



# Retirement Pensions and Disability Insurance for the 21st Century

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## Motivation

In order to alleviate fiscal pressures due to population aging, many Organization for Economic Cooperation and Development (OECD) countries, including the United Kingdom and United States, have increased the state pension age. At face value, most individuals for whom the retirement age increases can continue to work if they are able to do so, or rely on their personal savings if they prefer retiring before the full retirement age. The subset of individuals who are unable work due to disability and who do not have sufficient personal resources can instead apply for disability benefits until they reach the new retirement age.

However, it is an open question whether the disability insurance systems are best designed to perform this role. First, the level of disability benefits is often lower than pension benefits. Second, since it is often impossible to perfectly screen for disability. Disability systems exhibit refer to false positive errors (i.e., individuals who are not disabled receiving disability benefits) and false negative errors (i.e., individuals who are disabled but who are denied disability

benefits). The impact of retirement age reform on those who are unable to work importantly depends on features of the disability benefit system, specifically individuals' ability to obtain disability benefits and the level of these benefits that now replace pensions as a source of income.

This project seeks to evaluate different disability insurance systems in the face of increases in the retirement age. We adopt a comparative approach, examining the U.K. and U.S. disability and pension insurance systems together. Looking at the U.K. and U.S. from a comparative perspective is fruitful because both state pensions and disability benefits differ significantly. Furthermore, we exploit a large U.K. reform increasing the retirement age for women in the years 2010 to 2019 to examine whether the U.K. disability insurance system provided a suitable alternative benefit for disabled individuals who no longer had access to the state pension. We use two principal data sets for our empirical analysis: the Health and Retirement Study (HRS) for the U.S. and the English Longitudinal Study of Ageing (ELSA), which covers England, for studying the effects

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of the U.K. reform. Both of these data sets are nationally representative samples of people 50 and older, and have detailed socioeconomic outcome and functional limitation information.

## Key findings

Our comparative exercise requires the construction of a comparative measure of disability between the U.S. and England. We therefore estimate the degree of disability risk among in the U.S. and English over-50 populations using a state-of-the-art factor model. We find that individuals in the U.S. have significantly poorer disability outcomes on average than individuals in England. For instance, 50-year-old U.S. women have the same disability scores as 67-year-old women in England (see Figure 3 below). Furthermore, we find that individuals in the U.S. face higher risks of a persistent disability shock than in the U.K.

We estimate significant spillovers between disability insurance and retirement pension program in the context of the increase in the U.K. retirement age for women in the years 2010 to 2019. This was concentrated among the disabled, who significantly increased their take-up

of disability benefits in the face of increases in the state pension age. Figure 4 below shows the fraction of women ages 60 to 65 receiving disability benefits rose from nearly 0% to over 7% as a result of the state pension age increasing from 60 to 66.

We find that the increase in the take-up of disability benefits was concentrated among individuals who had a disability indicator above the minimum disability score (i.e., had some disability). Specifically, the fraction of disabled individuals receiving disability benefits increased by 26 percentage points (see table below), whereas the fraction of individuals with the minimum disability score receiving disability increased by only 2 percentage points.

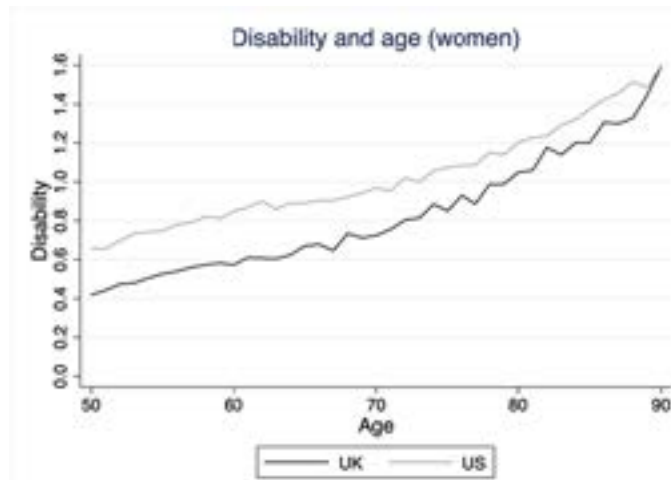
Healthy individuals, in contrast, responded to the increase in the retirement age by increasing their labor-force participation. We documented that despite a significant increase in take-up of disability benefits among disabled individuals who would have been otherwise retired, these individuals experienced larger losses in household income than healthy individuals. Specifically, individuals with disabilities experienced a fall in household incomes of 29%, against a 14% fall for healthy individuals. ❖

**Table 5: Responses to U.K. increase in SPA (women with some disability)**

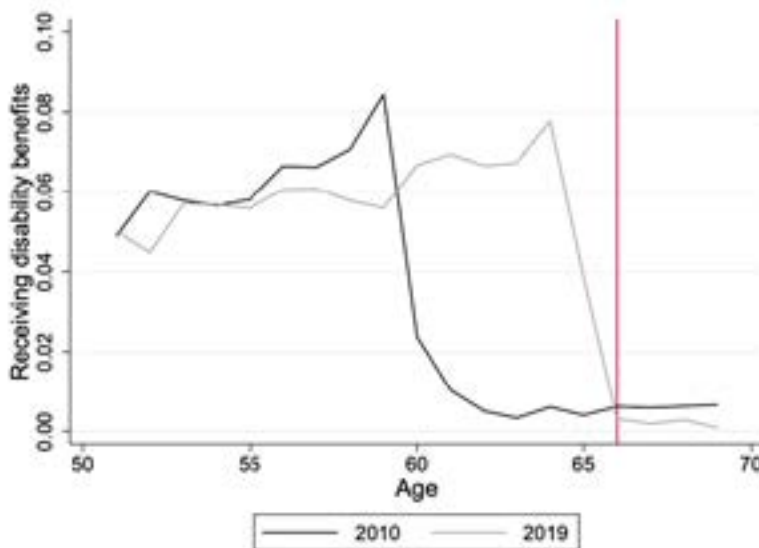
	(1)	(2)	(3)	(4)	(5)
	LFP	State pension	W'kly earnings (£)	Disability bft.	HH income (£)
$\beta$	0.084	-0.894***	15.50	0.258***	-152.49***
	(0.073)	(0.022)	(23.60)	(0.065)	(58.10)
<b>Baseline av.</b>	0.114	0.930	23.90	0.023	525.90
<b>Individuals</b>	344	344	344	344	342
<b>Observations</b>	444	444	444	444	440

Values in columns (1), (2), and (4) are probability of receipts; values in columns (3) and (5) are in GBP. Standard errors in parentheses are clustered at the individual level. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Figure 2: Disability life-cycle profile for women**



**Figure 4: Response to women's U.K. retirement reform, benefit claiming**



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