	***	0.985	n.s.	1.377	n.s.
Ill/Disabled	23.005	***	5.096	***	11.535	***
Unemployed	16.401	***	2.625	***	5.331	***
In Education	15.270	***	2.858	***	8.062	***
Home-Duties	8.774	***	1.674	***	5.559	***
Retired	5.881	***	0.973	n.s.	5.331	***
<i>Marital Status</i>						
Single	1.589	***	1.255	*	1.430	***
Widowed	1.422	*	1.377	*	1.526	***
Separated/Divorced	3.486	***	2.168	***	2.279	***
Number of Children > 2	2.605	n.s.	2.063	***	2.343	***
Lone Parent	4.612	***	2.837	***	2.314	***
<i>Age Group</i>						
Under30	2.897	***	0.836	n.s.	0.767	n.s.
30-49	4.114	***	0.998	n.s.	1.005	***
50-64	2.524	***	0.646	***	1.151	***
<i>Education</i>						
Primary	5.801	***	2.751	***	2.383	***
Lower Secondary	2.691	***	2.228	***	1.593	***
<i>Urban Location</i>						
	0.768	*	0.886	*	0.533	***
<i>Housing Tenure</i>						
Private Tenant	1.446	***	3.498	***	1.328	n.s.
Public Authority Tenant	3.592	***	4.222	***	1.797	***
Nagelkerke R ²				0.354		
Reduction in Likelihood Ratio				4,929.6		
Degrees of Freedom				66		
* p< .1 ** p< .01 *** , p< .001						

For the income poor but not economically vulnerable cluster a distinctive pattern also emerges. With the exception of retirement, the magnitude of the

odds-ratios relating to the forms of labour market inactivity is intermediate to those for the first two clusters. Marital status and household type effects are relatively similar to those for the first two cases. This group is characterised by a high degree of current dependency on social welfare income. However, farmers are as likely to be found in this group as in the vulnerable/poor cluster. The self-employed are also more likely to be found in this cluster. Home ownership has little effect in this case and the frequency of such ownership is almost as high for this group as for the reference category. The odds on being found in this cluster are also almost twice as high for rural respondents. The patterning of social differentiation is thus consistent with low current income but both an ability to draw on longer-term resources and location in an environment that requires somewhat less resources.

Further insight into the distinctive character of the clusters we have identified can be obtained by examining, as we do in Table 4, the impact that social class has on cluster membership. We employ a six-category aggregated version of the interim European Socio-economic Classification (EseC) schema which following Erikson and Goldthorpe (1992) and Goldthorpe (2000) seeks to operationalise social class in terms of a focus on employment relations.²⁶ For this analysis we assign the social class of the household reference person to all household members. Where a couple are jointly responsible for the accommodation we use a dominance procedure to decide between them.²⁷ While the ESeC is not intended to constitute a hierarchical scale, for the contrast between the economically vulnerable/income poor and the reference group a sharp pattern of this form emerges, with a gradual

increase in the odds ratio from unity for the salariat to just less than 3:1 for the higher grade blue and white collar class to 12:1 for semi- and non-skilled workers. A clear pattern of differentiation emerges between lower grade white collar and skilled worker/semi- and non-skilled workers and all others. The strength of these hierarchical effects is consistent with significant disparities between the classes in terms of both current and permanent income. For the vulnerable but non-income poor, the hierarchical pattern is a good deal less sharp with the odds ratio ranging between 2:1 and 4:1. In this case the ratio is somewhat higher for farmers and the petty-bourgeoisie than in the previous case and the contrast between these groups and the remaining classes is a good deal less sharp than in the previous case. This pattern is consistent with a group that is more sharply differentiated in terms of longer-term command over resources than current income. Finally, a strikingly different pattern is evident for the income-poor but non-vulnerable. In this case the highest odds ratio 11:1 is associated with farmers. The next highest of 7:1 relates to semi- and non-skilled class. However, little difference is observed between the self-employed classes and the higher-grade white and blue-collar class where in both cases the odds ratio is close to 5:1.

Conclusions relating to the impact of social class are crucially affected by the comparison on which one focuses. Where we take both economic vulnerability and income poverty into account sharp differentials emerge. Focusing on vulnerability unaccompanied by income poverty reveals systematic but more modest class differences. In contrast, income poverty unconnected to vulnerability produces substantial departures from the

hierarchical pattern observed for the vulnerable and poor cluster because of the higher values associated with the self-employed classes.

Table 4: Multinomial Regression of Income Poverty at 60% of median Income and Economic Vulnerability Typology with Social Class

	<i>Both Income Poor & Economically Vulnerable</i>		<i>Non-Income Poor & Economically Vulnerable</i>		<i>Income Poor Not Economically Vulnerable</i>	
	Odds ratio	sig	Odds ratio	sig	Odds ratio	sig
<i>Social Class</i>						
Reference Category Higher & Lower Salariat (ESeC Classes 1 &2).	1.000	***	1.000	***	1.000	***
Higher Grade White & Blue Collar (ESeC Classes 3 & 6)	2.555	***	1.932	***	1.637	***
Petit Bourgeoisie (ESEC Class 4)	4.020	***	1.861	***	4.904	***
Farmers (ESeC Class 5)	5.519	***	2.756	***	10.540	***
Lower grade white collar and skilled workers (ESeC Classes 7,8).	9.744	***	2.942	***	4.786	***
(Semi- and non-skilled workers (ESeC Class 9).	12.042	***	4.002	***	6.630	***
Nagelkerke R ²				0.124		
Reduction in Likelihood Ratio				1,434.4		
Degrees of Freedom				15		
* p< .1 ** p< .01 *** , p< .001						

Patterns and Levels of Multiple Deprivation

The combinations of economic deprivation that we have considered in the previous section are somewhat more restricted than those for which the term “multiple deprivation” is usually reserved. In this section we extend our analysis to deal more with broadly conceived patterns. In order to reach conclusions concerning multiple deprivation we define a threshold in relation to each dimension. Any such threshold must to some extent be arbitrary. Our preferred option would be to define the thresholds so that there are equal numbers above them for each of the dimensions. Unfortunately, the fact that the indices are comprised of variable numbers of indicators, and have rather differently shaped distributions, means that this is not a feasible option. We

have chosen therefore to define our thresholds so that in each case a significant, but variable minority are above the deprivation cut of point. This is consistent with the notion that multiple deprivation arises where excluded minorities overlap substantially. Thus for the economic strain, consumption and neighbourhood environment dimensions the thresholds are respectively 2+, 4+ and 2+. In each case approximately one in seven are above the threshold. For health the threshold is 2+ and one in five are found above it.

In Table 5 we report results for latent class models running from two to five classes. The goodness of fit indicators include the percentage of cases misclassified, the reduction in the deviance level compared to the independence model and the BIC statistic which favours parsimonious models and where lower values are preferable. The diagnostics indicate clearly that the four-class model provides the best fit. A comparison of the observed and expected frequencies for the 2⁵ table indicates that the preferred model misclassifies only 0.4 per cent of cases and, with a G² value of 14.3 and 8 degrees of freedom, provides a fit that is acceptable in strict statistical terms. The BIC value for this model is also lower than for any of the alternatives.

Table 5
Goodness of Fit of Latent Class Models of Multiple Disadvantage

	<i>Number of Classes</i>			
	2	3	4	5
G ²	278.85	120.22	14.32	11.76
Reduction in Independence Model G ²	94.3%	98.3%	99.2%	99.8%
Degrees of Freedom	20	14	8	2
% of case misclassified	3.10	1.64	0.39	0.34
BIC	88.56	-13.68	-62.20	-7.36

As set out in Table 6, the model identifies four underlying clusters of individuals exhibiting distinct profiles. The first cluster, which accounts for 83 per cent of the population, we label the “minimal deprivation” group. They display extremely low probabilities of being above the relevant threshold on the economic strain, consumption and housing dimensions with the respective percentages being 3%, 5% and 2%. The only dimensions on which this group suffer a non-negligible risk of being above the threshold are those relating to neighbourhood environment and household reference person health status. In the former case 11% are above the cut-off point and in the latter 16%. The second cluster, which we label “health and housing deprivation dominated”, make up 4% of the population. They also display an extremely low level of economic strain but the figure for consumption rises to 16% and that for neighbourhood environment to 24%. However, it is their deprivation levels for health and housing that are distinctive with the respective figures being 52% and 66%. The third group, are distinguished primarily by their current living standards and make up 6% of the population. They are marked out by the fact that their risks of being above the economic strain and consumption deprivation thresholds are substantially higher than for the remaining dimensions. 92% of this group are above the former cut-off point and 79% above the latter. The relevant figures fall to 28%, 23% and 1% respectively for health, housing and neighbourhood environment. The final group, which makes up 7% of the population, we label as “maximally deprived”. This group experiences a substantial level of deprivation in relation to housing with 41% being above the threshold but this is actually their lowest reported level. For health the figure rises to 56% and for neighbourhood environment to 75%. For

consumption deprivation the figure is 76% and finally it rises to 85% for economic strain. Both the maximally deprived and the current living standards dominated clusters are effectively sub-sets of the economically vulnerable but have sharply contrasting experiences in relation to health, housing and neighbourhood environment.

Table 6: Pattern of Multiple Deprivation

	<i>Clusters</i>			
	<i>Minimal</i>	<i>Health & Housing Dominated</i>	<i>Current Living Standards</i>	<i>Maximal</i>
<i>Size of Cluster</i>	0.826	0.045	0.062	0.068
<i>Deprivation Dimensions</i>				
Economic Strain	0.032	0.030	0.915	0.846
Consumption	0.053	0.162	0.789	0.758
Housing	0.023	0.658	0.226	0.408
Neighbourhood Environment	0.106	0.240	0.011	0.751
Health	0.158	0.518	0.279	0.556

In Table 7 we set out the results of a multinomial regression contrasting each of the three remaining groups with the minimally deprived group.²⁸ The health and housing deprived are differentiated primarily by their substantially higher probability of being in the over sixty-five group, being rural and in particular being rural public authority tenants. The self-employed without employees are also more likely than employees to be found in this cluster. As with the remaining cluster, employment precarity, being inactive in the labour market and lower educational qualifications also play a role. For the 'current living standards' group the latter factors also play a significant role but so too does lone parenthood and number of children. Public sector tenancy plays a significant role but the urban-rural contrast is less important than in the former

Table 7: Multinomial Regression of Multiple Deprivation Typology or Income Poverty at on Household Socio-Economic Characteristics

	<i>Maximal Deprivation</i>		<i>Current Living Standards Deprivation</i>		<i>Health & Housing Dominated Deprivation</i>	
	Exp (B)	Sig.	Exp (B)	Sig.	Exp (B)	Sig.
<i>Employment Status</i>						
Self-employed with employees	0.369	*	0.450	*	0.949	n.s.
Self-employed without employees	0.491	*	0.900	n.s	3.170	*
Farmer	0.340	**	0.690	n.s	0.671	n.s
Employee – unemployed in previous 12 months	1.580	*	1.382	n.s.	2.003	*
Ill/Disabled	7.957	***	4.628	***	4.063	***
Unemployed	4.993	***	4.568	***	2.698	***
In Education	1.671	***	7.799	***	1.562	**
Home-Duties	2.363	***	2.806	***	1.797	**
Retired	1.166	n.s.	0.986		1.538	*
<i>Marital Status</i>						
Single	2.349	***	1.450	**	3.117	***
Widowed	0.958	n.s.	0.985	n.s.	1.247	n.s.
Separate/Divorced	2.403	***	1.824	***	2.747	***
Number of Children > 2	0.927	n.s.	1.274	*	0.576	**
Lone Parent	1.722	***	2.334	***	0.523	*
<i>Age Group</i>						
Under30	1.040	n.s	0.759	n.s.	0.442	*
30-49	1.519	*	1.136	n.s.	0.279	***
50-64	0.735	*	0.996	n.s.	0.274	***
<i>Education</i>						
Primary	3.650	***	3.177	***	2.948	***
Lower Secondary	1.935	***	3.152	***	1.570	*
<i>Urban Location</i>						
	1.101	n.s.	0.529	***	0.357	***
<i>Housing Tenure</i>						
Private Tenant	2.704	***	4.060	***	1.487	n.s.
Public Authority Tenant	4.509	***	5.643	***	6.186	***
Public Authority Tenant*Urban Location	1.250	n.s.	0.823	*	0.437	***
Nagelkerke R ²			0.326			
Reduction in Likelihood Ratio			3500.1			
Degrees of Freedom			69			

and age, as such, has no impact. Being a private tenant also has its most substantial impact in this case. When we focus on the maximally deprived

cluster we find that its members are more likely to be found in urban areas than was the case for the previous two clusters. They are even more likely to be located in urban public sector housing. In relation to the minimally deprived group it is the combination of urban location and public sector tenancy that differentiates rather than location as such. Those in self-employment are even less likely to be found in this cluster than employees while illness/disability is a particularly powerful predictor of such membership.

Thus, the clusters we observe are differentiated in terms of varying combinations of variables such as employment status, household type, location and housing tenure. Further insight into the nature of these clusters is provided by the manner in which social class is associated with such membership as set out in Table 8. Focusing first on the health and housing dominated cluster, we find that for the employee classes there is clear hierarchical pattern, with the odds ratio peaking at just below 8:1 for the contrast between semi- and non-skilled manual workers. However, an important deviation from a hierarchical pattern arises from the fact that farmers and the petty-bourgeoisie have a high probability of being found in this cluster. It is in relation to the current living standards cluster that the most clear-cut pattern of hierarchical differentiation occurs. It is one that involves the self-employed class occupying a position intermediate to the salariat and higher-grade white and blue-collar workers. The odds ratios for the self-employed classes do not exceed 2:1. It then rises gradually to 9:1 for the three non-salariat employee classes. Finally, for the maximal deprivation cluster we observe a contrast between the salariat and the self-employed

classes and the remaining employee classes; accompanied by a hierarchical pattern of differentiation within the latter classes that is a good deal less sharp than in the case of the living standards dominated group. In this case the role of both location and age, as documented in Table 7, serve to dilute the impact of social class.

Table 8: Multinomial Regression of Multiple Deprivation Profiles with Social Class

	<i>Housing & Health</i>		<i>Living Standards Dominated</i>		<i>Maximal Deprivation</i>	
	Odds ratio	sig	Odds ratio	sig	Odds ratio	sig
<i>Social Class</i>						
Reference Category Higher & Lower Salaried (ESeC Classes 1 &2).	1.000	***	1.000	***	1.000	***
Higher Grade White & Blue Collar (ESeC Classes 3 & 6)	2.084	**	5.393	***	1.769	***
Petit Bourgeoisie (ESeC Class 4)	6.116	***	2.320	***	1.041	n.s.
Farmers (ESeC Class 5)	4.280		1.851	*	0.567	***
Lower grade white collar and skilled workers (ESeC Classes 7,8).	3.487	***	6.715	***	3.377	***
(Semi- and non-skilled workers (ESeC Classe 9).	7.505	***	9.378	***	5.116	***
Nagelkerke R ²				0.090		
Reduction in Likelihood Ratio				810.7		
Degrees of Freedom				15		

Conclusions

In this paper we have sought to establish levels of economic vulnerability and multiple deprivation in Ireland. In both the Irish and the international literature globalization has been seen as both increasing the numbers vulnerable and widening the range of risks and the extent of overlap. However, the difficulty involved in resolving these apparently conflicting claims, has proved an obstacle to progress in enumerating levels of vulnerability and fashioning empirical accounts of the patterning of such vulnerability. Furthermore, the combination of such imprecision and a lack of interest in appropriate

operationalisation make it extremely difficult to assess wide-ranging claims relating to increasing individualisation of risk and the declining importance of social structuring of risk in terms of factors such as social class.

In addressing these issues in the Irish case, we have focused on two related but distinct forms of vulnerability. In the first case we identify an economically vulnerable cluster making up one-fifth of the population. Despite the fact that income poverty constitutes one of the elements of such vulnerability, little more than one in two of those who are income poor at the 60 per cent income line are also economically vulnerable. Different combinations of vulnerability and income poverty are characterised by varying patterns of social structuring. These findings are consistent with the fact that simultaneous exposure to vulnerability and poverty appears to arise from deficiencies relating to both current and longer-term resources and the role of additional needs. The experience of vulnerability unaccompanied by current poverty appears to be associated with the absence of wider ranging or longer-term resources and above average needs. Finally, exposure to income poverty in the absence of vulnerability seems to be related to the limitations of current disposable income as an indicator of broader command over economic resources, particularly in relation to the self-employed, homeowners and older age groups.

Our detailed analysis of the socio-economic factors associated with vulnerability supported these interpretations. In particular exposure to both income poverty and vulnerability is sharply differentiated in social class terms

in a straightforward hierarchical fashion. In contrast, income poverty in the absence of vulnerability is much more evenly distributed across the class structure and is relatively common among the self-employed classes.

Broadening our conception of vulnerability we identified four clusters distinguished in terms of a range of life-style dimensions. The current living standards and maximally deprived clusters constitute sub-groups of the economically vulnerable. A range of socio-economic factors influences membership of such clusters. While consumption deprivation is sharply differentiated in class terms rather different patterns are observed in relation to maximal deprivation and health and housing deprivation where urban-rural location and housing tenure combine in varying ways to differentiate such outcomes.

Our findings run counter to the widespread emphasis on the negative consequences of economic globalization for Irish society and are a good deal more consistent with the view expressed by Layte *et al* (2005:402-407) that Ireland now stands as a good example of a small open economy that has prospered from globalization. Paradoxically, while many sociologists have propounded universalistic interpretations of the impact of globalization, a number of leading economists have recently stressed the mediating role of institutions and values. Thus. Blanchard (2005) in his recent analysis of European unemployment accords a significant role to labour market institutions and trust. Similarly, Sapir (2005) stresses the crucial importance of welfare regimes or varying models of labour and social institutions in

mediating the impact of globalization.²⁹ What the Irish case illustrates particularly well is the importance of variation within as well as between welfare regimes. As O' Riain and O'Connell (2000) argue, the Irish strategy has involved a distinctive version of 'competitive corporatism' which prioritises the attraction of foreign direct investment, competitiveness, macro-economic stability and employment but downplays the equity objectives of more traditional 'golden age' forms of corporatism.

The strategy has resulted in an Irish society characterised by a set of tiered levels of deprivation. Our analysis suggests that the number identified at risk of exclusion from the mainstream ranges from one in five to one in fourteen depending on whether one focuses on economic vulnerability broadly conceived or heightened risk of exposure to a range of overlapping deprivations. Variation in exposure to such risks is highly structured in socio-economic terms. However, both the levels and breadth of current deprivation are a good deal more modest than suggested by radical critics of the Irish experience of globalization.

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Notes

¹ See Blanchard (2002) and Honohan and Walsh (2002).

² See Surrender (2004) for a more detailed discussion of the globalization perspective on challenges to the welfare state

³ See Allen (2000), O'Hearn, (2000 and 2003), Kirby (2002)

⁴ See also Kleinman's (2002) development of the argument that the role of the state in social policy has become more closely connected with prevailing economic conditions.

⁵ For a range of detailed case studies see Scharpf and Schmidt, (2000).

⁶ See also Siegel (2005).

⁷ See Daly and Yeates (2003) for a discussion of a number important respects in which the Irish strategy has diverged from the British.

⁸ See O'Connell and Russell (forthcoming) and Whelan and Layte (2006).

⁹ See Nolan and Smeeding (2005).

¹⁰ For a general critique of convergence arguments relating to the Irish case see Goldthorpe (1992).

¹¹ See Whelan *et al* (2001 and 2004).

¹² For a more general discussion of value and implications of a multidimensional approach to poverty and social exclusion see Nolan and Whelan (forthcoming).

¹³ A sample of residential households will necessarily exclude groups at high risk of vulnerability such as the homeless and the Travelling community. However, this will have little effect on our estimates of risk or incidence.

¹⁴ See Whelan, Maître and Nolan (2006) for a detailed discussion of these findings.

¹⁵ See also Dewilde (2004) and Moisis (2004).

¹⁶ See Magidson and Vermunt (2004) and McCutcheon and Mills (1998)

¹⁷ See Whelan, Nolan and Maître (2006).

¹⁸ By allowing for further differentiation relating to the economic strain and stress variables it becomes less likely that a two-class model will provide a satisfactory fit. However, what we consider to be the most appropriate 4*3*3 analysis produces very similar results in terms of class size and pattern of differentiation. Details are available from the authors.

¹⁹ This dichotomisation has been shown to maximise discriminatory power in relation to the economic pressure indicator relating to being able to cope with unanticipated expenses. See Whelan *et al* (2006).

²⁰ The model can also be thought of as a log-linear model in which one variable is unobserved.

²¹ The numbers currently experiencing any combination of the constituent disadvantages will be lower than the number vulnerable.

²² In the former case individuals are allocated to the vulnerable or non-vulnerable class on the basis of the modal assignment rule with each observation in a cell being assigned to the class with the largest conditional. The estimated classification error employing this procedure is 0.060. The proportionate improvement over an approach that assigns all observations to the largest latent class is 0.705. See McCutcheon (1987:36-37) for a discussion of these indices.

²³ Individuals are again allocated to categories of the economic vulnerability classification on the basis of modal assignment. Thus, a two stage modelling strategy is employed in connecting classes to covariates.

²⁴ Urban being defined as major cities and suburbs.

²⁵ This may be related to the fact that as Ireland has approached a situation of full employment this group has taken on a rather heterogeneous character.

²⁶ See Rose (2005) for a detailed discussion of the classification.

²⁷ See Erikson (1984)

²⁸ Allocation to clusters is on the basis of modal assignment. The estimated error in classification is 0.072 and the proportionate improvement over allocating all cases to the largest latent class is 0.586.

²⁹ See also Hall and Soskice (eds) 2001.

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Appendix A

For the following set of items respondents were asked if (1) the household possessed/availed the items (2) did not possess/avail of because they could not afford it or (3) did not possess/avail for other reason. The items are:

- Paying for a week's annual holiday away from home in the last 12 months.
- Eating meat chicken or fish (or vegetarian equivalent) every second day..
- Having a roast joint (or equivalent) once a week.
- Buying new, rather than second hand clothes.
- A warm waterproof overcoat for each household member.
- Two pairs of strong shoes for each household member.
- Replacing worn-out furniture.
- Keeping home adequately warm.
- Having friends or family for a drink or meal at least once a month.
- Buying presents for family/friends at least once a year.

A similar format was employed in relation to the set of consumer items set out below.

- | | | |
|---------------------|---------------------------|------------------|
| • A satellite dish | a video recorder | a stereo. |
| • A CD player | a camcorder | a home computer. |
| • A washing machine | a clothes dryer | a dish washer. |
| • A vacuum cleaner | a fridge | a deep freeze. |
| • A microwave | a deep fat fryer | a liquidiser. |
| • A food processor | a telephone (fixed line). | |

A second set of items concerns the household dwelling and it was simply asked if the household possessed some specific amenities. Given the widespread availability of these items, we assume that their absence is due to inability to afford them.

- Bath or shower
- Internal toilet
- Central heating
- Hot water

A third set of 5 items relate to the quality and the environment of the dwelling. Respondents were asked if their dwelling suffered any of the problems listed below:

- Leaking roof, damp walls/ceilings/floors/foundations, rot in doors, window frames.
- Rooms too dark, light problems
- Noise from neighbours or from the street
- Pollution, crime or other environmental problems
- Crime, violence or vandalism in the area

The final set of item we consider were addressed to individuals and the absence and affordability elements were incorporated in one question (and two part questions for the last two items). The items are as follows:

- Going without heating during the last 12 months through lack of money.
- A morning, afternoon or evening out in the last fortnight for entertainment.
- A car.

The last set of items relate to the health of the household reference person.

The specific questions were as follows:

- Evaluation of general health. Five response options were offered. We considered respondents as having health problems when they answered from “fair” to “very bad”.
- If they suffered from any chronic illness or condition. A simple “yes” or “no” was offered to the respondents.
- If they have been limited in usual activities for at least the last 6 months because of a health problem. Three options were offered and those answering “yes very limited” and “limited” are considered as well as having health problems.