

## **Increasing the State Pension Age, the Recession and Expected Retirement Ages**

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*Abstract:* In March 2010, the Irish government announced that the age at which the state pension is paid would be raised to 66 in 2014, 67 in 2021 and 68 in 2028. One typical objective of such policy reforms is to provide an incentive for later retirement. The question we address in this paper is whether the expected retirement ages of Irish individuals aged 50 to 64 changed as a result of the policy announcement. The data we use are from the Irish Longitudinal Study on Ageing (TILDA). Our findings show that there was no noticeable break in expected retirement ages before and after 3 March, 2010 (the day on which the policy announcement was made). Also during 2010, the economic news became increasingly bad as the full scale of the fiscal and banking crises in Ireland emerged. The data suggest that there was a reduction in the proportion of people planning to retire at age 65 after 30 September, 2010, the day that the full scale of the banking crisis emerged.

### I INTRODUCTION

Population ageing is a feature of many countries and the challenges which arise as a result of this demographic trend are increasingly discussed in the health and economics literatures. Within economics, much of the discus-

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sion has focused on the long-term pressures on the public finances that will be experienced as the population structure shifts towards those who are aged 65 and over and away from those who are in the “standard” working age bracket. The possibility of a public pension time-bomb is probably the most familiar concern.

Recognising the growing pension-related pressures and the threat they pose to the sustainability of the public finances, many countries have announced reforms to their public pensions systems. In March 2010, the Irish government joined this international trend and announced that the age at which the state pension is paid would be raised to 66 in 2014, 67 in 2021 and 68 in 2028. One goal of this policy is to contain spending on social welfare pensions in the coming years. Another goal is to provide an incentive for people to remain in the labour force beyond the age of 65, thereby increasing labour supply and national output. The reason for pre-announcing the policy is to provide people with time to adjust their expected paths of work and retirement.

The primary question we address in this paper is whether or not individuals approaching retirement age in Ireland adjusted their expected ages of retirement in response to the policy announcement of the raising of the state pension age. This is an important question within Ireland but, as noted above, with many countries implementing similar policies, there is an international interest in seeing how individuals react to pension policy changes. While we typically expect individuals to react to policy changes, reactions to initiatives in the pensions sphere may be different. Pensions are inherently complicated and distant, in a temporal sense, and so individuals with short time horizons and possibly limited knowledge of pension policies and structures may be less likely to react to long-off pension changes compared, for example, to tax changes which have immediate impacts.

The number of studies that have investigated whether individuals alter their expected age of retirement in response to pension policy reforms is limited. In Europe, evidence has been collected in Italy and Germany. Brugiavini (1999) investigated whether Italian individuals responded to the 1992 pension reform by comparing retirement expectations in 1991 and 1993. Contrary to expectations, she found that Italian individuals decreased their expected retirement age, although the reform increased the mandatory retirement age. The author argued that the debate on early retirement initiated by the reform shifted the attention of Italian workers on the issue of early – rather than normal – retirement. Mastrogiamco (2004) found that in the period 1989 to 2000, the expected retirement age of Italian individuals increased by more than two years. Similar conclusions were drawn by Bottazzi *et al.* (2006), who found that both Italian men and women altered their retirement expectations in response to the whole set of reforms that took place

in Italy in the 1990s (a delay of two years for men and three years for women). The authors also found that those who altered their expectations the most were those who had better knowledge of the social security system.

In Germany, Coppola and Wilke (2010) studied the effects of the increase in the state pension age from 65 to 67 years introduced by the 2007 reform. The results of the econometric model employed in the paper showed that the introduction of the pension reform motivated better educated male workers to remain longer in the labour force. However, weaker results were found for women.

We use data from the first wave of The Irish Longitudinal Study on Ageing (TILDA) in our analysis. TILDA is a nationally-representative sample of people aged 50 and over and living in Ireland. The sample includes over 8,000 observations and contains detailed information on the economic, social and health circumstances of the participants. As the fieldwork for the TILDA data collection was conducted between late 2009 and early 2011, we have observations on random samples before and after the announcement of the policy reform. This allows us to explore whether retirement expectations altered after the policy announcement.

It must be noted, of course, that the Irish economy suffered severe difficulties over the period 2009-2011 when the data was being collected and there may be reason to think that macroeconomic cycles can affect retirement decisions. For example, as the economic crisis led to falls in asset values, people whose wealth had declined may have decided to restore wealth holding through longer careers. The empirical literature on this point suggests that the effects for individuals approaching retirement may be small (see, for example, Sevak 2002, Gustman et al 2009 and McFall 2011). Nevertheless, we think it is important that we account for the recession in our analysis. In doing this, we are also able to assess if people altered their expected retirement ages in response to the recession, thereby giving the paper a further innovative strand.

The paper is structured as follows. In Section II, we highlight the key features of Ireland's pension system. In Section III, we describe the methods and data. The results follow in Sections IV (descriptive) and V (regressions). We conclude in Section VI.

## II THE IRISH PENSION SYSTEM AND THE PENSION REFORM

At present, the pension system in Ireland comprises two main elements. The first is the state-run Social Welfare system; the second comprises supplementary pensions provided through a number of arrangements and regulated by the State.

The first pillar consists of two types of payments: (a) state pension (contributory), paid to people aged 66 and above who have made sufficient social insurance contributions (maximum of €230.30 per week in 2010); and (b) state pension (non-contributory) which is financed through general taxation, is means-tested and is paid according to need from 66 years of age (maximum of €219 per week in 2010). Although the state pension (contributory) is paid from age 66, individuals are entitled to the state pension (transition) when they reach age 65, provided that they have paid enough contributions. The state pension (transition) is paid only for one year and individuals are then automatically transferred to state pension (contributory) when they reach age 66. This means that, in practice, those who have paid enough social insurance qualify for the state pension at age 65.

The second pillar comprises supplementary pensions which can take the form of pensions sponsored by the employer (occupational pension schemes), or personal pensions such as Retirement Annuity Contracts (RACs) and Personal Retirement Savings Accounts (PRSAs). The two standard types of occupational pension schemes offered in Ireland are defined benefit and defined contribution schemes. Defined benefit schemes provide the employee with a pension “promise” of a certain percentage of an employee’s final salary. Defined contribution schemes offer a pension determined by the level of contributions invested into a fund, its investment performance and the charges levied.

On 3 March, 2010, the Irish government announced that a number of significant changes will be made to the Irish pension system in the near future. In particular, the government announced that the State pension age will rise to 66 in 2014, 67 in 2021 and 68 in 2028. This implies that the reform will affect those born on 1 January, 1949 or onwards. Under the old legislation, those born in 1949 would qualify for the state pension (transition) at age 65 in 2014. With the new rules, they will directly qualify for the state pension (contributory) at age 66 in 2015. In other words, the first change introduced by the reform implies the abolition of the state pension (transition). The minimum qualifying state pension age will be 66 for those born between 1 January, 1949 and 31 December, 1954; 67 for those born between 1 January, 1955 and 31 December, 1960 and 68 for those born on or after 1 January, 1961.

The media covered the news of the reform on and just after 3 March, 2010.<sup>1</sup> However, there was basically no discussion in the media about the

<sup>1</sup> It was covered on TV (e.g., *RTE news*), radio (e.g. *Morning Ireland*) and newspapers (e.g. *The Irish Times*) on 3/4 March 2010.

reform in the months preceding the announcement of the reform. The reform became law on 29 June, 2011, with the publication of the Social Welfare and Pensions Act 2011.

Nivakoski and Barrett (2012) provide information on the proportion of total income which is derived from the state pension across categories of retirees and it is evident that the state pension provides a significant proportion of total income for the average retiree. Across the full sample of male retirees, the state pension (contributory and non-contributory) was found to account for 50 per cent of income, or €194 per week out of a total average income of €395 per week. For women, the proportion was higher, at 62 per cent. As would be expected, the state pension makes up a higher proportion of income for those with lower earnings. For men earning less than €250 per week, the state pension accounts for 90 per cent of earnings.

As regards pension coverage for existing employees beyond the state pension, Mosca and Barrett (2011) showed that 20 per cent of male employees aged between 50 and 64 have no supplementary pension coverage while the figure for women is 41 per cent. These people would be reliant on the state pension when they retire but many of those who are covered may well have modest supplementary pensions and so the state pension will form a significant part of their retirement incomes. Based on the findings in both Nivakoski and Barrett (2012) and Mosca and Barrett (2011), it is clear that the state pension is, and will be, a significant component of retiree incomes and so it is reasonable to assume that changes to it can have a significant impact on expected incomes.

### III METHODOLOGY AND DATA

#### 3.1 *Research Strategy*

As discussed in the Introduction, our core question is whether the announcement of an increase in the age at which the state pension would be paid led individuals approaching retirement to alter the age at which they expected to retire. TILDA fieldwork spanned from 18 October, 2009 to 22 February, 2011 and during this period the announcement with respect to the raising of the state pension age was made. If all else had been relatively constant in the Irish economy, our approach would have been to create two groups from the sample – those interviewed before and after 3 March, 2010 – and to compare expected retirement ages across the two groups. However, all else was not constant and Ireland experienced a severe recession, the full extent of which came to be understood on 30 September, 2010, named by the media as “Black Thursday”. In order to account for this, we create three

groups from our sample which correspond to the three mutually exclusive and exhaustive time periods, as identified in Figure 1:

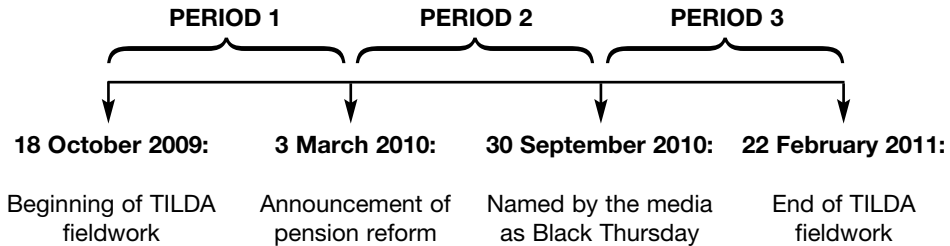
- Period 1: includes individuals interviewed between the beginning of the fieldwork and the announcement of the policy reform (18 October, 2009 to 3 March, 2010).
- Period 2: includes individuals interviewed after the announcement of the policy reform but before Black Thursday (4 March, 2010 to 30 September, 2010). Black Thursday is the day in which the full scale of the banking crisis emerged. The media announced that the cost of the banking bailout had increased, that the bailout of Anglo Irish Bank alone would cost at least €29 billion and that – as a result – the 2011 budget would be tighter than expected.
- Period 3: includes individuals interviewed after Black Thursday and before the end of the fieldwork (1 October, 2010 to 22 February, 2011). This is the period in which the media coverage of the fiscal and financial difficulties faced by Ireland became particularly intense, as explained in the paragraph below.

Black Thursday was followed by the set of events which led to the bailout of November 2010. On 26 October, 2010, the government announced that a budgetary adjustment of €15 billion would be required in the following four years to reduce the State's deficit to 3 per cent by 2014 (compared to €7.5 billion as announced in the 2010 budget). On 4 November, 2010, Finance Minister Brian Lenihan confirmed that the 2011 budget would include a €6 billion budget adjustment (compared to €3 billion as released at the beginning of the same year). This was followed by visits to Ireland from EU and IMF officials. On 21 November, 2010, it was announced that the Government would seek EU and IMF funding. An agreement was reached on 28 November, 2010: the final bailout figure amounted to €85 billion, which Ireland will need to repay at a 5.8 per cent interest rate. The 2011 budget was announced on 7 December, 2010. Following the events of the last months of 2010, January 2011 was characterised by increasing political instability which resulted in the stepping down of Taoiseach Brian Cowen as leader of Fianna Fáil on 22 January, 2011.

In the empirical specification, which we discuss in detail in Sections 3.3 and 3.4, we estimate multinomial logit models in which the dependent variable is “expected age of retirement” for each individual broken up into age categories. Each period (as per Figure 1) is identified by a dummy variable equal to 1 if the individual was interviewed in that time period, 0 otherwise.

We set “Period 1” as the reference category. Given this set-up, the estimated coefficient on the Period 2 dummy variable can be viewed as the “least biased” estimate of the impact of the policy change because it includes those interviewed immediately after the policy announcement and excludes those interviewed after Black Thursday.

Figure 1: *The Three Time Periods of Interest*



We take the Period 3 dummy variable as capturing the effect of the recession. As discussed above, public discussion was completely dominated by the recession, the banking crisis and the bailout from 30 September onwards with essentially no discussion of the pension policy change. For this reason, we argue that any changes in expected retirement ages that might be observed for the Period 3 group is likely to be the results of the bleak economic news and to specific factors such as falls in asset values and expectations of increased taxation due to the soaring public deficit. While it might be argued that the recession had been on-going since 2008 and that Black Thursday did not represent a structural break, this view fails to capture the significance of Black Thursday. Up to that point, many commentators had argued that the costs of the banking collapse would be “manageable” and there was little popular understanding that the recession was likely to be enormously costly and long-lived.

### 3.2 Data

Data from the first wave of The Irish Longitudinal Study on Ageing (TILDA) are used. This is a study of people aged 50 and over (and their spouses or partners of any age) residing in Ireland. TILDA collects detailed information on all aspects of the respondents’ lives, including the economic dimension (pensions, employment, living standards), health aspects (physical, mental, service needs and usage) and the social domain (contact with friends and kin, formal and informal care, social participation). The study is closely harmonised with other leading international longitudinal studies of ageing (e.g., The English Longitudinal Study of Ageing (ELSA); the Survey of Health,

Ageing and Retirement in Europe (SHARE) which is pan-European, and the Health and Retirement Survey (HRS) conducted in the United States).

Data collection in TILDA is made up of three components: (a) the computer-aided personal interview (CAPI) questionnaire; (b) the self-completion questionnaire (SCQ), designed to explore certain areas that were considered particularly sensitive for respondents to answer directly to an interviewer; (c) the health assessment component of the study, conducted both in dedicated TILDA health assessment centres and, alternatively, in respondents' homes. The health and functioning measures collected in the CAPI interview and by the self-completion questionnaire are self-reported (with the exception of a number of memory and cognitive function tests). The health assessment complements the CAPI and self-completion questionnaires by adding a range of objective measures of health status and functioning. The first wave of TILDA includes 8,504 respondents for the CAPI questionnaire, 7,191 for the SCQ and 6,153 for the Health Assessment.

The fieldwork was conducted nationally throughout the period. This is important for the research question here, because we need participants to be randomly distributed over the fieldwork period so that we can exploit the fact that interviews happened at different points throughout the sixteen month period. It could be argued that with the worsening of the general economic outlook, the willingness of the respondent to participate in the survey might have declined, so that the sample might be increasingly skewed towards more diligent individuals, who in turn might also expect to retire later. Alternatively, if the "hard-cases" (i.e., those who are more difficult to reach and interview) were left at the end of the survey, the sample might be skewed towards more resistant individuals (or procrastinators), who might have different expectations as when to retire compared to those who agreed to participate in the survey straight ahead.

We address this by investigating the number of contacts made to get a successful interview in each time period. Interviewers called at respondents' homes more than once for a range of different reasons: (a) they were not able to make a contact the first time; (b) the respondent agreed to participate but was unwilling to be interviewed straight ahead; (c) the contact was made but an appointment was not scheduled; (d) the interview was partial and had to be completed at a later date; or (e) one individual refused but there was scope to interview other eligible members. The average number of calls made to get a successful interview for the 8,504 TILDA respondents was 3.7. Focusing on the three time periods of interest in our analysis, the average number of calls made to get a successful interview was 3 in Period 1, 3.4 in Period 2 and 4.8 in Period 3.



As there is an increase in the average number of calls across those participants in Periods 1, 2 and 3, we needed to look at the characteristics of the people in each group to assess if differences were present. Table 1 shows that respondents interviewed in the three different periods do not differ in terms of the observable characteristics which are relevant in our analysis (which will be discussed in more detail in Section 3.4).

Table 1: *Descriptive Statistics for the Three Time Periods of Interest in the First Wave of TILDA (N = 8,504)*

	<i>Period 1</i> <i>18 Oct. 2009 to</i> <i>3 March 2010</i>	<i>Period 2<sup>a</sup></i> <i>4 March 2010 to</i> <i>30 Sept. 2010</i>	<i>Period 3<sup>a</sup></i> <i>1 Oct. 2010 to</i> <i>22 Feb. 2011</i>
Male	0.486	0.480	0.473
Education:			
None/primary	0.372	0.377	0.404
Secondary	0.440	0.437	0.413
Third/higher	0.189	0.185	0.183
Married or cohabiting	0.660	0.686	0.673
Lives in rural area	0.447	0.500	0.520
Labour market status:			
In labour force: employed	0.360	0.361	0.336
In labour force: unemployed	0.056	0.054	0.053
Economically inactive	0.571	0.573	0.596
Other	0.013	0.012	0.015
Has occupational/private pension <sup>b</sup>	0.466	0.461	0.431
Public sector worker <sup>c</sup>	0.479	0.443	0.434
Probability of surviving to next age group	69.05	72.47	73.04
Private health insurance	0.528	0.536	0.504
Self-valuation residence, mean	271,726.8	274,613.3	259,507.2
Age, mean	63.99	63.81	64.41
Number of chronic illnesses, mean	1.74	1.74	1.70
CASP-19 score, mean	44.10	44.10	43.90
Number of children aged<18, mean	0.140	0.149	0.167

Notes: \*\*\*p<0.01 \*\*p<0.05 \*p<0.10.

a: statistically significant differences are reported for Period 2 and Period 3 with respect to Period 1.

b: expressed as a percentage of those who are not retired and aged 50 to 64.

c: expressed as a percentage of those in paid employment and aged 50 to 64.

### 3.3 Outcome Variable and Model Specification

In the CAPI questionnaire, individuals who are in paid employment, self-employed, unemployed or in education or training are asked the following question:

“I would now like to ask you some questions with regards to the arrangements you are making to prepare for retirement. At what age do you plan to retire?”

- 50 ... 99
- Do not plan to retire
- Do not know
- Refused

Unfortunately, this question does not specify what is meant by “retirement”. However, a similar but more specific question was asked in the pension provision module of the *Quarterly National Household Survey* (Quarter 4, 2009). The question was formulated in the following way: “at what age do you expect to fully retire from doing paid work?”. Respondents could give an age of expected retirement (in five-age year brackets), state that they had no intentions of ever retiring or did not know. Among individuals aged 55 to 69, 60 per cent intended to retire when they were aged between 60 and 69 years, 22 per cent stated that they did not know and 10 per cent stated they had no intention to retire (Central Statistics Office, 2011). These figures are very similar to those obtained in TILDA and so it seems that the TILDA respondents interpreted “retirement” as “fully retiring from paid work”, although this is speculative.<sup>2</sup>

We model expected retirement employing a multinomial logit model which identifies five categories of responses to the question on the age at which people expect to retire: (1) age 50 to 64 (base category); (2) age 65; (3) age 66+; (4) do not plan to retire; and (5) do not know. We restrict the analysis to individuals who have not reached the state pension age yet (and so are aged 50 to 64). This sample includes 2,234 observations.

The decision to include categories (4) and (5) is based on the following rationale. As Cobb-Clark and Stillman (2009) point out, analysing data on subjective expectations can be methodologically challenging, “... because these questions can be difficult to conceptualise leading many respondents to explicitly refuse to answer or to reply that they do not know” (p. 147). Some early papers, including Bernheim (1989), have excluded those answering “do not know” from the final sample under consideration. In more recent papers (e.g., Disney and Tanner 1999, and Cobb-Clark and Stillman 2009) the

<sup>2</sup> TILDA also includes probabilistic expectations questions on future labour market status. For example, individuals aged less than 62 and 65, are asked about the chances they will be working full-time after reaching aged 62 and 65, respectively. Although the evidence shows that individuals respond informatively to probabilistic expectations questions for personally significant events (Manski, 2004, p. 1370), we argue that the point estimate expectations question as to when to retire is more relevant given our research question.

characteristics of those choosing the “do not know” or “do not plan to retire” response have been investigated more closely. Disney and Tanner (1999) and Cobb-Clark and Stillman (2009) argued that individuals who do not know at what age they will retire might face greater uncertainty over their future labour market behaviour. Disney and Tanner (1999) found that individuals with a more variable employment history are more likely to state that they do not know when they will retire. The authors also found that individuals showing a greater involvement with the labour market in full-time employment during their working lives are less likely to opt for the “do not know” response.

Based on these findings, we keep both those who do not plan to retire and do not know when they will retire in our sample. We also assign them to two different outcome categories (“do not know” and “do not plan to retire”) due to the existence of important differences between the two groups. For example, the self-employed are significantly more likely not to plan to retire and those who are unemployed or in education or training are more likely not to know when they will retire. This will be investigated in more detail in Sections IV and V.

Turning to the distribution of retirement expectations, 34.3 per cent of respondents aged 50 to 64 in our sample say that they expect to retire at age 65, compared to 20.7 per cent planning to retire before turning 65 and 12.5 per cent planning to retire at age 66 or older. Also, 20.1 per cent of respondents say they do not plan to retire and 12.4 per cent say they do not know at which age they will retire. Although the proportions of those who opted for the answers “do not plan to retire” and “do not know” might seem particularly high, they are in line with the figures of other international studies. For example, 14.2 per cent of respondents of the first wave of the Health Retirement Study reported that they did not know at what age they would retire, and another 14.1 per cent stated they never intended to retire. Also, around one-third of women and less than one-fifth of men aged 55 to 69 interviewed in the 1988 and 1989 waves of the Retirement Study in the UK reported they did not know at what age they would retire (Disney and Tanner, 1999).<sup>3</sup>

### 3.4 *Explanatory Variables*

Following the literature, we then include a number of explanatory variables which are believed to impact on retirement expectations. We control for the usual demographic and socio-economic characteristics and also include

<sup>3</sup> In the TILDA sample, the average expected age of retirement for individuals aged 50 to 64 who give a point estimate is 64.4 (64.8 for men and 63.8 for women). The Central Statistics Office reported in 2004 that the average age of exit from the labour force was 62.3 years for women and 63.4 years for men.

measures of physical and mental health, life expectancy, attitude towards risk and pension coverage.

Focusing first on the demographic characteristics, we include controls for: single year of age; gender; marital status (married or cohabiting or not) and number of children aged less than 18. In line with previous studies, we hypothesise that the probability of expecting to retire before turning 65 is higher for women and lower for older individuals (Disney and Tanner, 1999 and Coppola and Wilke, 2010). We would also expect that individuals who are approaching the state pension age are more likely to have already formed expectations as to when to retire compared to younger individuals for whom retirement is further away.

Turning to the socio-economic characteristics, we include controls for: area of residence (rural and urban); highest qualification attained (primary or none, secondary and third or higher);<sup>4</sup> current self-reported labour market status (in paid employment, self-employed, unemployed, and in education or training); and a dummy variable for whether the respondent is a public sector employee or not. These dummies are included because they may be related to knowledge of pensions generally, to the pension reform in particular and to a more definite sense of likely retirement ages. Urban dwellers may be more likely to work in large firms and to have larger networks. Higher levels of education and being employed may also be related to pension knowledge. Finally, selection-type arguments would suggest that people who place a high relative value on pensions may be attracted into public-sector employment.

We also include a variable capturing the self-valuation of current residence (in terciles) as a proxy for wealth.<sup>5</sup> In addition, we control for pension coverage and include a dummy variable equal to 1 if the individual is covered by an occupational pension scheme organised by her current or

<sup>4</sup> In TILDA, education is measured by the highest level of formal education achieved. Irish-specific levels are reclassified into three categories: primary/none (not complete or primary or equivalent), secondary (intermediate/junior/group certificate or equivalent and leaving certificate or equivalent) and third/higher (diploma/certificate, primary degree and postgraduate/higher degree).

<sup>5</sup> We also create a fourth category taking the value of 1 if the information on the self-valuation of current residence is missing and 0 otherwise. It should be noted that at the time of data collection the property market was falling and so the valuations of respondents may not have been an accurate reflection of the actual current value of their homes. Alternatively, we could have included a comprehensive measure of gross or net assets to control for wealth. However, this would have resulted in an item non-response for 50 per cent to 60 per cent of observations due to the failure of many participants to report on all forms of wealth. Also, around one-in-four of home owners in our sample are still paying off a mortgage. Following the suggestion of an anonymous referee, we investigated whether the presence of a mortgage impacted the results. We did not find a significant association between the presence of a mortgage and the outcome variable. Also, the magnitude and sign of the other explanatory variables of interest did not change. Hence, we did not include this additional regressor in the final model.

previous employer, a Personal Retirement Saving Account (PRSA) organised through her current employer, or another kind of personal pension scheme; 0 otherwise. Disney and Tanner (1999) found that men with occupational pensions are more likely to expect to retire earlier than those without and are less likely to report that they do not know at what age they will retire. We expect similar results in our analysis.

Turning to health, Disney and Tanner (1999) found that poor health has a positive effect on the probability of expecting to retire before the state pension age for women and is associated with a higher probability of giving a “do not know” response for both men and women. To control for health, we include a variable capturing the number of self-reported chronic diseases from the following list: heart attack, heart failure, angina, cataracts, hypertension, high cholesterol, stroke, diabetes, lung disease, asthma, arthritis, osteoporosis, cancer, Parkinson’s disease, peptic ulcer and hip fracture.

Coppola and Wilke (2010) found that individuals who are not satisfied with their job expect to retire earlier, although this effect was not significant at conventional levels. TILDA does not include a question on job satisfaction. However, it includes a battery of questions on quality of life (CASP-19). Four domains are investigated: control – the ability to actively participate in one’s environment; autonomy – the right of the individual to be free from the unwanted interference of others; self-realisation – the fulfilment of one’s potential; and pleasure – the sense of happiness or enjoyment derived from engaging with life. Individuals are asked to indicate how often (often, sometimes, not often or never) each statement applies to them. Responses to each question are scored from 0 to 3. The total mean score ranges from 0 (complete absence of quality of life) to 57 (total satisfaction).

Börsch-Supan *et al.* (2009) found that subjective survival probability has a strong negative effect on the probability of being retired. Coppola and Wilke (2010) found a positive effect of survival probability on expected retirement age. Hence, in line with the results of the international literature, we expect to find a positive association between expecting to live longer and expecting to work longer for the respondents in our sample. In TILDA, individuals aged 50 to 64 are asked to state the per cent chance (on a scale from 0 to 100) that they will live to be 75 years of age. We create a life-expectancy dummy variable equal to 1 if the individual states that the chance (s)he will live to age 75 is 75 per cent or more (high life expectancy); 0 otherwise.

Finally, we include a dummy variable for whether the individual is covered by private health insurance or not. Our expectation is that respondents who are covered by health insurance are more likely to be risk adverse, *ceteris paribus*, and hence, more likely to have already formed retirement expectations.

## IV DESCRIPTIVE STATISTICS

Focusing first on the characteristics of those with different retirement expectations, Table 2 shows the shares of those planning to retire: before turning 65; at 65; after turning 65; not planning to retire; and uncertain about at which age to retire for each category of the outcome variable employed in our model. For categorical variables, statistically significant differences are reported for each subgroup with respect to the category which is omitted in the econometric model. For continuous variables, statistically significant differences are reported with respect to the base outcome category (i.e., planning to retire at age 65).

Looking at Table 2 we focus first on the time-related dummy variables which are of core interest. Table 2 shows that there are no statistically significant differences across the outcome categories for individuals interviewed in the first and second period, respectively. On the other hand, those who were interviewed in Period 3 are less likely to plan to retire at age 65 and more likely not to plan to retire or not to know at which age to retire if compared to those who were interviewed in Period 1. For instance, 28.9 per cent of those interviewed after Black Thursday plan to retire at age 65, compared to 38 per cent of those interviewed in Period 1. Similarly, 17.6 per cent of those interviewed in Period 3 do not know at which age they will retire, compared to 10.2 per cent of those interviewed in Period 1.

Turning then to the other explanatory variables employed in our model, Table 2 shows that those who plan to leave the labour market before turning 65 are more likely to be younger, female, highly educated, living in an urban area, in paid employment, covered by an occupational or private pension, working in the public sector, with a private health insurance and falling into the third tercile of the distribution of the self-valuation of current residence. For example, 8.9 per cent of those with primary or no education plan to retire before turning 65, compared to 31.2 per cent of those with tertiary or higher education. Similarly, 28.0 per cent of those who are covered by an occupational or private pension plan to retire before turning 65, compared to 9.3 per cent of those who are not covered.

At the same time, those who do not plan to retire or do not know when to retire are more likely to be poorly educated, living in a rural area, self-employed or unemployed, not covered by an occupational or private pension scheme and scoring poorly in the CASP-19 score. For example, 37.6 per cent of the self-employed do not plan to retire, compared to 13.3 per cent of those in paid employment. Of those living in a rural area, 24.1 per cent do not plan to retire, compared to 16.4 per cent of those living in a urban area. The mean CASP-19 score of those who do not know when to retire is 42.8, compared to 45.3 for those planning to retire before age 65.

Table 2: *Descriptive Statistics on Expected Retirement Ages*

	<i>Outcome Categories:</i>					<i>Total</i>
	<i>(1)</i> <i>50-64</i> <i>Years</i>	<i>(2)</i> <i>65</i> <i>Years</i>	<i>(3)</i> <i>66+</i> <i>Years</i>	<i>(4)</i> <i>Do Not</i> <i>Plan to</i> <i>Retire</i>	<i>(5)</i> <i>Do</i> <i>Not</i> <i>Know</i>	
<i>Categorical Explanatory Variables:</i>						
Interviewed in Period 1 (ref. cat.)	0.226	0.380	0.121	0.172	0.102	1
Interviewed in Period 2	0.206	0.349	0.132	0.199	0.114	1
Interviewed in Period 3	0.191	0.289**	0.107	0.236*	0.176***	1
Female (ref. cat.)	0.258	0.336	0.099	0.173	0.133	1
Male	0.171***	0.348	0.143***	0.221***	0.118	1
None/primary educ. (ref. cat.)	0.089	0.367	0.144	0.243	0.156	1
Secondary education	0.195***	0.340	0.127	0.208	0.131	1
Third/higher education	0.312***	0.333	0.108	0.159***	0.088***	1
Not married/cohabiting (ref. cat.)	0.180	0.333	0.130	0.221	0.136	1
Married or cohabiting	0.215*	0.346	0.123	0.195	0.121	1
Urban area (ref. cat.)	0.240	0.372	0.122	0.164	0.103	1
Rural area	0.172***	0.313**	0.128	0.241***	0.147***	1
In paid employment (ref. cat.)	0.267	0.388	0.122	0.133	0.088	1
Self-employed	0.105***	0.214***	0.142	0.376***	0.162***	1
Unemployed	0.094***	0.355	0.113	0.221***	0.216***	1
In education/training	0.227	0.271	0.054	0.196	0.252***	1
No occupation/private pension (ref. cat.)	0.093	0.280	0.148	0.300	0.179	1
Has occup./private pension	0.280***	0.384***	0.110**	0.137***	0.089***	1
Not public sector worker (ref. cat.)	0.152	0.330	0.134	0.244	0.141	1
Public sector worker	0.355***	0.379**	0.102*	0.087***	0.078***	1
Not high life expectancy (ref. cat.)	0.222	0.339	0.119	0.184	0.136	1
High life expectancy	0.201	0.345	0.127	0.207	0.120	1
No private health insurance (ref. cat.)	0.110	0.337	0.143	0.245	0.165	1
Private health insurance	0.260***	0.346	0.115*	0.177***	0.102***	1

Table 2: *Descriptive Statistics on Expected Retirement Ages (contd.)*

	<i>Outcome Categories:</i>					<i>Total</i>
	<i>(1)</i> <i>50-64</i> <i>Years</i>	<i>(2)</i> <i>65</i> <i>Years</i>	<i>(3)</i> <i>66+</i> <i>Years</i>	<i>(4)</i> <i>Do Not</i> <i>Plan to</i> <i>Retire</i>	<i>(5)</i> <i>Do</i> <i>Not</i> <i>Know</i>	
Self-valuation residence 1st tercile (ref. cat.)	0.165	0.327	0.132	0.211	0.165	1
Self-valuation residence 2nd tercile	0.210**	0.335	0.147	0.198	0.109**	1
Self-valuation residence 3rd tercile	0.311***	0.361	0.088**	0.166*	0.075***	1
Self-valuation residence (missing)	0.157	0.364	0.126	0.230	0.123*	1
<i>Continuous Explanatory</i>						
<i>Variables:</i>						
Age, mean	54.3***	56.2	57.0**	56.2	55.4**	–
Number of chronic illnesses, mean	1.1**	1.2	1.2	1.0***	1.2	–
CASP-19 score, mean	45.3*	44.5	44.8	44.5	42.8***	–
Number of children aged <18, mean	0.343	0.276	0.251	0.358*	0.280	–
N	520	763	267	423	261	2,234

Notes: \*\*\*p<0.01 \*\*p<0.05 \*p<0.10.

## V REGRESSION RESULTS

We now turn to the econometric models of expected retirement. Again, our main interest is in seeing if there are differences across the groups interviewed in Periods 1 and 2 as this would indicate an impact of the policy announcement. This is captured by the Period 2 dummy variable. The Period 3 dummy variable captures the effect of the economic crisis.

### 5.1 *Full Sample*

Focusing first on the key dummy variables which are of most interest for us, Table 3 shows there was no noticeable break in expected retirement ages between Periods 1 and 2. The marginal effects of the dummy variable “interviewed in Period 2” are not significant at conventional levels for any of the five outcome categories. However, there was a clear shift of people into the



category “do not know” between Periods 1 and 3. Similarly, there was a shift away from expecting to retire at age 65 in Period 3. The results of Table 3 show that the probability of expecting to retire at age 65 is 9.0 percentage points lower for those who were interviewed after Black Thursday compared to those interviewed in Period 1. Similarly, the probability of not knowing at which age to retire is 6.9 percentage points higher for those interviewed after Black Thursday.

Turning to the other controls, Table 3 shows that, in line with the results of the descriptive statistics and of the international literature, the probability of expecting to retire before turning 65 is lower for those who are older, male and self-employed. Women are also more likely to report that they do not know at which age to retire. Uncertainty in women’s retirement planning is not surprising given the women usually have more interrupted career paths and face greater complexity in labour supply decisions more generally.

Individuals with tertiary or higher education, working in the public sector and falling into the third tercile of the distribution of the self-valuation of current residence are significantly more likely to expect to exit early from the labour market (marginal effects = 0.067, 0.095 and 0.066, respectively). Also these results are not surprising. For example, we would expect that wealthier individuals have accumulated more resources to finance their retirement over the life time and hence face less financial constraints if they retire early. Disney and Tanner (1999) found that men with an occupational pension are 12.4 percentage points more likely to plan to retire before the state pension age. However, the marginal effect for women was 0.012 and was not significant at conventional levels. In our analysis, we find that individuals who are covered by an occupational or private pension are 11.7 percentage points more likely to retire before age 65.

Table 3 also shows that the probability of not planning to retire is higher for the self-employed and for those who are not covered by an occupational or private pension scheme. For example, the probability of not planning to retire is 16.2 percentage points higher for the self-employed and 12.3 percentage points lower for those who are covered by an occupational or private pension scheme.

In addition, we find that individuals who are not covered by an occupational or private pension, who are currently unemployed and who have a lower quality of life are more likely to say that they do not know at which age they will retire. This reinforces the argument of Disney and Tanner (1999). According to the authors, individuals who choose the “do not know” response are likely to be individuals who genuinely face greater uncertainty about retirement.

Table 3: *Multinomial Logit Model of Expected Retirement Ages, Marginal Effects [Standard Errors]*

	<i>Outcome Categories:</i>				
	(1)	(2)	(3)	(4)	(5)
	<i>50-64 Years</i>	<i>65 Years</i>	<i>66+ Years</i>	<i>Do Not Plan to Retire</i>	<i>Do Not Know</i>
Interviewed in Period 2	-0.013 [0.022]	-0.035 [0.030]	0.009 [0.021]	0.024 [0.027]	0.014 [0.018]
Interviewed in Period 3	-0.016 [0.026]	-0.090** [0.035]	-0.019 [0.024]	0.055 [0.035]	0.069*** [0.024]
Age	-0.018*** [0.002]	0.009*** [0.003]	0.008*** [0.002]	0.005** [0.002]	-0.004** [0.002]
Male	-0.052*** [0.018]	0.036 [0.023]	0.053*** [0.015]	0.003 [0.020]	-0.041** [0.017]
Secondary education	0.039 [0.028]	-0.047 [0.034]	0.011 [0.021]	0.006 [0.025]	-0.009 [0.022]
Tertiary/higher education	0.067** [0.028]	-0.062* [0.035]	0.014 [0.023]	0.005 [0.028]	-0.025 [0.022]
Married or cohabiting	0.014 [0.020]	0.012 [0.026]	-0.001 [0.019]	-0.036 [0.024]	0.012 [0.018]
Lives in a rural area	-0.017 [0.018]	-0.020 [0.024]	-0.011 [0.017]	0.024 [0.023]	0.023 [0.017]
Self-employed	-0.069*** [0.022]	-0.170*** [0.027]	-0.014 [0.020]	0.162*** [0.028]	0.091*** [0.027]
Unemployed	-0.019 [0.033]	-0.007 [0.036]	-0.050** [0.021]	-0.008 [0.027]	0.084*** [0.030]
In education/training	0.080 [0.085]	-0.076 [0.083]	-0.082** [0.031]	-0.032 [0.064]	0.109 [0.070]
Occup./private pension	0.117*** [0.018]	0.094*** [0.024]	-0.044** [0.019]	-0.123*** [0.022]	-0.043** [0.019]
Public sector worker	0.095*** [0.021]	-0.002 [0.026]	-0.016 [0.020]	-0.075*** [0.024]	-0.002 [0.021]
High life expectancy	-0.035* [0.020]	0.008 [0.024]	0.009 [0.017]	0.021 [0.020]	-0.002 [0.017]
Private health insurance	0.086*** [0.019]	-0.012 [0.025]	-0.023 [0.020]	-0.041** [0.021]	-0.010 [0.017]
Self-valuation of residence (2nd terc.)	0.011 [0.021]	0.011 [0.029]	0.020 [0.025]	-0.002 [0.025]	-0.040* [0.022]
Self-valuation of residence (3rd terc.)	0.066*** [0.025]	0.041 [0.032]	-0.039* [0.021]	-0.012 [0.026]	-0.057*** [0.022]
Self-valuation of residence (missing)	-0.001 [0.025]	0.044 [0.032]	-0.013 [0.023]	0.002 [0.026]	-0.032 [0.022]

Table 3: *Multinomial Logit Model of Expected Retirement Ages, Marginal Effects [Standard Errors] (contd.)*

	<i>Outcome Categories:</i>				
	<i>(1)</i> <i>50-64</i> <i>Years</i>	<i>(2)</i> <i>65</i> <i>Years</i>	<i>(3)</i> <i>66+</i> <i>Years</i>	<i>(4)</i> <i>Do Not Plan</i> <i>to Retire</i>	<i>(5)</i> <i>Do Not</i> <i>Know</i>
Number of chronic illnesses	-0.001 [0.007]	0.017* [0.010]	-0.001 [0.008]	-0.018** [0.008]	0.003 [0.007]
CASP-19 score	0.001 [0.001]	0.000 [0.002]	0.001 [0.001]	0.000 [0.001]	-0.002** [0.001]
Number of children aged <18	-0.025* [0.013]	-0.006 [0.016]	0.004 [0.012]	0.033*** [0.012]	-0.007 [0.011]
N	520	763	267	423	261

Notes: \*\*\*p<0.01 \*\*p<0.05 \*p<0.10.

Reference category for variables with at least three categories: interviewed in Period 1; no/primary education; in paid employment; self-valuation of residence 1st tercile.

### 5.2 *Those Affected by the Reform and Those Not Affected*

One could argue that the impacts of the pension reform announcement need to be investigated more rigorously given that the model of Table 3 included both those who will and will not be affected by the reform. Hence, in the models in Table 4 below we investigate the effects of the announcement of the reform on those who were (i) affected and (ii) not affected separately. Those (i) affected are private sector employees who were born on or after 1 January, 1949 (turning 65 in 2014 or onwards). Those (ii) unaffected are public sector employees and private sector employees born before 1 January, 1949 (turning 65 before 1 January, 2014). Individuals who are unemployed, in education and training and self-employed are excluded due to the ambiguity of their position.

The variables employed in the models of Tables 3 and 4 are the same, with the exception of current self-reported labour market status. However, the number of observations is different, due to the exclusion of those in self-employment, unemployment and education and training in the model of Table 4.

Table 4 displays the marginal effects of the two time-related dummy variables for three separate specifications: Specification (1) includes both those affected and not affected by the reform; Specification (2) includes only those affected by the reform; and Specification (3) includes only those not affected by the reform.

The results of Table 4, Specification (1) are broadly in line with those of Table 3. Although there was no noticeable break in expected retirement ages before and after 3 March, 2010, there was a shift of people from the category

“planning to retire at 65” ( $p=0.059$ ) into the category “do not plan to retire” ( $p=0.039$ ) after September 30 2010.

Table 4, Specification (2) focuses only on those who were affected by the reform. The only noticeable change in Period 2 is a reduction in the proportion of those who do not know when they will retire. As the objective of the policy would have been to increase the age at which people expected to retire, we would argue that the policy has not been shown to have succeeded based on this specification. Table 4, Specification (3) focuses on those who were not affected by the reform. Once again, there was a shift to the category “do not plan to retire” in Period 3 and so we continue to find evidence of a recession-effect.

Table 4: *Multinomial Logit Models For All, Those Affected and Those Unaffected by the Pension Reform, Marginal Effects [Standard Errors] of Time-Related Dummy Variables*

		<i>Outcome Categories:</i>				
		(1)	(2)	(3)	(4)	(5)
		<i>50-64</i>	<i>65</i>	<i>66+</i>	<i>Do Not</i>	<i>Do</i>
		<i>Years</i>	<i>Years</i>	<i>Years</i>	<i>Plan to</i>	<i>Not</i>
		<i>Retire</i>				
		<i>Know</i>				
<i>Specification:</i>	<i>Interviewed in:</i>					
1. Affected and not affected by pension reform (N=1,474)	Period 2	-0.015 [0.030]	-0.014 [0.035]	0.033 [0.024]	0.018 [0.025]	-0.022 [0.020]
	Period 3	-0.027 [0.035]	-0.080* [0.042]	0.007 [0.027]	0.075** [0.036]	0.024 [0.027]
2. Affected by pension reform (N=678)	Period 2	0.032 [0.041]	-0.011 [0.053]	0.029 [0.035]	0.010 [0.044]	-0.061** [0.031]
	Period 3	0.018 [0.049]	-0.082 [0.063]	0.019 [0.041]	0.049 [0.058]	-0.004 [0.042]
3. Not affected by pension reform (N=796)	Period 2	-0.057 [0.042]	-0.017 [0.044]	0.041 [0.032]	0.018 [0.022]	0.014 [0.025]
	Period 3	-0.080 [0.051]	-0.077 [0.057]	0.012 [0.037]	0.094** [0.042]	0.050 [0.035]

Note: \*\*\* $p<0.01$  \*\* $p<0.05$  \* $p<0.10$ . Reference category is: interviewed in Period 1.

### 5.3 Interactions

In Table 3, we found that older Irish individuals did not adjust their retirement expectations after the announcement of the pension reform (Period 2). However, one could argue that the results of Table 3 do not pick up whether some subgroups did indeed change their retirement expectations after the

announcement of the policy reform. In order to investigate whether this is the case, we interact the time-related dummy variables with some of the other explanatory variables of interest.

In Table 5, we report the marginal effects of the time dummy variables “interviewed in Period 2” and “interviewed in Period 3” at different value of the interacted covariates.<sup>6</sup> It is interesting to note that even when we allow for the impact of the pension reform to differ across individuals with different educational attainment, working in the public sector or not, in paid employment, self-employment or unemployment/education/training and married or cohabiting or not, we still find no changes in the retirement expectations of any of these groups after the announcement of the pension reform. However, we observe changes in expectations in Period 3.

Focusing on public sector employment and occupational/private pension coverage, we observe a shift from “planning to retire at age 65” to the “do not know” category for those who do *not* work in the public sector or are *not* covered by an occupational or private pension scheme in Period 3. A similar shift is not observed in Period 2.<sup>7</sup> Hence, if our identification strategy is correct, the recession impacted on the retirement expectations of those who do not work in the public sector or are not covered by an occupational or private pension scheme.

When we investigate in detail whether the pension reform affected those in paid employment, self-employment or unemployment/education/training, we do not find significant shifts or changes in retirement expectations for any of these groups. However, these groups seem to have changed their retirement expectations in Period 3, with the self-employed and unemployed or in education or training being more likely to state that they do not know at which age they will retire and those in paid-employment being more likely to say that they do not plan to retire.

Focusing then on age, the table shows an interesting result. Those in the oldest age group (aged 60 to 64) altered their expectations in Period 2, after the announcement of the pension reform. The probability of expecting to retire at age 65 is 10.4 percentage points lower for individuals aged 60 to 64 who were interviewed in Period 2, compared to individuals in the same age group who were interviewed in Period 1. Similarly, the probability of falling into the “do not know” category is 7.6 percentage points higher for individuals aged 60

<sup>6</sup>For this purpose, we use the command “margins” in STATA 12.

<sup>7</sup>We do see an increase in the group who do not plan to retire for the interaction “period 2/not covered by occupational/private pension”. However, the point estimate is only significant at the 10 per cent level and there is no corresponding decrease in another category so no “shift” is found.

to 64 interviewed in Period 2. Hence, one can hypothesise that individuals approaching the state pension age reacted to the pension reform, at least to some extent.

Table 5: *Marginal Effects [Standard Errors] of Time-Related Dummy Variables at Different Values of the Interacted Covariates*

<i>Inter- viewed in:</i>	<i>Interacted with:</i>	<i>Outcome Categories:</i>				
		<i>(1) 50-64 Years</i>	<i>(2) 65 Years</i>	<i>(3) 66+ Years</i>	<i>(4) Do Not Plan to Retire</i>	<i>(5) Do Not Know</i>
Period 2	Aged 50-54	-0.020 [0.037]	-0.013 [0.043]	0.035 [0.027]	0.019 [0.033]	-0.020 [0.028]
	Aged 55-59	0.001 [0.038]	-0.017 [0.048]	-0.033 [0.035]	0.031 [0.043]	0.017 [0.030]
	Aged 60-64	-0.021 [0.031]	-0.104* [0.062]	0.030 [0.048]	0.019 [0.051]	0.076*** [0.027]
Period 3	Aged 50-54	-0.063 [0.041]	-0.087* [0.049]	-0.024 [0.029]	0.107** [0.048]	0.068* [0.039]
	Aged 55-59	0.041 [0.047]	-0.054 [0.055]	-0.025 [0.041]	-0.007 [0.051]	0.044 [0.038]
	Aged 60-64	-0.031 [0.036]	-0.148* [0.076]	0.007 [0.059]	0.060 [0.064]	0.112** [0.043]
Period 2	Female	0.017 [0.033]	-0.056 [0.038]	0.016 [0.027]	0.057** [0.026]	-0.034 [0.028]
	Male	-0.034 [0.029]	-0.019 [0.040]	0.003 [0.029]	0.000 [0.037]	0.050** [0.023]
Period 3	Female	-0.013 [0.039]	-0.093** [0.047]	-0.019 [0.029]	0.088** [0.042]	0.037 [0.039]
	Male	-0.019 [0.034]	-0.087* [0.046]	-0.019 [0.033]	0.031 [0.045]	0.093*** [0.029]
Period 2	No/primary education	-0.067 [0.043]	0.023 [0.076]	-0.047 [0.059]	0.092 [0.063]	-0.002 [0.048]
	Intermediary education	-0.009 [0.032]	-0.067 [0.041]	0.028 [0.028]	0.030 [0.034]	0.019 [0.045]
	Tertiary/higher education	0.020 [0.038]	-0.004 [0.043]	0.003 [0.027]	-0.033 [0.033]	0.014 [0.022]
Period 3	No/primary education	-0.063 [0.051]	-0.107 [0.082]	-0.040 [0.066]	0.118 [0.073]	0.092 [0.061]
	Intermediary education	-0.041 [0.038]	-0.106** [0.050]	-0.021 [0.032]	0.087** [0.047]	0.081** [0.035]
	Tertiary/higher education	0.063 [0.046]	-0.031 [0.051]	-0.010 [0.032]	-0.047 [0.039]	0.025 [0.029]
Period 2	Not working in the public sector	0.004 [0.024]	-0.047 [0.036]	0.000 [0.025]	0.027 [0.034]	0.015 [0.022]
	Working in the public sector	-0.054 [0.047]	-0.004 [0.047]	0.031 [0.032]	0.015 [0.023]	0.013 [0.027]

Table 5: *Marginal Effects [Standard Errors] of Time-Related Dummy Variables at Different Values of the Interacted Covariates*

<i>Inter-viewed in:</i>	<i>Interacted with:</i>	<i>Outcome Categories:</i>				
		(1) <i>50-64 Years</i>	(2) <i>65 Years</i>	(3) <i>66+ Years</i>	(4) <i>Do Not Plan to Retire</i>	(5) <i>Do Not Know</i>
Period 3	Not working in the public sector	0.005 [0.029]	-0.118** [0.042]	-0.018 [0.029]	0.044 [0.044]	0.086*** [0.030]
	Working in the public sector	-0.070 [0.058]	-0.012 [0.061]	-0.025 [0.034]	0.087** [0.041]	0.021 [0.034]
Period 2	Not covered by occupational/private pension scheme	0.008 [0.025]	-0.070 [0.046]	-0.042 [0.036]	0.084* [0.045]	0.020 [0.033]
	Covered by occupational/private pension scheme	-0.026 [0.032]	-0.011 [0.038]	0.043* [0.024]	-0.016 [0.027]	0.010 [0.019]
Period 3	Not covered by occupational/private pension scheme	-0.017 [0.033]	-0.131** [0.052]	-0.058 [0.043]	0.077 [0.058]	0.129*** [0.046]
	Covered by occupational/private pension scheme	-0.015 [0.037]	-0.062 [0.045]	0.009 [0.026]	0.037 [0.035]	0.031 [0.026]
Period 2	In paid employment	-0.016 [0.029]	-0.013 [0.035]	0.031 [0.024]	0.019 [0.025]	-0.021 [0.020]
	Self-employed	-0.027 [0.041]	-0.081 [0.060]	-0.016 [0.044]	0.062 [0.061]	0.063 [0.063]
	In unemployment/education/training	0.017 [0.042]	-0.049 [0.078]	-0.046 [0.059]	-0.007 [0.065]	0.084 [0.054]
Period 3	In paid employment	-0.029 [0.035]	-0.079* [0.042]	0.008 [0.027]	0.074** [0.035]	0.027 [0.027]
	Self-employed	-0.004 [0.047]	-0.115* [0.067]	-0.043 [0.051]	0.063 [0.076]	0.098* [0.052]
	In unemployment/education/training	0.011 [0.058]	-0.091 [0.093]	-0.092 [0.062]	-0.026 [0.078]	0.198** [0.078]
Period 2	Not married/cohabiting	0.013 [0.039]	-0.001 [0.051]	-0.065 [0.047]	0.059 [0.047]	-0.007 [0.037]
	Married/cohabiting	-0.022 [0.027]	-0.045 [0.036]	0.033 [0.023]	0.013 [0.029]	0.021 [0.019]
Period 3	Not married/cohabiting	0.035 [0.047]	-0.102 [0.063]	-0.120** [0.051]	0.086 [0.065]	0.100* [0.053]
	Married/cohabiting	-0.032 [0.031]	-0.087** [0.041]	0.013 [0.026]	0.045 [0.029]	0.060** [0.027]

Note: \*\*\*p<0.01 \*\*p<0.05 \*p<0.10. Reference category is: interviewed in Period 1.

## VI CONCLUSIONS

As noted in the Introduction, governments throughout the developed world are looking to raise state pension ages in an effort to tackle looming “pensions time-bombs”. Through such policies, governments hope to curb state spending on pensions and also to provide people with a stronger incentive to remain in work beyond current typical retirement ages. In March 2010, the Irish government announced a policy change along these lines, with the precise proposal being relatively ambitious. Given that a large-scale, representative sample of Irish people aged 50 and over was being conducted around the time of the policy announcement, this provided us with a unique opportunity to explore whether the policy had the impact of altering retirement expectations.

However, the announcement of the raising of the state pension age did not seem to result in a move away from early and standard retirement ages. There are a number of possible explanations as to why this has been observed. One explanation is that people did not know about the reform. Alternatively, people may have known about it but did not believe that it would actually happen. Yet another possibility is that they knew about it, believed it but still felt that retiring no later than 65 was what they planned on doing.

Our data do not allow us to explore which of the three possible explanations might be true but the implications of the results are important, regardless of explanation. If one of the goals of a policy such as increasing the state pension age is to change mindsets with regard to expected retirement ages, then the evidence here is that the goal was not achieved within the timeframe of our analysis. Even if people adjust retirement expectations later, they will have less time to replace the reduced state contribution to their retirement incomes and may ultimately face lower retirement incomes or longer working lives. As longer working lives may not be an option for some, especially people in more physically demanding occupations, the failure to internalise the impact of the policy change is more likely to lead to lower retirement incomes for this group. Given these concerns, it may be necessary for the government to “re-inform” people about the policy change and to convince them that this will be implemented.

The fact that expected retirement ages did seem to react to the worsening economic news is interesting from a number of perspectives. One interpretation of the finding is that people became fearful of the economic circumstances and may have believed that longer working lives would be necessary to maintain living standards. Given the scale of the economic downturn in Ireland, this may have been a rational reaction. It remains to be seen if the apparent pushing out of expected retirement ages will persist as economic



normality returns to Ireland. As TILDA is a longitudinal study, it will be possible to return to this issue and to explore changing expectations of retirement across individuals.

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