Early retirement ages and employment before and during Covid-19

1. Introduction

Raising the age at which a public pension can first be drawn is a key way that many governments have sought to address the public finance pressure of an ageing population. The success of such a strategy will depend in part on the degree to which actual retirement behavior increases in response. And these responses may vary according to the age at which it applies: an early retirement age of 60 may have a far bigger impact on employment than one set at age 70. An additional important consideration for policymakers is the extent to which the impact of rising pension claiming ages varies across different people: this will be a key determinant of how inequalities are affected. Finally, the impact of increasing pension ages on labor market outcomes – and on inequalities – is likely to vary according to the state of the economy and, specifically, with the extent to which employment is available (essentially another form of heterogeneity). This will be a particularly important consideration as economies go through the turmoil of the COVID-19 pandemic and the subsequent recovery and likely labor market changes.

Our proposed study would produce new, up-to-date, evidence on the employment responses of men and women reaching their early retirement age. This would include a specific examination of the heterogeneity of responses. By improving the evidence base on work behaviors around retirement our research would fit within the theme of the "economics of working longer and an aging workforce" and speak directly to "the determinants of work and retirement behavior at older ages, including the impact of public and private pension programs on labor supply".

2. Contribution

In the United States the full retirement age is rising very gradually – from age 66 to age 67 over a six-year period (from age 66 at the end of 2020 to 67 at the start of 2027). This slow pace of change makes it relatively difficult to assess its impact empirically, as comparing outcomes across individuals

with a one-year difference in eligibility ages risks conflating differences related to the fact they will also be born six years apart. Moreover, the earliest age at which social security benefits can be claimed remains unchanged; as a result, there are no US data on labor market outcomes under a higher early retirement age.

Evidence can be found from other countries where early retirement ages have been increased more swiftly. For example, Australia increased the age at which women could qualify for a public pension from age 60 to age 65 (to equalize it with men) over an 18-year period from 1995 to 2013. Similarly – and even more swiftly – the UK increased the age at which women could receive a public pension from age 60 to age 65 (again to equalize it with that of men) over an 8-year period from 2010 to 2018. Both these reforms have been found to have increased employment rates of affected women (see Atalay and Barrett 2015, and Cribb, Emmerson and Tetlow 2016, respectively). Due to the nature of the reforms considered both these studies only examine women. Austria has increased its early retirement age for both men (from 60 to 62) and women (from 55 to 58¼) and this has been found to have increased employment rates and unemployment rates (Staubi and Zweimüller, 2013).

We propose to study the increase in the earliest age at which individuals in the United Kingdom can receive a public pension (known in the UK as “the state pension age”), from age 65 to 66, that took place between Fall 2018 and Fall 2020. This includes the first ever increase in the early retirement age for men in the UK. This will build on the literature cited above in four important ways.

- First, we will explore the extent to which responses to reaching the early retirement age are heterogeneous across different types of individuals – most obviously between men and women, but also by other characteristics such as education; health; family structure; occupational background; and housing tenure.
- Second, for women we will compare the impact of an early retirement age of 66 to the impact of the lower early retirement ages seen earlier over the previous decade. This will allow us to test

directly the hypothesis that the size of labor market impact of an early retirement age may be smaller when the age is higher.

- Third, we would examine the extent to which reaching the early retirement age affects the employment behavior of affected individuals' partners. By exploiting a reform that increased pension ages for both men and women, we can provide fresh evidence on this, in particular whether the finding in Coile (2004) (that husbands respond to their wife's incentives but that wives do not respond to their husband's incentives) holds for labor market responses induced by reaching the early retirement age.
- Fourth, by using timely data collected before, during, and after the recovery from the pandemic, we will examine the extent to which employment – or desired labor supply – of 65-year olds who are now unable to access a public pension changes as the economy recovers from the pandemic. We would also investigate the extent to which differences in exposure to COVID-19, and the public health responses to the pandemic, affected responses to the early retirement age.

The UK is arguably the country most suitable country outside the US for those interested in American retirement behavior. As a large industrialized economy, the UK also has a similar employment rates at older ages to the US (66% for 55-64 year olds in the UK; 64% in the US). The US and UK also spend a similar fraction of GDP on public pensions (5.6% of GDP in the UK; 7% in the US); both have a pension system that relies significantly on private saving for higher earners; and working-age welfare systems that provide little support to out-of-work families without children. Naturally, there are also differences across the two systems, such as the existence of early and full retirement ages in the US vs. a single retirement age in the UK and the presence of a retirement earnings test in the US prior to the full retirement age vs. no such test in the UK.

Our results would therefore be set alongside a careful description of the context in the UK, and the parallels that can be drawn to the US. This would set out the incentives that individuals face to remain in the labor market until they are able to access their public pension. In addition, we would

document recent trends in labor market activity – and in other key characteristics – at old ages. Alongside this we would discuss the extent to which our results might be expected to translate to other contexts, in particular to the US.

3. Data and methodology

The main data we will use are from the UK Labour Force Survey (LFS). This is a large and timely dataset which provides data on the labor market activity of around 70,000 adults each quarter, around 3 months after the fact (e.g. data collected in 2021Q1 are now available to researchers).

In order to identify the impact of reaching the early retirement age in the UK we would first employ a difference-in-differences methodology, much as Cribb, Emmerson and Tetlow (2016) did in studying earlier UK reforms. We would compare how the outcomes of people with slightly different birth dates (and therefore slightly different ages) would differ over time, as the early retirement age rises. This exploits the fact that people who were born only a few months apart can face different early retirement ages.[1] We would estimate the following equation:

$$employed_{i,t} = \alpha + \theta underERA_{i,t} + \gamma_a + \delta_t + X'_{i,t}\beta + \varepsilon_{i,t}$$

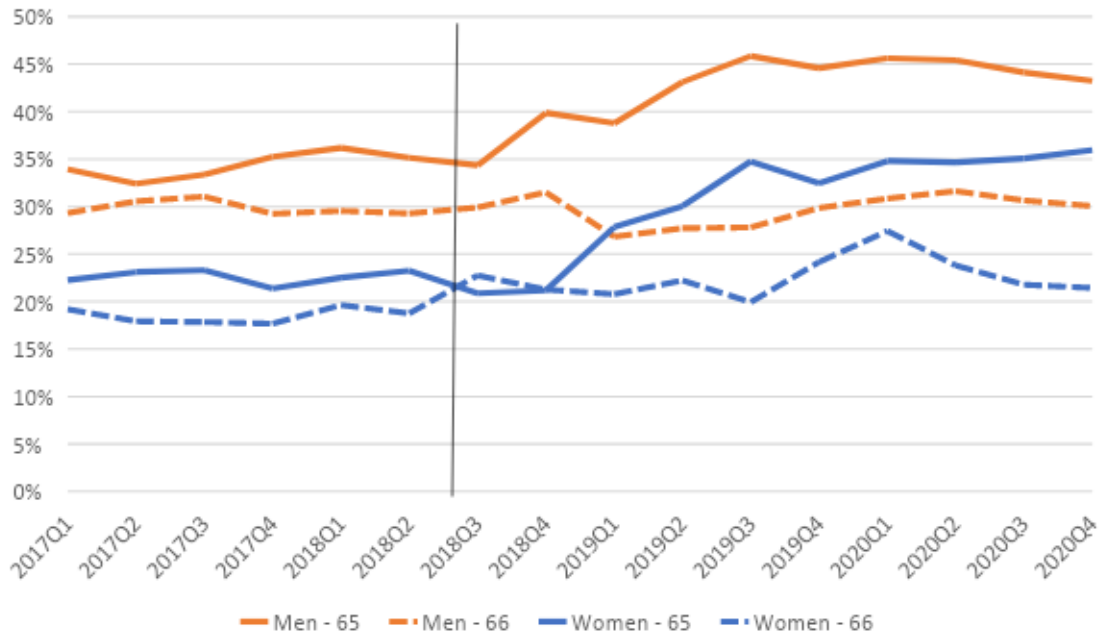
Where γ_a and δ_t are respectively fine age and time dummies, and "$underERA$" is a dummy indicating being under the early retirement age and is an interaction between age and time. A naïve version of this methodology would be to compare how the gap in employment rates between 65 and 66 year olds changes between Fall 2018 and Fall 2020 as the early retirement age rises from 65 to 66, as is shown in Figure 1. It shows substantial rises in employment for 65 year olds compared to 66 year olds. The key "common trends" assumption that we make is that, in absence of the reform, the outcomes of interest for these people born a few months apart would have evolved in a similar way. Due to differences in their labor market behavior – and to allow for the impact of reaching the early

[1] For example, men born before 6 December 1953 have an early retirement age of 65, while those born between 6 December 1953 and 5 January 1953 all became eligible for their public pension on 6 March 2019 (aged between 65 and 2 months and 65 and 3 months). For each following month of birth, the early retirement ages rises by an additional month, until age 66 is reached for those born on or after 6th October 1954 in October 2020.

retirement age to vary by gender – we would conduct our analysis separately for men and for women.

Over the course of the (almost) two years of increase in the early retirement ages from 65 to 66 (between December 2018 and October 2020), we would expect to observe over 1,000 men and 1,000 women who face an early retirement age above 65 (up to 5 times each) in the LFS. In our experience working with these data, these are sufficiently large samples to draw credible conclusions, both overall and across demographic groups.

Figure 1 Employment rates among 65 and 66 year old men and women, 2017-2020



Note: Employment includes employees furloughed from their jobs during the Covid-19 pandemic. Vertical line indicates when the early retirement age started to rise from age 65 to 66. Source: Own calculations using the UK LFS.

The richness of the data will allow us to distinguish if any change in work is full- or part-time (and whether they want to work more or fewer hours), whether it is as an employee or in self-employment, on a temporary or permanent contract, whether other economic states – such as caring or being unemployed – are affected. We would also examine whether changes are bigger in particular occupations or vary by other individual characteristics such as education, and whether the

employment statuses of the partners of those reaching the early retirement age are also affected (shown to be important in the US (Coile, 2004) and France (Stancanelli, 2017).

The nature of our data would allow us to control finely for differences in labor market outcomes by age and time (both in quarters) and to check robustness to including cohort trends (in ways that are not colinear with age and time, for example using linear cohort trends). Our analysis would control for a standard set of background characteristics such as family structure, education, housing tenure and region. We would also include controls to take account of the impact of the pandemic. Specifically, we could control for the prevalence of the virus and the degree of "lockdown" in the local area over time, and how affected individual's industries were (by % of employment furloughed). We would also test for a different response to the SPA before vs. after March 2020 as well as in areas or occupations more and less affected by the pandemic.

In addition to this, we will test the robustness of our results by also using a Regression Discontinuity Design (RDD) where the discontinuity of interest is the early retirement age, which varies for people born only a few months apart. Employing an RDD methodology, and pooling the same set of people who face early retirement ages above 65 as used in the difference-in-difference analysis, allows us to focus in entirely at the change in behavior around the (changing) early retirement age. Rather than the "common trends" assumption in the previous analysis, we would instead assume "continuity of other factors" (i.e. nothing else important changes at that point).

4. Outputs and dissemination

The main output for this work would be a working paper submitted to the NBER by September 2022. This would be published as part of the NBER Working Paper series and the Institute for Fiscal Studies (IFS) Working Paper series and would be available for download free of charge (through IFS). A version of the paper would be submitted to a peer-reviewed economics journal. An interim report on progress on the project would be provided to the NBER by June 2022. We would also seek out

opportunities to present the work at relevant academic conferences, for example the NBER Summer Institute Workshop on the Economics of Aging or the Royal Economics Society Annual Conference.

5. Staffing and budget

The project would be led by Professor Courtney Coile. Coile (5% FTE over 12 months) is Professor of Economics at Wellesley College, co-director of the NBER's International Social Security project, and co-director of the NBER Retirement and Disability Research Center. Coile has published widely on the economics of aging and health, with a particular focus on retirement and disability policy. Coile will provide high level input on the technical analysis, the interpretation of results and the direction of research, and help ensure that the research is both of the highest quality and fully disseminated.

Expertise on the UK's institutional setup and data would be brought by Carl Emmerson and Jonathan Cribb of the IFS. Emmerson is Deputy Director of the IFS and also a member of the Social Security Advisory Committee which provides independent advice to the Secretary of State for Work and Pensions in the UK. Cribb is a Senior Research Economist at the IFS. Both Emmerson and Cribb are expert on the UK's pension arrangements and have published widely on the impacts of policies in the area of pensions and retirement and implications for their design. Emmerson (5% FTE over 12 months) will take overall responsibility for the delivery and quality of all outputs and will be actively engaged in all aspects of the project. Cribb (10% FTE over 12 months) will be responsible for the day-to-day running of the project and also provide input into all its aspects.

The data analysis will be carried out by Laurence O'Brien who is a Research Economist at the IFS and is about to commence a part-time PhD in economics at University College London. O'Brien (35% FTE over 12 months) would also be involved with writing up and disseminating findings.

The total amount requested from the NBER for this project is $74,658 (inclusive of indirect costs levied at 12%). Details of the budget allocation are provided in the table below, further details are available on request.

Description	Calculation details		Budget $
Courtney Coile (Wellesley)	168,684	0.6 months	$11,246
Carl Emmerson (IFS)	186,088	0.6 months	$9,304
Jonathan Cribb (IFS)	104,503	1.2 months	$10,450
Laurence O'Brien (IFS)	63,174	4.2 months	$22,111
	Subtotal salaries		$53,111
Wellesley Fringe @		34.6%	$3,891
IFS Fringe @		23.1%	$9,657
	Total personnel		**$66,659**
Total direct cost			**$66,659**
Indirect costs @		12.0%	$7,999
Project total cost			**$74,658**
Budget requested			$74,658

Note: Coile's salary is a 9-month salary. Emmerson, Cribb and O'Brien's are 12-month salaries

References

Atalay, J., and Barrett, G, (2015) The impact of age pension eligibility age on retirement and program dependence: evidence from an Australian experiment, *Review of Economics and Statistics* 97 (1).

Cribb, J., Emmerson, C., and Tetlow, G. (2016) Signals matter? Large retirement responses to limited financial incentives, *Labour Economics*, Vol 42, pp. 203-212.

Coile, C. (2004) Retirement Incentives and Couples' Retirement Decisions, *The B.E. Journal of Economic Analysis & Policy*, 4(1).

Stancanelli, E., (2017) Couples' Retirement under Individual Pension Design: a Regression Discontinuity Study for France, *Labour Economics*, 49, pp. 14-26.

Staubli, S. and Zweimüller, J. (2013) Does raising the early retirement age increase employment of older workers? *Journal of Public Economics*, 108, pp. 17-32.