



# Research Repository UCD

<b>Title</b>	The Great Recession and the Changing Distribution of Economic Stress across Income Classes and the Life Course in Ireland: A Comparative Perspective
<b>Authors(s)</b>	Whelan, Christopher T., Nolan, Brian, Maitre, Bertrand
<b>Publication date</b>	2016-01-26
<b>Publication information</b>	Whelan, Christopher T., Brian Nolan, and Bertrand Maitre. "The Great Recession and the Changing Distribution of Economic Stress across Income Classes and the Life Course in Ireland: A Comparative Perspective." University College Dublin. Geary Institute, January 26, 2016.
<b>Series</b>	UCD Geary Institute for Public Policy Discussion Paper Series, WP2016/03
<b>Publisher</b>	University College Dublin. Geary Institute
<b>Item record/more information</b>	<a href="http://hdl.handle.net/10197/7649">http://hdl.handle.net/10197/7649</a>

Downloaded 2025-06-08 02:46:39

The UCD community has made this article openly available. Please share how this access benefits you. Your story matters! (@ucd\_oa)



© Some rights reserved. For more information



**UCD GEARY INSTITUTE FOR PUBLIC POLICY  
DISCUSSION PAPER SERIES**

# **The Great Recession and the Changing Distribution of Economic Stress across Income Classes and the Life Course in Ireland: A Comparative Perspective**

Christopher T. Whelan  
School of Sociology and Geary Institute for Public Policy,  
University College Dublin

Brian Nolan  
Department of Social Policy and Intervention and Institute for  
New Economic Thinking at the Oxford Martin School,  
University of Oxford

Bertrand Maître  
Economic & Social Research Institute, Dublin

Geary WP2016/03  
Jan 26, 2016

# The Great Recession and the Changing Distribution of Economic Stress across Income Classes and the Life Course in Ireland: A Comparative Perspective

Christopher T. Whelan<sup>1\*</sup>, Brian Nolan<sup>\*\*</sup> and Bertrand Maître <sup>\*\*\*</sup>

\*School of Sociology and Geary Institute for Public Policy, University College Dublin

\*\* Department of Social Policy and Intervention and Institute for New Economic Thinking at the Oxford Martin School, University of Oxford \*\*\* Economic & Social Research Institute, Dublin

**Abstract:** The impact of the Great Recession led to changes in the distribution of economic stress across the life course in Ireland, one of the countries severely affected by the economic crisis. Our peak to trough analysis shows that in Ireland in 2008 there was a clear life course gradient in relation to economic stress with children occupying the most favourable and the elderly the least favourable position. Over time the gradient became sharper with the relative position of younger groups deteriorating. In 2008 life course differentiation was significantly sharper for the precarious and poverty classes than for the high income groups. For the former graduated differentiation across the range of the life course was evident while for the latter the primary contrast was between the elderly and all other stages. Thus the major line of differentiation in terms of both overall stress levels and their patterning across the life course was between the precarious and poor income classes and the high income group. While stress levels increased for all groups between 2008 and 2012, within the high income class the elderly group saw their relative position particularly enhanced while children experienced the sharpest deterioration. Among the precarious and poor classes, the elderly again experienced an improvement in their relative position while for the former the sharpest deterioration was experienced by the older middle aged group and for the latter the younger middle aged group. Thus while the elderly experienced a cross class improvement in their relative position for other life course stage the impact of the crisis was contingent on income class. That the Irish pattern of change was not an inevitable outcome of the economic crisis is illustrated by the fact that in Iceland a similar starting produced a quite different set of changes involving an erosion of life course differentials in the impact of precarity and poverty. Greece on the other hand provides an example of the emergence of life course differentiation where the pre-recession period was characterised by their absence. Clearly policy choices not only affect such differentiation but the extent to which they operate differentially across income cases.

Key words: Great Recession, income classes, economic stress, life course

---

<sup>1</sup> Corresponding author: Christopher T. Whelan, Room B113 Geary Institute, University College Dublin, Belfield. Dublin 4, Ireland, e-mail: [christopher.whelan@ucd.ie](mailto:christopher.whelan@ucd.ie), phone: 00353 1 2882540

## **Introduction**

In this paper we seek to bridge the gap between recent analysis relating to the distributional consequences of the Great Recession across the income distribution and more specific concerns relating to life-course effects (Jenkins et al 2013, Kus 2013). Our primary focus is on the Irish case which constitutes a particularly interesting one because of the scale of the economic crisis. Our analysis situates the Irish outcomes in the context of those for Iceland and Greece which like Ireland were among the hardest hit counties by the Great Recession and which earlier research, employing the European Union Survey of Income and Living Conditions (EU-SILC), has shown were, like Ireland, quite distinctive in terms of the consequences for declining income levels and increasing levels of material deprivation and economic stress (Whelan et al 2015).

In this paper we focus our attention on changing levels of economic stress which is an outcome that takes on particular significance given the distinctive role that debt has played in shaping the circumstances of households during the recent economic crisis (Russell et al 2013, Whelan et al 2015). In particular, we focus on the impact of the Great Recession on the distribution of economic stress across income classes and the life-course and the extent to which the impact of the latter is moderated by the former. In constructing income class categories we follow the approach based on defining intervals in terms of percentages of median household income, thus allowing the size of such classes to vary across time and counties income rather than focusing on groups with fixed numbers such as quintiles (Atkinson and Brandolini 2013: 82).

## **Economic Crisis and Social Stratification of Risks**

Atkinson and Morelli (2011: 49) in a comprehensive analysis of the relationship between economic crisis and income inequality conclude that there is no hard and fast pattern and that crises differ greatly from each other in their causes and outcomes and that as far as inequality is concerned “this time may be different”. The impact of the economic crisis and austerity on inequality operates through complex channels with varying impacts. Jenkins et al.’s (2013) comparative analysis of the impact of the Great Recession showed that the initial distributional effects varied widely across countries,

reflecting not only differences in the nature of the macroeconomic downturn but also in the manner in which cash transfers and direct taxes cushioned household net incomes from the full consequences of reductions in market incomes with varying consequences for economic and life-course groups. (Jenkins et al 2013, Callan et al 2014, Savage et al 2015).

In any event, the impact of the economic crisis, particularly on households made vulnerable by increased debt levels and affected by declining asset values (notably property) that accompanied it, is not likely to be fully captured by focusing purely on how incomes were affected. In assessing the impact of the crisis in Ireland, as in the boom, relative income measures such as the conventional at-risk of poverty measure and Gini fail to capture the magnitude of the changes experienced by households. In the Irish case alternative analyses focusing on outcomes relating to economic stress and vulnerability have provided a broader picture of the impact of economic crisis. (Whelan et al 2015, Whelan and Maître, 2014). In this paper we focus on an indicator of economic stress which is available on a comparative European basis and which we anticipate will be influenced by not only current disposable income but also broader command over resources, financial obligations, access to financial and social support and capacity to cope with financial pressures.

Different expectations of the consequences of the Great Recession for the changing distribution of economic stress across the income distribution and the life-courses can be derived from competing sociological perspectives relating to the consequences of economic change. The individualization thesis (Beck, 1992) might lead us to expect that the scale of economic change associated with the Great Recession would lead to growing diversification of routes leading to economics stress. An important variant of this argument focuses on the emergence of new inequalities as a consequence of individualized life-course trajectories with hierarchical stratification structures coming to have a declining impact (Pintelon et al 2013). Combining the life course and individualization perspectives leads to expectations of a particular form of diversification relating to the distribution of risks across the life-course (Bonoli, 2005, Vandecasteele, 2007, 2010).

Earlier work focusing on new social risks emphasised the role of entrance to and precarity in the labour market, care responsibilities and life-course risks associated with events such as leaving the parental home, lone parenthood and partnership dissolution (Taylor-Gooby, 2004). However, the role that increased household indebtedness has played in the Great Recession provides a substantial further justification for focusing on variation across the life-course, since children and individuals in the middle stages of the life-course are more likely to be residing in households experiencing higher levels of debt. During the pre-recession period the level of debt rose substantially across the whole of Europe. Expressed as the ratio of household financial liabilities to national gross domestic product (GDP), in some countries the debt level significantly exceeded a 100 per cent of GDP. In Ireland it reached 113 per cent in 2008, Netherlands 121 per cent and Denmark 144 per cent (Russell et al., 2011). Not only did the importance of household debt rise in the economy as a whole, but also within households' personal financial portfolios. Household Figures from the Organisation for Economic Co-operation and Development (OECD) showed that household debt as a percentage of disposable income had risen consistently since the mid-1990s (OECD, 2006) in many European countries. In that context, the extent to which the Great Recession was associated with a changing distribution of economic stress is of particular interest.<sup>2</sup>

An alternative polarization hypothesis assumes that the consequences of the Great Recession in relation to outcomes such as economic stress are likely to be broadly in line with the international trend towards increased income inequality (Piketty, 2014) and the evidence for the negative social consequences of such inequalities (Wilkinson and Pickett, 2009).

Finally, earlier critiques of the life-course perspective draw attention to the need to consider the manner in which life-course and class effects interact (Whelan and Maître, 2008, Vandecasteele 2010).

---

<sup>2</sup> See also Kus (2015)

## Data and Measures

Our analysis draws on data from 2008 and 2012 waves of the EU-SILC. We exclude individuals in households where the Household Reference Person (HRP) has never worked and where annual equivalent household income is of zero or below.<sup>3</sup> The choice of years may affect conclusions. For example both Ireland and Iceland experienced boom periods before the recession and an earlier reference period would show less dramatic changes. However, given our interest in the impact of the Great Recession and the fact that income refers to that in the previous year of the survey we concluded that the most appropriate comparison was between the 2008 and 2012. In no case was a decline in incomes observed before 2007. For those counties experiencing the sharpest falls these were observed between 2007 and 2011 although the specifics varies across countries. It should be kept in mind that the pattern of class effects observed relating to the impact of the economic crisis may be rather different from those that may be found to characterise economic recovery.

## Economic Stress

Our key dependent variable is a measure of economic stress. It is based on a set of items that are intended to capture debt problems but also capacity to cope with financial demands. Overall we understand the outcome to capture objective factors relating to debt burdens and financial obligations while also reflecting subjective elements relating to variable ability to cope with such demands and obligations and differential reference points against which financial pressures are evaluated. The absence of a clear cut distinction between objective and subjective facets of economic stress is consistent with finding from the recent literature relating to the measurement of debt problems/

While there is an agreement that debt levels have substantially increased, there has been less consensus on how over-indebtedness and its consequences should be defined and measured. Furthermore, it is widely recognized that the concept of over-indebtedness is multidimensional and therefore no single indicator can encapsulate it. The models employed for measuring consumer over-indebtedness include objective and

---

<sup>3</sup> The equivalised household income is constructed with the OECD equivalence scale which gives a value of 1 for the first adult, 0.66 for each additional adult and 0.33 for each additional child.

subjective versions (Ferreira, 2000; Finlay, 2006; Betti et al., 2007). The former is based on the notion of unsustainable spending behaviour (consumption/income ratio) or unsustainable level of debt (debt/asset ratio) or inability to service debt (debt payment/income ratio). However, there is no established methodology for determining the critical level of these ratios. Furthermore, Betti et al. (2007) argue that even if a critical level of indebtedness can be established, it is likely to fluctuate widely through the life course of an individual. The subjective approach classifies as over-indebted all those who judge themselves to be unable to repay their debts without reducing their other expenditure below their normal minimal levels. The implication is that the debt has become unsustainable. One difficulty with this measure is that tolerance for debt may vary across countries, time, socio-economic groups and individuals and therefore may be an unstable indicator if used in isolation.

As Russell (2013: 695-697) note, a consortium of researchers appointed by the European Commission to develop a common operational definition of over-indebtedness proposed a mix of objective and subjective model indicators (Davydoff et al. 2008: pp. 55–56). They included payment commitments that push the household below the poverty threshold, structural arrears on at least one financial commitment, a burden of monthly commitment payments considered to be heavy for the household, limited payment capacity, and illiquidity.

Drawing on the items available in EU-SILC our proposed indicator of economic stress includes items relating to structural arrears, burden of housing costs, illiquidity in terms of inability to meet with unexpected expenses and additionally includes items relating to debt experiences in the past 12 months and experiencing difficulty in making ends meet.

The full set of items is as follows

1 Households were defined as having a structural problem with arrears where they were unable to avoid arrears relating to mortgage or rent, or utility bills or hire purchase instalments (in the past 12 months). Those households experiencing such problems were given values of 1 while the remainder were scored as 0.



2. Focusing on illiquidity, Individuals in households indicating that they were unable to cope with unexpected expenses were scored 1 while all others were scored 0.

3. The indicator relating to the financial burden of total housing cost was based on the following question: "Thinking of your total housing costs including mortgage repayment or rent, insurance and service charges. To what extent are these costs a financial burden to you?" Three possible answers were offered and responses indicating a "heavy burden" or "somewhat of a burden" were scored as 1 while the remaining category was assigned a value of 0.

4. A further indicator of debt was captured by the question "Has the household had to go into debt within the last 12 months to meet ordinary living expenses such as mortgage repayments, rent, food and Christmas or back-to-school expenses?" A positive answer was scored as 1 while a negative one was assigned a value of 0.

5. The final item relating to ability to make ends meet is based on the following question. "A household may have different sources of income and more than one household member may contribute to it. "Thinking of your household's total income is your household able to make ends meet, namely, to pay for its usual necessary expenses?" Seven possible answers were offered from "very easily" to "great difficulty" and responses indicating "great difficulty" or "difficulty" have been given a value of 1 while the remaining categories have been scored as zero.

The average reliability of this measure across all three counties employing Cronbach's alpha was above 0.70 in both 2008 and 2012. Overall the economic stress measure displays both satisfactory levels of reliability and extremely modest variation across countries thus limiting the extent to which our conclusions regarding cross-national variation are affected by such factors.

In creating the economic stress index, following Desai and Shah (1988), each item is weighted by its prevalence weight in the total population across the sixteen countries included in the analysis. Less frequently experienced stresses (or deprivation) are allocated a proportionately greater weight. These weights are allowed to vary across time order to best capture the latent stress variable and material deprivation variable. The weighted items are then added and this produces a continuous variable which has then been 'normalized' to produce scores ranging from 0 to 1. A score of zero means

that the individual is not stressed (or deprived) on any of the items while a score of 1 means that the individual is stressed (or deprived) on all items while intermediate scores reflect the pattern of stress (or deprivation) responses and the prevalence weights at each point in time. Since the choice of thresholds for the dichotomous items making up the stress and material deprivation scales necessarily involve the exercise of judgement, the prevalence weighting procedure has the advantage of adjusting for the distributional consequences of such decisions.

Since our measure is calculated at the household level while our analysis is conducted at the individual, level our findings relate to individuals living in households experiencing variable levels of economic stress.

## **Income Class**

The economics literature is said to be “converging” (Ravallion 2010, 446) on the definition of the income limits for the middle income group as 75 and 125 % of the median. Atkinson and Brandolini (2013) note that we may either accept “the premise that middle class living standards begin when poverty ends,” as Ravallion (2010, 446) states, or instead take a more conservative approach and fix a level so as “to ensure that the lower endpoint of the middle class represents an income significantly above the poverty level,” as suggested by Horrigan and Haugen (1988: 5). Atkinson and Brandolini (2013) note that in the EU, the former criterion would bring us to identify the lower bound with the at-risk-of-poverty line, set at 60 % of the median, whereas the second criterion would rationalize the 75 % cut off as defining the “margins” of poverty as plus a quarter of the at-risk-of-poverty line. The middle class can then be said to be those “comfortably” clear of being at-risk-of-poverty. They note that the rationale for the bottom cut off implies that there exists a “lower middle class,” comprised of people whose income is in the range of 75–125 % of the median and who are neither poor nor precarious. We could analogously postulate that there is an “upper middle class” between the “lower middle class” and the rich or affluent by taking the 125 % cut off, which is a quarter less than the income level that identifies the rich. The implicit “richness line” would equal 167 % of the median. This would amount to partitioning the population into five groups.

The income class variable we employ distinguishes 5 income categories as set out below

- Less than 60 % of median equivalized income—income poor
- 60–75 % of median equivalized income—precarious income class
- 75–125 % of median equivalized income—lower middle income class
- 125–166 % of median equivalized income—upper middle income class
- 167 % of median equivalized income—affluent class

We have chosen to label those between 60 and 75 % of equivalized income as the “precarious income class” because of the evidence that this group are highly likely to experience frequent transitions into and out of poverty (Jenkins 2011).

Exploratory analysis revealed that in relation to changing life course effects and their interaction with income class the key distinctions relate to the income poor class, the precarious class and the remaining classes and our subsequent analysis will focus on this threefold distinction.

## **The Changing Distribution of Economic Stress across the Life Course**

Earlier analysis focusing on the original EU-15 (other than Luxembourg) together with Iceland and Norway identified Ireland, Iceland and Greece as the countries experiencing distinctive increases in economic stress, between 2008 and 2012 (Whelan *et al* 2015). In Table 1 we provide a brief summary of overall changes in levels. In 2008 Ireland, Iceland and Greece were characterized by similar stress levels counties in the welfare regimes to which they are normally assigned with mean levels respectively of respectively 0.212, 0.130 and 0.286. However while the latter countries experienced modest changes over time stress levels in Ireland, Iceland and Greece respectively, by 2012 mean levels had increased to 0.233, 0.323 and 0.403. The changes involved similar absolute increases of average magnitude of 0.110. The proportionate increases exceeded 50% and 40% respectively in Ireland and Greece and a doubling of stress levels in Iceland, although from a very low base.

<i>Table 1: Economic Stress by Country and Welfare Regimes</i>		
	<b>2008</b>	<b>2012</b>
Iceland	0.130	0.233
Ireland	0.212	0.323
Greece	0.286	0.403

In Table 2 we show the breakdown of economic stress across the life course by country and date of survey. In 2008 in Ireland a clear life course gradient was observed with the stress level declining gradually from 0.254 for children to 0.119 for the elderly. A particularly sharp contrast was observed between the latter and all others with an average difference of 0.105. The largest increase between 2008 and 2012 was observed for children with an increase of 0.146 and the smallest of 0.042 for the elderly. Increases for the remaining age groups display a clearer gradient with a gradual decline from 0.131 to 0.102. Consequently by 2012 the observed life course gradient was sharper with values ranging from 0.400 for children to 0.151 for the elderly.

In Iceland in 2008 stress levels were substantially lower at all stages of the life course than in Ireland. However, as in the Irish case there was a clear gradient with levels for children once again being twice those for the elderly, with respective values of 0.158 and 0.073, although with somewhat less differentiation in the higher income categories than in the Irish cases. Between 2008 and 2012 the pattern was accentuated with increases for children being almost double those for the elderly with respective values of 0.142 and 0.079. For the remaining categories the magnitude of increases was broadly similar with an average level of 0.104. As In Ireland this produced a sharper contrast between children and all other groups but particularly the elderly.

In Greece in 2008, in contrast to Ireland and Iceland, there was an absence of life course differentiation in economic stress levels. Between 2008 and 2012 a similar pattern of change was observed for the three youngest age groups with average increases in stress levels of 0.153. This fell to 0.115 for the older middle aged group and for the elderly to 0.023.

Thus in Ireland and Iceland the initial advantages enjoyed by older groups, in particular, the elderly were accentuated, Furthermore, in both cases the situation of

children deteriorated significantly. In Greece on the other starting from a situation of minimal life course differentiation the relative outcomes for the older groups and, in particular the elderly, improved but there was little change in the relative circumstances of the youngest groups with no particular deterioration in the circumstances of children.

Table 2: Economic Stress by Life Course Stage for Ireland, Iceland and Greece						
	Ireland		Iceland		Greece	
	2008	2012	2008	2012	2008	2012
Life Course Stage						
Children ( 0-17)	0.254	0.400	0.158	0.290	0.291	0.441
Young Adults (18-29)	0.243	0.374	0.154	0.247	0.294	0.452
Younger Middle Age (30-44)	0.212	0.327	0.142	0.268	0.277	0.429
Older Middle Age (45-64)	0.186	0.288	0.099	0.202	0.277	0.392
Elderly ( 65 +)	0.119	0.151	0.073	0.105	0.300	0.323
Eta <sup>2</sup>	0.023	0.057	0.019	0.040	0.001	0.023
N	0.254	0.400	8,147	8,353	16,731	13,663

## Economic Stress, Life Course Differentiation and Income Class

At this point we seek to go beyond a description of the overall patterns of life courses change in relation to economic stress and consider that manner in which such effects are distributed across income classes and, in particular, the extent to which class location moderates such effects.

In Table 3A we set out the distribution of economic stress levels across life course stages and income classes for Ireland in 2008 and 2012. Based on exploratory analysis for we distinguish between the income poor, the precarious class and the high income group. From Table 3 we can see that in Ireland 2008 there was a clear life course gradient in relation to stress for all income groups but one that was rather sharper for the poor and precarious groups rather than the more affluent ones. The respective percentages of variance accounted for by life course differentiation were 6.3%, 9.8% and 1.9%. Among the income poor, children were clearly associated with the highest level of stress with a mean of 0.412 while the lowest level of 0.173 was found for the elderly while the average for the remaining groups was 0.340. The distribution for the

precarious category differed only in that the values for the three youngest categories displayed less variation and were more sharply contrasted with the older groups. Finally for the higher income class category the main distinction was between the elderly with a stress level of 0.077 and the remaining categories with an average value of 0.167. Life course stage variation and, particular the contrast between the elderly and the remaining life course stages was of significantly greater import for the precarious and poor income classes than for the high income classes. The respective differences are 0.185, 0.224 and 0.091. The major line of differentiation in class terms was between the income poor and precarious classes and the higher income group. In income class terms, by far the sharpest contrast was for children with the average scores for the poor and precarious classes being 0.240 higher than for the higher income class while for the elderly it was 0.088. For the intervening life course stages the average difference was 0.201.

The changes between 2008 and 2012 produce an even sharper contrast between the elderly and the rest of the population within the income poverty category with the former experiencing an increase of 0.017 while the average for the remaining categories is 0.153. The older middle age group also improves its relative position with an increase of 0.112 in comparison with an increase of 0.201 for the younger middle age group and an average of 0.153 for the two younger age groups. Among the precarious class it is again the elderly who are most insulated over time with contrasting change values of 0.023 and 0.099. However, on this occasion the largest increase was experienced by older middle aged group with an increase of 0.127. The favourable experience of the elderly was sustained for the higher income class where a modest increase of 0.060 contrasted with that of 0.163 for children and an average increase of 0.107. However, it is notable that absolute increases in stress for children and the elderly were actually greatest in the high income category. So while the elderly continued to enjoyed a relative advantage that was robust across class categories, the accentuation of that advantage did not follow a hierarchical pattern but rather was greatest in the income poor class and least in the precarious class. The fortune of the remaining life course groups also varied across class categories with children experiencing the sharpest relative deterioration in their position in the higher income group, although the absolute increase was of similar magnitude among the poor, while for the younger

middle aged group the sharpest deterioration occurred among the income poor and for the older middle aged group among the precarious class. By 2012 the respective average gaps between the non-elderly and elderly groups for the income poor, precarious and high income groups had increased to 0.322, 0.300 and 0.154. The respective percentages of variance accounted for by life course differentiation were 11.5%, 13.0% and 4.1% reflecting an increased importance across all income classes but a maintenance of the ranking in relative explanatory power observed in 2008. In income class terms the major contrast related to the average impact of income poverty and precarity for the elderly versus the rest of the population with respective differences of 0.049 and 0.206.

Table 3A: Economic Stress by Life Course Stage by Income Class : Ireland						
	2008			2012		
	Income Poor	Income Precarity	Higher Income	Income Poor	Income Precarity	Higher Income
Life Course Stage						
Children ( 0-17)	0.412	0.414	0.173	0.574	0.498	0.336
Young Adults (18-29)	0.347	0.413	0.199	0.490	0.508	0.318
Younger Middle Age (30-44)	0.342	0.392	0.165	0.543	0.483	0.275
Older Middle Age (45-64)	0.330	0.309	0.133	0.442	0.436	0.234
Elderly ( 65 +)	0.173	0.158	0.077	0.190	0.181	0.137
Total	0.336	0.338	0.159	0.485	0.432	0.270
Eta <sup>2</sup>	0.063	0.098	0.019	0.115	0.130	0.041
N	1,885	1,825	8,700	1,816	1,432	8,549

In Table 3 B we provide a comparable analysis for Iceland. While economic stress levels were considerably lower in Iceland than in Ireland in 200, the pattern of life course effects was broadly similar for all three income class categories. In each case the highest levels of stress were observed for the three youngest age groups and the lowest for the oldest category with the older middle age group occupying an intermediate position. However, again as in Ireland such variation was considerably sharper in the income poor and precarious classes where the gaps between children and oldest elderly were respectively 0.150 and 0.175 whereas for the higher income group it falls to 0.069. As with the Irish case, viewed from an income class perspective, the main contrast is between the income poor and precarious classes and the higher income group with the contrast being of similar magnitude for the two youngest age groups with average

difference of approximately 0.150 before declining progressively to 0.137, 0.094 and 0.058 for the older age groups. In 2008 the proportion of variance accounted for in each of the three class categories was respectively 5%, 6.1% and 1.2%.

By 2012 stress levels increased for all age groups in the income poor category. However, by far the sharpest increases of 0.147 and 0.145 were observed for the older middle age and elderly groups. They were followed by children and younger middle age groups with increases of 0.117 and 0.097 respectively followed by the younger middle aged group with the most modest increase of 0.043. Stress levels increased for all age groups in the precarious income class but with a somewhat different pattern of variation than for the income poor. The sharpest increases were associated with the middle aged groups with an average of 0.118 compared to the corresponding figure of 0.086 for the three youngest age groups and one of 0.056 for the elderly. For the upper income category by far the largest increase in stress levels of 0.145 was observed for children. In contrast, the increase for the elderly was a modest 0.036. For the remaining categories the average increase was 0.106. While the explanatory power of life course differentiation declined for the income poor and remained relatively stable for the precarious class it increased for the higher income group; accounting for respectively 1.2%, 5.0% and 3.9%. As a consequence of these changes the strength of the impact of poverty across the life course changed significantly and this is an issue to which we will return in our subsequent multivariate analysis.

Table 3B: Economic Stress by Life Course Stage by Income Class : Iceland						
	2008			2012		
	Income Poor	Income Precarity	Higher Income	Income Poor	Income Precarity	Higher Income
Life Course Stage						
Children ( 0-17)	0.267	0.284	0.119	0.384	0.368	0.264
Young Adults (18-29)	0.285	0.239	0.112	0.328	0.333	0.219
Younger Middle Age (30-44)	0.258	0.255	0.115	0.355	0.337	0.250
Older Middle Age (45-64)	0.184	0.179	0.088	0.331	0.302	0.189
Elderly ( 65 +)	0.117	0.109	0.050	0.262	0.165	0.086
Total	0.234	0.219	0.103	0.348	0.313	0.211
Eta <sup>2</sup>	0.050	0.061	0.012	0.012	0.050	0.039
N	801	983	6,363	607	970	6,783



Once again the pattern for Greece, as set out in Table 3C, is rather different to that relating to Iceland and Ireland. In 2008 for all three income classes life course variation was negligible. Correspondingly income class variation within life-course stage was relatively uniform. Between 2008 and 2012 age differentiation was introduced primarily by the fact that increases in stress levels were more modest for the older age groups and in particular the elderly in all income classes. Thus among the income poor group for the elderly an increase of 0.023 was observed compared to an average increase of 0.171 for the remaining categories. For the precarious class the corresponding figures were 0.076 and 0.181 and for the higher income class 0.034 and 0.115.

Table 3C: Economic Stress by Life Course Stage by Income Class : Greece						
	2008			2012		
	Income Poor	Income Precarity	Higher Income	Income Poor	Income Precarity	Higher Income
Life Course Stage						
Children ( 0-17)	0.434	0.398	0.225	0.604	0.573	0.349
Young Adults (18-29)	0.437	0.400	0.240	0.617	0.548	0.352
Younger Middle Age (30-44)	0.423	0.390	0.227	0.600	0.585	0.351
Older Middle Age (45-64)	0.442	0.380	0.224	0.597	0.486	0.318
Elderly ( 65 +)	0.441	0.386	0.236	0.464	0.462	0.270
Total	0.435	0.389	0.229	0.582	0.531	0.324
Eta <sup>2</sup>	0.001	0.001	0.001	0.040	0.031	0.013
N	3,260	1,756	11,715	2,966	1,471	9,196

## Multivariate Analysis of Income to and Life Course Interaction

In this section we employ multiple regression provide a more formal analysis of income class and life course analysis in relation to economic stress. In the former case the reference category is the higher income group and in the latter it is the elderly.

In Table 4, focusing first on Ireland, we can see that when we allow for all possible interactions between life course and income class categories, in both 2008 and 2012 all eight coefficients are positive and significant, indicating that the impact of both poverty and precarity varied significantly across each stage of the life course at both points in

time. Even for the group most insulated from economic stress, the elderly in the highest income class, the mean level of stress increased from 0.077 to 0.140. In Figure 1 for 2008 and 2012, taking the high income and elderly group as the benchmark, we set out the deviations from this group for each combination of life course stage and income class.

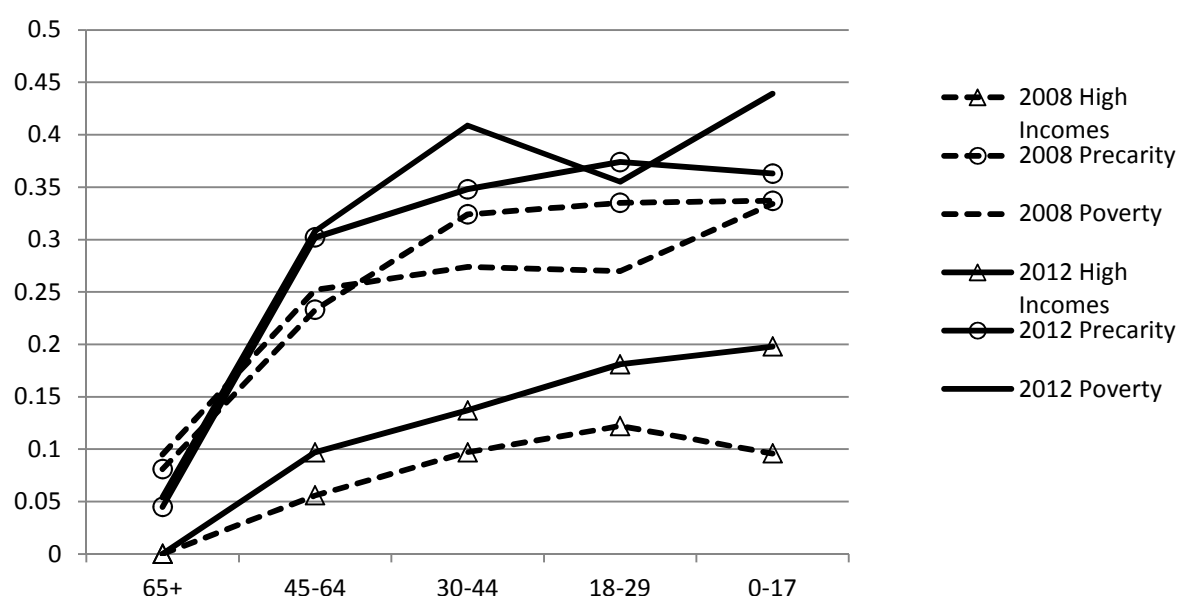
Table 4: OLS Regression Iceland of Economic Stress on Life Course Stage & Poverty & Precarity						
	2008			2012		
	Ireland	Iceland	Greece	Ireland	Iceland	Greece
0-17	0.096 ***	0.069 ***	-0.011 ns	0.198 ***	0.178 **	0.077 ***
18-29	0.122 ***	0.068 ***	0.004 ns	0.181 ***	0.134 ***	0.081 ***
30-44	0.097 ***	0.065 ***	-0.009 ns	0.137 ***	0.165 ***	0.079 ***
45-64	0.056 ***	0.038 ***	-0.012 ns	0.097 ***	0.103 ***	0.046 ***
Reference category 65+						
Poverty	0.095 ***	0.066 ***	0.205 ***	0.054 *	0.178 ***	0.198 ***
Precarity	0.081 ***	0.059 ***	0.150 ***	0.045 *	0.082 ***	0.196 ***
Reference category - higher Incomes						
Poverty*0-17	0.143 ***	0.090 ***	0.004 ns	0.187 ***	-0.055 ns	0.062 ***
Poverty*18-29	0.053 ***	0.100 ***	-0.008 ns -	0.120 ***	-0.067 ns	0.070 ***
Poverty*30-44	0.082 ***	0.076 ***	-0.009 ns	0.218 ***	-0.071 ns	0.055 ***
Poverty*45-64	0.101 ***	0.030 ns	0.012 ns	0.157 ***	-0.034 ns	0.085 ***
Precarity*0-17	0.160 ***	0.105 ***	0.024 ns	0.120 ***	0.024 ns	0.032 ns
Precarity*18-29	0.132 **	0.062 ***	0.008 ns	0.148 ***	0.034 ns	0.004 ns
Precarity*30-44	0.146 ***	0.081 ***	0.014ns	0.166 ***	0.007 ns	0.042 ***
Precarity*45-64	0.096 ***	0.033 ns	0.005ns	0.160 ***	0.033 ns	0.024 ns
Constant (elderly & higher incomes)	0.077	0.050	0.236	0.140	0.087	0.273
R <sup>2</sup>	0.127	0.07	0.104	0.136	0.061	0.166
N	12,410	8,147	16,731	11,797	8,353	13,633

So our focus is on relativities at each point. The absolute increase over time for such groups for group includes both the increase for the reference category and changes over time in life course differentials.

The bottom two curves in Figure 1 show the life course differentials for the high income group. Over time the degree of advantage enjoyed by the elderly group increased in relation to all other stages of the life cycle with the magnitude of the change ranging from 0.040 for the younger middle aged group to 0.092 for children. The third and fourth curves focus on the precarious class. In 2008 within the precarious class the

difference in stress levels relative to the benchmark category ranged from 0.081 for the elderly to 0.337 for children. In 2012 its relative disadvantage relating to the elderly decreased slightly but increased modestly for all other groups with the largest increase being of 0.070 being for the older middle aged group. The relative advantage enjoyed by the elderly in relation to all other life course groups increased with the magnitude of the differential ranging from 0.105 for the older middle aged group to 0.065 for children. The fifth and sixth curves show the outcomes of the income poor group in 2008 and 2012. In 2008 within the income poverty class disadvantage relative to the benchmark category was least for the elderly group with a coefficient of 0.095 before rising to an average of 0.265 for intermediate groups and peaking at 0.334 for children. In 2012 the relative disadvantage for the elderly fell to 0.054. However, for all other groups it increased. The increase was most modest for the older middle aged group at 0.056. It rose to 0.105 for children and finally to 0.135 for the younger middle aged group. As a consequence of these changes among the income poor, the gap between the elderly and the remaining life course groups rose by 0.016.

*Figure 1: Economic Stress by Life Course Stage and Income Class in Ireland in 2008 and 2012*

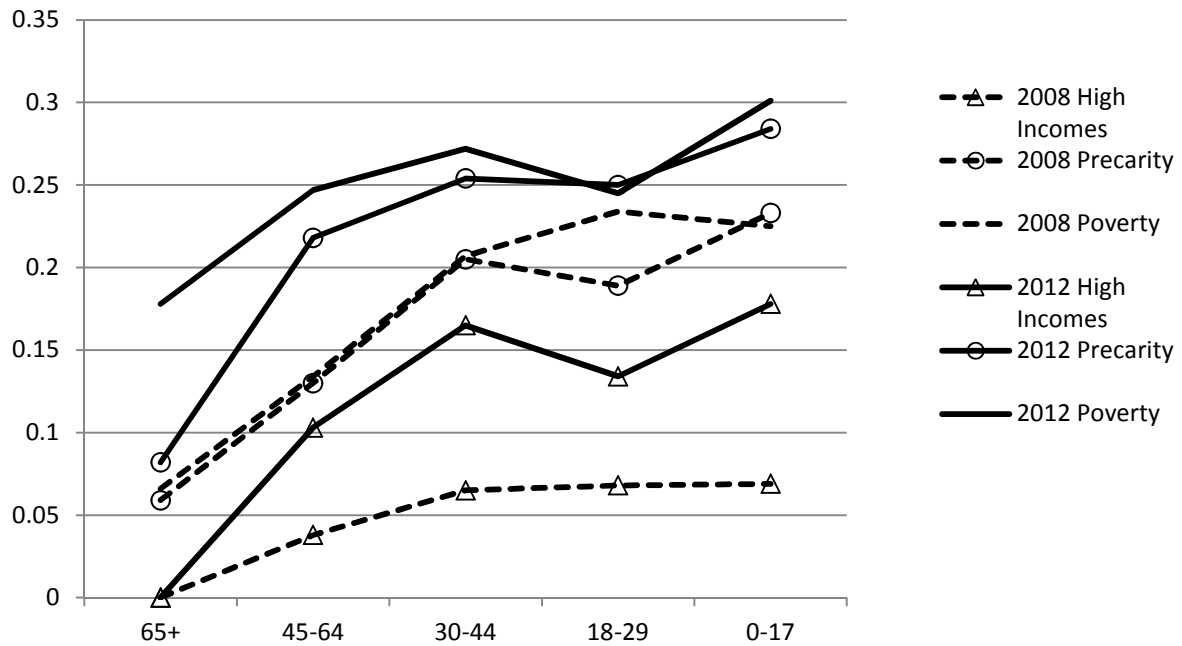


Thus over time life course differentiation in relation to economic stress increased substantially. This can be thought of as involving two components. The first involves variability in increase in stress that is common across income class categories and in that respect children and the older middle age group suffered most. The second involves

changes in the additional effects of poverty. In 2008 such additional effects involved a clear contrast between the elderly and all others. By 2012 this contrast had been sharpened particularly for the three youngest group but particularly for children and the older middle aged.

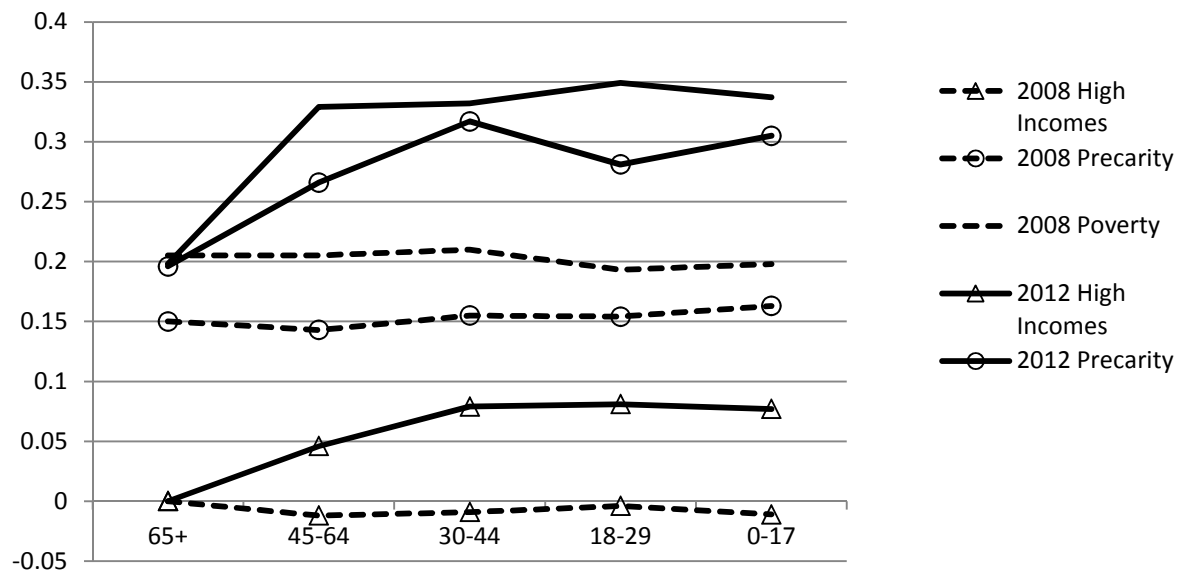
Focusing on the results relating to Iceland, we see that compared to Ireland, stress levels for the high income group increased more modestly for the elderly going from 0.050 to 0.087. As in Ireland in 2008 the interaction coefficients for precarity and poverty were significant for children, young adults and the younger middle age groups. However, there were no significant differences for the older middle aged groups. However, in 2012 none of the eight life course – income class interactions was significant. In Figure 2, again taking the elderly high income class as the benchmark, we document the changing patterns of life course relativities for all three income classes. The bottom two lines show life course variation relative to the reference category in both 2008 and 2012. In 2008 stress levels were 0.038 were higher for the older middle aged group and an average of 0.061. By 2012 the gap between the elderly and all other life course stages had risen. The increases ranged from 0.103 for the older middle aged group to 0.178 for children. The third and fifth lines show life course variation relative to the benchmark group for the precarious income class. In 2008 the impact of precarity for elderly was 0.059. The impact of precarity then increased relative to this group for the three youngest age groups by an average of 0.089 with only modest variation. In 2012 unlike the case for Ireland the impact of precarity among the elderly increased slightly to 0.080. However, unlike the case for Ireland and for Iceland in 2008, the absence of significant interactions between life course stage and income class indicates that the impact of the former was uniform across categories of the latter. The fourth and sixth lines show the relativities for the income poor class. In 2008 for the elderly group poverty increased stress levels by 0.066. Additional effects averaging 0.062 were observed for the three youngest groups. In sharp contrast with Ireland, by 2012 the impact of poverty increased sharply for the elderly to 0.178. Furthermore, unlike the Irish case, the life-course- income class interactions were negative rather than positive although not statistically significant. Thus the relative advantage enjoyed by the elderly in relation to the impact of poverty had been eroded by 2012 which again provides a clear contrast with the Irish case.

Figure 2: Economic Stress by Life Course Stage and Income Class in Iceland in 2008 and 2012



Focusing on the coefficients for Greece in Table 4 we can see that in 2008 there was a complete absence of life course effects across income classes. Thus, as is clear from the three bottom lines in Figure 3, precarity increases stress levels by 0.150 and poverty by 0.205 across income classes. By 2012 the impact of precarity and poverty among the high income rose respectively to 0.196 and 0.198. As shown in lines 3 and 5 of Figure 3, in relation to precarity there was no significant life course – income class interactions with the increase in the impact of precarity being experienced in a relatively uniform fashion. In contrast, as illustrated in lines 4 and 6 of Figure 3 the impact of poverty was significantly higher in all the non-elderly with an average differential of 0.068 and relatively modest variation across groups. So while the elderly, in common with other groups, experienced a sharp deterioration in their absolute stress levels their position deteriorated less sharply than for other life course stages.

Figure 3: Economic Stress by Life Course Stage and Income Class in Greece in 2008 and 2012



## Conclusions

In this paper we have sought to establish the extent to which the impact of the Great Recession has led to changes in the distribution of economic stress across the life course in Ireland one of the countries severely affected by the economic crisis. We have also sought to establish the extent to which such changes are moderated by income class. Earlier work has suggested that the relationship between economic crisis and inequality operates through complex channels. Taking both life course and income class effects and their into account allows us to assess the extent to which individualization and polarization perspectives prove to be useful in assessing the impact of the Great Recession and the extent to which it has relatively uniform as opposed to diverse outcomes

Here we have taken advantage of the availability of data from EU-SILC to place the Irish experience in comparative context specifically by comparing the Irish outcomes with those for Iceland and Greece the two countries which earlier analysis has shown to be closest to Ireland in experiencing distinctive increases in stress levels.

Our peak to trough analysis shows that in Ireland in 2008 there was a clear age gradient in relation to economic stress with children occupying the most favourable and the elderly the least favourable position. Over time the gradient became sharper with the relative position of younger groups deteriorating. Turning our attention to how such change operated across income classes we found that in 2008 life course differentiation was significantly sharper for the precarious and poverty classes than for the high income groups. For the former age differentiation across the range of the life course was evident while for the latter the primary contrast was between the elderly and all other stages. Thus the major line of differentiation in terms of both overall stress levels and their patterning across the life course was between the precarious and poor income classes and the high income group. Over time while stress levels increased for all groups within the high income class a clear life course gradient was observed in relation to the magnitude of the changes with the elderly group enhancing their already favourable position while children saw the sharpest deterioration. Among the precarious and poor classes class, the elderly again experienced an improvement in their relative position while for the former the sharpest deterioration was experienced by the older middle aged group and for the latter the younger middle aged group.

Comparing the outcomes for Ireland with those for Iceland and Greece, we see that from a similar starting point to Ireland the former exhibits a quite different trajectory of change. While the elderly in Ireland saw their initial advantages enhanced, in Iceland it was eroded. Greece provides an example of another contrasting pattern with the initial stage being characterised by a complete absence of life course differentiation across all classes. By 2012 stress levels had increased for all stages of the life course for the high income class but less so for the oldest age groups and most particularly for the elderly. The pattern for the precarious group was identical to that for the high income but the elderly enjoyed an additional advantage in relation to the impact of poverty in 2012.

Thus life course change in Ireland was quite distinctive in that, from a starting point characterised by clear income gradient the impact of the Great Recession sharpened such differentials particularly in relation to the elderly. The increased salience of life course differentiation involved two components. The first related to variability in increase in stress across the life course that is common across income class categories. In that respect children and the older middle age group suffered most. The second

involves changes in the additional effects of poverty. In 2008 such effects were most evident for children and the older middle aged and over time the impact of poverty for these groups did increase. However, the increases were of greater magnitude for young adults and, in particular, the younger middle aged group. As a consequence, while the variable impact of poverty increased the differentials between the elderly and all other groups, it reduced the degree of differentiation between the non-elderly groups. Thus the deteriorating relative situation of children was due largely to cross-class increases in stress levels rather than to increased exposure to income poverty or increased sensitivity to such poverty. Income precarity also increased stress levels. However, its degree of variability across non-elderly categories and time was a good deal more modest than in the case of income poverty. That the Irish pattern of change was not an inevitable outcome of the economic crisis is illustrated by the fact in Iceland a similar starting point produced a quite different set of changes involving an erosion of life course differentials in the impact of precarity and poverty. Greece on the other hand provides an example of the emergence of life course differentiation where the pre-recession period was characterised by their absence. Clearly policy choices not only affect such differentiation but the extent to which they operate in a uniform or variable fashion across income classes.



## References

- Atkinson, A. B. and Brandolini, A. (2013) 'On the Identification of the Middle Class', in J.C. Gornik and M. Jäntti (eds) *Income Inequality: Economic Disparities and the Middle Class in Affluent Countries*. Stanford, CA: Stanford University Press
- Atkinson, A. B. and Morelli, S. (2011) *Economic Crises and Inequality*, Human Development Research Paper, 2011/6
- Beck, U. (1992) *Risk Society. Towards a New Modernity*. SAGE: London
- Betti, G., Dourmashkin, N., Rossi, M. and Yin, Y. (2007) 'Consumer over-indebtedness in the EU: measurement and characteristics', *Journal of Economic Studies*, 34: 136–156.
- Bonoli, G. (2005) 'The Politics of New Social Policies: Providing Coverage against New Social Risks in Mature Welfare States', *Policy and Politics* 33(3): 431–449.
- Callan, T., Nolan, B., Leane, C., Savage, M. and Walsh, J. R. (2014) 'Crisis, Response and Distributional Impact: The Case of Ireland', *IZA Journal of European Labour Studies*, 3(9): 1-17.
- Davydoff, A., Naacke, G., Dessart, E., Jentzsch, N. et al. (2008) 'Towards a Common Operational European Definition of Over-indebtedness'. European Communities: Directorate-general for Employment, Social Affairs and Equal Opportunities European Commission
- Eichengreen, B. (2015) *Hall of Mirrors: The Great Depression, The Great Recession and the Uses and -Misuses of History*, New York: Oxford University Press.
- Ferreira, A. (2000) *Household Over-indebtedness: Report to the Economic and Social Committee*, Brussels: European Communities

- Finlay, S. M. (2006) 'Predictive models of expenditure and over-indebtedness for assessing the affordability of new consumer credit applicants.' *The Journal of the Operational Research Society*, 57: 655–669.
- Gornik, J. & Jännti, M. (2013) 'Introduction'. In J. C. Gornik & M. Jännti (Eds.), *Economic disparities in the middle class in affluent countries*. Stanford: Stanford University Press.
- Horrigan, Michael W. & Haugen, Steven E. (1988) 'The declining middle class thesis: A sensitivity analysis', *Monthly Labor Review*, 111(5): 3–13.
- Jenkins, S. P. (2011) *Changing fortunes: Income mobility and poverty dynamics in Britain*. Oxford: Oxford University Press.
- Jenkins, S. P., Brandolini, A., Micklewright, J., & Nolan, B. (2013) *The great recession and the distribution of household income*. Oxford: Oxford University Press
- Kus, B. (2015) 'Sociology of Debt: States, Credit Markets and Indebted Citizens, *Sociology Compass*, 9(3): 212-223
- Kus, B. (2013) 'Credit, Consumption, and Debt: Comparative Perspectives', *International Journal of Comparative Sociology* 54(3): 183-186.
- OECD (2006). 'Has the rise in debt made households more vulnerable?' OECD Economic Outlook 80. Paris: OECD. <http://www.oecd.org/dataoecd/40/31/39698857.pdf>.
- Pintelon, O., Cantillon, B., van den Bosch, K. and Whelan, C. T. (2013) 'The Social Stratification of Social Risks: Class and Responsibility in the New Welfare State', *Journal of European Social Policy*, 23(1): 52-67
- Piketty, T. (2014) *Capital in the Twenty-First Century*, Harvard University Press, Cambridge, Massachusetts

Ravallion, M. (2010) 'The developing world's bulging (but vulnerable) middle class'. *World Development*, 38(4): 445–454

Russell, H, Whelan, C. T. and Maître, B (2013) 'Economic Vulnerability and the Severity of Debt Problems: An Analysis of the Irish EU-SILC 2008', *European Sociological Review*, 29 (4):695-706

Savage, M, Callan, T., Nolan, B. and Colgan, B. (2015) 'The Great Recession, Austerity and Inequality: Evidence from Ireland', ESRI Working Paper No. 499, Dublin: Economic and Social Research Institute

Taylor-Gooby, P. (2004) 'New Risks and Social Change', in P. Taylor-Gooby (ed.) *New Risks, New Welfare: The Transformation of the European Welfare State*. Oxford: Oxford University Press

Vandecasteele, L. (2007) 'Dynamic Inequalities. The Impact of Social Stratification Determinants on Poverty Dynamics in Europe'. *Unpublished PhD Thesis*. Leuven: Faculty of Social Sciences, Katholieke Universiteit Leuven.

Vandecasteele, L. (2010) 'Poverty Trajectories after Risky Life Course Events in Different European Welfare Regimes', *European Societies* 12(2): 257–278.

Whelan, C. T. and Maître, B (2008) 'New; and 'Old' Social Risks: Life Cycle and Social Class Perspectives on Social Exclusion in Ireland', *Economic and Social Review*, 39(2): 131-156.

Whelan, C. T., Russell, H. and Maitre, B. (2015) 'Economic Stress and the Great Recession in Ireland: Polarization, Individualization or Middle Class Squeeze?' *Social Indicators Research*, DOI [10.1007/s11205-015-0905-x](https://doi.org/10.1007/s11205-015-0905-x)

Whelan, C. T. & Maitre, B. (2014) 'The Great Recession and the Changing Distribution of Economic Vulnerability by Social Class: The Irish Case.' *Journal of European Social Policy*, 24 (5):470-485.

Whelan, C. T., Nolan, B. and Maître, B (2015) The “Squeezed Middle” in the Great Recession: A Comparative European Analysis of the Distribution of Economic Stress, *Geary WP 2015/12 Dublin: University College Dublin*

Wilkinson, R. and Pickett, (2009) *The Spirit Level: Why Equality is Better for Everyone*. London: Penguin Books