Information on welfare and elderly labour participation decision

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Abstract

This paper investigates how the reform of informing workers close to retirement about their pension contribution and their expected pension benefits affect their behavioural responses. Using a difference-in-difference strategy on a French panel dataset, we exploit the discontinuity in age cutoffs introduced by this measure to identify its impact on the labour market behaviour. We find that receiving letters about the pension mechanisms influence labour supply decisions' workers in different ways. For individuals with long working careers, the retirement information change their labour market decision by reducing their labour supply. This decline in labour supply translates into a higher economic inactivity exit. On the other hand, highly skilled workers tend to work longer and to increase their savings in order to improve their income in retirement.

Key words: Labour Market Participation, Retirement Decision, Social Security Incentives, Public policy, Savings.

1 Introduction

With the aging population, questions about the sustainability of contribution based state pension systems have been raised since the last decades. In France, as in many developed countries, several levers have been used to improve the public finances through an increase of insurance duration, or an increase of the age of retirement for instance. However, many workers have little understanding about the pension system, and little information about their retirement rights [Lusardi and Mitchell, 2011b]. Indeed, pension benefits are determined through a complex formula depending on worker's lifetime earnings history and on the age of claiming pension benefit. According to a recent report from the Pensions Advisory Council [COR, 2013], a small proportion of individuals interviewed have a limited information about their pension rights in France. For example, only 26% of those aged less than 35 year olds know about the length of contribution required to receive the full rate pension; 46% for those aged 50 and over. In the same way, among those retired in 2010-2011, only a third can quote their contribution's histories, and the contribution length required for the full-rate pension.

To inform workers about their situation with regard to their pension benefits, the French government introduced the 'right to information'. This measure has been introduced as part of the reform of the pension system implemented in 2003 which led to the establishment of several measures to encourage individuals to remain more longer in the labour force, and highlighted the importance of preparing for retirement. To this end, the implementation of the information rights was adopted to promote a culture of information about retirement system in a context where access to information rights and the amount of the expected pension benefits were relatively limited. We exploit this measure to evaluate the effectiveness of information retirement on labour force participation decisions on workers approaching retirement. To assess the effect of this measure, we use a difference-in-difference method on a French panel dataset for the years 2005–2014. We find that retirement information has heterogenous labour supply effects. Receiving letters about the pension mechanisms and their estimated pension benefits affect mainly workers with long working careers. For them, the retirement information change their labour market decision by reducing their labour supply by 8.5 percentage points for males, and by 5.9 percentage points for females. This decline in labour supply translates into a higher economic inactivity exit. This impact is statistically significant for both gender, with similar sign and size for males (i.e. 2.6 percentage points) and for females (i.e. 2.9 percentage points) in reply to the treatment. On the other hand, highly skilled workers tend to work longer. They increase their labour supply by 5 percentage points, and it

seems to be driven by males. We also investigate how information letters influence savings of older workers. We show that the pension reform about retirement information is accompanied by an increase of savings, but only among the wealthiest workers. They improve their savings by 10 percentage points for males and 7.4 percentage points for females, suggesting that they adapt their income in retirement after being informed about their retirement rights.

This paper relates to several part of the literature. First, the literature on the impact of information rights about Social Security (SS henceforth) benefits [Biggs, 2010; Mastrobuoni, 2011]. Studies, which evaluate the effect of information letters about SS benefits on workers approaching retirement, find evidence of better understanding of pension system. Mastrobuoni [2011] analysed the effect of the SS statement launched in 1995 in the USA on workers' knowledge about their SS benefits and on their retirement making decisions. He found that the information measure has limited effects on labour supply decision. The SS statement did not change the retirement behaviour of older workers, but it had some effects by improving the individuals' SS benefits understanding. Biggs [2010] found similar results by demonstrating that SS statements improved SS benefit knowledge. While majority of studies have analysed the effects of pension reforms on retirement decisions [Aubert, 2013; Mastrobuoni, 2009; Staubli and Zweimüller, 2013], few studies assess how the reform of retirement information affect the labour market behaviour of older workers. Our study extends this literature by examining the impact of this policy changes on older workers' employment rates and on transition out of employment. Second, this paper is linked to the literature of financial literacy. Learning about future pension benefits could also influence financial decisions if workers consider that expected pension benefits are not sufficient to meet their living standards. In this context, workers can delay their retirement to increase their pension benefits, or they can increase their savings. Studies which have examined the role of pension information on financial decisions found significant effects on retirement savings [Lusardi and Mitchell, 2011a; El Mekkaoui de Freitas and Legendre, 2015]. They show that knowledge of financial mechanisms plays an important role on retirement planning. Information on retirement as well as pension benefits increases the probability to accumulate wealth in order to ensure an adequate old-age income. [Chetty, 2015; Dolls et al., 2016].

The remaining part of the paper is organised as follows. Section 2 describes the French pension system and the pension reform that we exploit in the paper. Section 3 presents our data and empirical strategy. Section 4 analyses the effects of retirement information on the labour market outcomes for older workers, before concluding in Section 5.

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2 Institutional Framework

2.1 The French Pension System

The French pension system is based on pay-as-you-go financing (henceforth the PAYG), and is characterised by various pension systems depending on the occupational status. The general regime which covers 71% of the labor force, the public sector (17% of the contributors), the self-employed scheme (i.e. 10% of the contributors), and the special schemes (which include the national railway company, the clergy, minors and represent 2% of the contributors), with specific rules for the last three schemes.

The general regime (i.e 'reǵime général'), which provides social welfare for the majority of wage-earners in the private sector, is based on two mandatory pillars: a basic scheme and a complementary scheme. For the basic scheme, individuals receive their pension benefits from the CNAV ('Caisse nationale d'assurance vieillesse') and the level of the pension benefits will depends on three criteria: a reference wage corresponding to the 25 best annual earnings, a number of years of contribution and a minimum age of retirement. Until the 2003 pension reform, workers have to contribute at least 160 quarters and have at least 60 years old to receive a full pension. The 2010 pension reform increased the minimum age of retirement by two years to 62. The second pillar depends on the occupational group, and is managed by ARRCO for all the workers, and ARGIRC for executives.

2.2 The 'blue envelope'

In 2003, the French government adopted the 'Fillon' reform in August 21 2003 to restore the financial sustainability of the public pension scheme, and to encourage older workers to remain longer into labour market. Several measures were introduced such as the increase of the number of years of contributions from 160 to 164 quarters; the restriction of access to early retirement schemes which allow workers to leave the labour force before reaching the legal retirement age, or the introduction of a system of bonus (i.e. the 'surcôte') for delaying retirement after reaching the full rate by 3% per additional year of contribution (this rate was increased to 5% with the 2010 pension reform).

Another component of the 'Fillon' reform was to provide a general information about the retirement system and a personalized information on workers' own situation in terms of pension rights. The retirement reform established the right for all insured individuals to obtain a document tracing all the rights he has constituted within the legally mandatory retirement schemes. The first shipments of the documents took place in 2007.

Prior to this reform, individuals did not have any information on their pension rights until one or two years before the age at which they could claim pension benefits. To address the lack of information, the 'Gip Info Retraite' (the Gip thereafter) was created. The Gip, which regroups all the pension institutions managing the legally mandatory pension schemes (i.e 35 pension schemes in France), is responsible for implementing tools designed to provide a general and an individual information on their retirement. Two kind of documents are sent in a *blue envelope* to individuals according to their age: a statement of his individual situation (i.e "le relevé de situation individuelle", the RIS thereafter) from the age of 35, and an overall indicative estimate of the amount of retirement benefits (i.e "l'estimation indicative globale", the EIG thereafter) from the age of 55.

The shipments of letters are systematic, and individuals have no particular steps to undertake. The envelope contains a letter explaining the reason for sending; another giving a simple overview of the various pension plans, as well as a sheet entitled "Understanding your retirement" (i.e "Comprendre votre retraite"); a personal situation report (the RIS). The RIS is sent to individuals aged 35, and then every five years until the age of fifty. The RIS is a career statement which states the rights of individuals in their different career schemes, that is the number of quarters for the basic pension and the number of pension points for the complementary pension plan. The form specifies the number of quarters contributed, the pension points cumulated as well as the conditions to be fulfilled for a full pension (see Figure 1 for an example of the letters sent to individuals). The RIS is also available online (i.e. the RISe).

From the age of 55, then every five years, workers receive in addition to previous documents an overall indicative estimate of the amount of retirement pensions, the EIG. The EIG provides to each recipient a personalized estimate of the monthly pension benefits he could get at three ages, at the date of mailing: i) at the minimum retirement age (i.e at 60 until 2010 pension reform); ii) at the full-rate retirement age; and at the mandatory retirement age (i.e at the age of 65). The estimated pension will be based on the elements already acquired at the age of full-rate pension benefits, and on individual and macroeconomic assumptions for the remaining period to be covered (see Figure 2 for details). Consequently, individuals have sufficient information in advance of potential rights to retirement, including the date at which benefits at full rate is reached. They can rectify or complete the missing or the incorrect elements. They can understand the opportunities offered and take the appropriate personal/ professional decisions. As a consequence, individuals will have the opportunity to decide on internal actions to the pension schemes such as buying back missing quarters, or external actions such as age of retirement, savings in order to

improve their retirement benefits.

The information letters measure was gradually introduced from 2007. The first overall indicative estimates were sent in 2007 to individuals born in 1949 or in 1957 (i.e individuals aged 50 or 58 in 2007). The years 2007 to 2010 mark the transitional period of introduction of the measure. By the end of 2010, individuals born from 1949 to 1955 had received, as well as a statement of individual situation (RIS), at least one overall indicative estimation (EIG), if they were still economically active in the year of scheduled shipment (see Figure 3 for details on the letter schedule).

3   Identification Strategy

3.1   Dataset and Descriptive Statistics

The dataset are from the SRCV, the French part of *The European Union Statistics on Income and Living Conditions* (EU-SILC) for the period 2005-2014. The SRCV is a rotating panel of households in which one ninth of the household is replaced every year. The data are collected every year. Since 2005, individuals are interviewed each year and over nine consecutive years. The panel is representative of the households living in metropolitan France. The SRCV includes rich information on socio-demographic status such as age, gender, education level, as well as information on poverty, social exclusion and other living conditions. The panel contains retrospective information for each month on labour market status which allows us to construct transition across employment, unemployment and economic inactivity.

We restrict the sample to individuals aged between 50 to 65 years old in employment since we want to assess the effectiveness of pension information policy on employment decisions around the legal retirement age[1]. We restrict the sample to individuals born between 1954 and 1959, in employment, because age 55 constitutes a threshold in receiving the information letters from 2010. Before 2010, the age cutoff of starting receiving letters varies between 56 and 58, which does not create a clear age discontinuity. However, to check the robustness of our findings, we also include them in the sample and the conclusions remain similar. Our final sample includes 11,719 observations, implying that we can rely on 1,200 observations per year. Individuals are observed at least two consecutive years, and they can potentially leave employment status for unemployment, retirement or economic inactivity. Farmers, self-employed are excluded from the analysis.

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[1]The legal retirement age was 60 for both gender during this analysis period.

Table 1 presents some characteristics of our analysis sample separately for males (Column (1)) and for females (Column (2)). Individuals in our sample are aged 54 in average, which is similar between gender. The sample is characterized by individuals with a low educational level. More than half of them have only basic secondary education. Among them, almost 15% have no qualification, with a similar proportion of low educational attainment between gender. However, we find some differences in occupational skills between sex. Males are mainly in high skill occupations, while females are in majority medium skill workers. When looking at employment trends around the introduction of information letters (Table 2), proportion of individuals in employment decreases after receiving the information letters (Columns (2) and (4)). This decline is particularly marked for low skilled workers. Similar trends are found as regards the savings (Table 3), except for the high skilled workers who tend to increase their savings after the receiving the letters.

3.2 The Empirical method

To examine the effects of retirement information on labour market outcomes for older workers we use a a difference-in-difference (DiD) approach, widely applied in the literature to evaluate policy change effects [Staubli and Zweimüller, 2013; Dolls et al., 2016]. The gradual introduction of the measure which affects specific individuals creates a natural experiment. Depending on the age and year, the shipments of statement create two groups: the treated group who receives the mailing information at a given age and year, and the control group who does not receive it. As a consequence, the configuration makes it possible to identify the effects of the retirement information measure on labour supply behaviour. While individuals who do not receive the mailing information are the control group, those who receive the retirement information are the treatment group. In our context, we examine the employment decisions of treated individuals aged 55 and over who receive the letter upon the pension reform (since 2010), and compare it with the behaviour of untreated individuals aged between 50 to 54 over time (see Table 9).

To estimate the effects of the retirement information induced by the pension reform, we estimate the following equation separately for males and females due to differences in working careers which could influence labour supply decisions in different way. Y_{ict} indicates the labour market status for individual i from cohort c in year t.

$$Y_{ict} = \alpha + \beta_1 D_{Treated} + \beta_2 Post_t + \gamma(D_{Treated} * Post_t) + X_{ict}\delta + u_{ict} \quad (1)$$

where $D_{Treated}$ is the treatment group, β_1 is the treatment-group specific effect which accounts for average permanent differences between the treated and control groups, and which is constant over time. $Post_t$ is a dummy variable which indicates whether the dependent variable is observed after the implementation of the policy change. It is a control for the time trend common to the control and treatment groups. Therefore, β_2 is the estimated post-treatment which is the same for both treated and control groups. X_{ict} is a vector of control variables which includes individual specific characteristics to control for observable differences between individuals such as education level, marital status, household composition, number of children, occupational category, as well as partner's employment status, and a dummy indicating public vs private sector. The key policy coefficient γ, the interaction term between the treatment group dummy and the policy year dummy, captures the average effect of pension reform on exit rates.

4   Impacts of Retirement Information on Behavioural Responses

In this section, we present our main empirical evidence on how information on pension information changes the labour supply behaviour of older workers, and their decisions to increase their savings for retirement. We start with the effects of pension information policy on labour market participation.

4.1   Retirement Information and Labour Supply Behaviour

We estimate the effects of retirement information on labour supply behaviour with a DiD method. The empirical strategy relies on the common trend assumption. This hypothesis assumes that the trend in employment would have been similar between the control and treated groups without the pension reform. To check the assumption of the common trend, we perform a placebo test. For that, we estimate Equation 1 for the period 2004-2010, and we assume that there is a change in policy that begins in 2006 while no pension information letters were sent during this period. Results shown in Table 4 are not significantly different from zero, suggesting that the common trend cannot be rejected in this period. Moreover, we perform two tests to check the sensitivity of the common trend assumption. We re-estimate Equation 1 by first varying years when takes place the 'fake' reform, and then by changing the window of period around the reform threshold. The difference between the control and the treated groups

are still not statistically significant. We apply the same strategy to examine the savings behaviour between the treated and the control group before the implementation of the information retirement measure, and as depicted in Table 5, the effects of the measure are not statistically significant. We also test for the robustness of the results by dropping some birth cohorts from the difference-in-differences estimation. Particularly, individuals born between 1949 to 1953 receive the letters not at the age of 55 but at the age of 56, 57 or 58, and it could affect our results because no clear age discontinuity is created for these birth cohorts. We re-estimate Equation 1 and we find substantively same results. These findings suggest that the identification strategy is appropriate in our context.

We run DiD regressions with controls for education, marital status, household composition, number of children, occupational status, partner's employment status, public sector and year dummies to take account for common time-specific effects. The estimated coefficients are shown in Table 6.

The Consequences on Employment Rates

The estimates in Columns (1) and (4) of Table 6 show the effects of the information letters on employment rates for males and females, respectively. The coefficient of interest is the interaction between the treatment and post-reform dummies (i.e $D_{Treated} * Post_t$). The estimates are -0.0230 for males and 0.0236 for females but are not statistically significant, meaning that workers do not change their labour supply behaviour when receiving the letter.

However, because the SS statement improves significantly the understanding of pension benefits [Mastrobuoni, 2011; Sass et al., 2015], better informed individuals, who have fulfilled the conditions required to the full-rate pension might change their behaviour after receiving the letters. This could be particularly important in France where early retirement for workers who started working at a early age can retire before reaching the legal age of retirement. As a consequence, being informed about retirement mechanism could affect employment decisions for this group of workers (see Table 10 for more details on early retirement schemes for long career workers). In addition, the duration of contribution years required to get a full pension at age of 60 increases from 40 to 41 for individuals born from 1952 since the 2003 pension reform. To further investigate the role of expected pension benefits understanding, we re-estimate Equation 1 for workers who have met the eligibility requirements to receive full-rate pension benefits. For that, we define a dummy variable for individuals who have contributed at least 41 years to the National Insurance. Columns (2)

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and (5) of Table 6 report the results taking into account required years of contributions. Having contributed the required years of contributions (i.e $D_{Treated} * Post_t * contribution$) appears to have a negative influence to remain longer in employment. The employment probability for workers with the required conditions to receive full rate pension decreases by 8.5 percentage points for males, by 5.9 percentage points for females. Differences in career lengths is a determinant for the treatment effects on employment decisions. Workers with a long work history tend to change their behaviour in response to the letters.

Furthermore, the literature suggest that retirement planning varies among socio-economic categories [Lusardi and Mitchell, 2011a,b]. We add to the literature by investigating at how employment decisions change between workers with different skill levels. We define skill groups by occupations, and we consider three skill groups. High skill group includes engineers, managers and senior officials. Medium skill group includes associate professionals and technical, administrative and secretarial, skilled trade. Low skill group includes personal services, machines and plant operators, partially skilled, unskilled workers. Columns (3) and (4) explore whether estimated effects are different among skill groups. The estimate which refers to the effect of pension information on employment probability (i.e $D_{Treated} * Post_t * high\ skill$) is significantly positive for males. We see in Column (4) that workers in high skilled occupations tend to remain more longer in employment. The probability to be in employment significantly increases by 4.9 percentage of points among males. In that respect, high skilled workers tend to delay their retirement to work longer to improve their monthly pension benefits after being informed about their retirement rights.

The Consequences on Working Status

To complete the analysis, we investigate the impact of pension information on potential transition between working status. To this end, we distinguish three separate exit destinations (Tables 7 and 8). Workers can leave employment for **retirement**; to **unemployment** or for **inactivity** which includes sickness or family leave.

The top panels of Tables 7 and 8 display the effect of letters on exits from employment to retirement. We find that retirement information has a positive effect on transition from employment to retirement for males. The probability to retire increases by 3.4 percentage points for males, but the effect is restricted to males with the sufficient number of years contributions required. The effects are not significant for females (Column (3))

and among skilled groups (Table 8). Concerning the transition into unemployment shown in the middle panel, we do not find evidence that the information letters affect the behaviour of older workers, except for females with long working careers. This effect is positive but significant at 10 percent level. Finally, the regression results for inactivity exits are significant for both groups of workers as presented in the bottom panel. For long career group, the information intervention about retirement increases this percentage by around 2.6 percentage points for males, and by 2.9 percentage points for females. While the transition into inactivity increases for individuals with long working careers, the effect is significant and negative for high skilled males. The probability to leave employment for inactivity decreases by 2 percentage points in the male subsample.

4.2   Retirement Information and Saving Behaviour

Learning about expected retirement benefits could also affect financial decisions if workers consider that the future pension benefits are not sufficient to meet their living standards. In this context, workers can postpone their retirement to increase their pension benefits, or they can also increase their savings [Lusardi and Mitchell, 2011a; El Mekkaoui de Freitas and Legendre, 2015]. Next, we examine the role of pension benefits knowledge on financial behaviour. Particularly, we are interested in whether saving decisions differ by gender, skill levels and social security contributions. To this end, we analysis the impact of retirement information on savings. Amounts of financial assets and savings are not available in our dataset. However, individuals are asked whether their savings have increased compared with the previous year. We use this information to define our variable of interest. Specifically, we estimate Equation 1 where Y_{ict} is a dummy indicating whether the savings have increased from the year before the interview. Table 8 reports the effects of retirement on savings for males (Columns (1)–(3)) and for females (Columns (4)–(6)).

We find that retirement information measure affects only a part of workers. The top panel of Table 8 shows that the information letters do not change individuals' response in terms of savings. There is also no evidence of effects for workers with long careers as depicted in the middle panel. The letter increases the probability to increase retirement savings but only for high skilled workers. For the high skilled group, the results show that retirement savings increase by 10 percentage points for males, and by 7.4 percentage points for females. The findings indicate that knowledge of pension benefits have important implication on wealth accumulation among high skilled workers. This suggests that highly skilled workers, and hence the the highest paid, adjust their assets accumulation behaviour after receiving knowledge on their future income. Conversely, estimates of individual's

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pension benefits seem to not affect low and medium skilled workers, as well as workers who have contributed enough to retire.

5 Conclusion

This paper provide quasi-experimental evidence for the role of retirement information on individual's labour market decisions. Using a difference-in-differences approach on longitudinal dataset for France, we look at the effects of this measure on the employment rates of older workers, as well as on their transition on the labour market. We find that receiving letters that inform workers about the pension system and their estimated pension benefits affect differently their labour market behaviour depending on their characteristics. While the pension reform does not affect the employment decisions of the entire sample, we find evidence that information about retirement rights influence employment decisions of individuals with long working careers. Individuals, better informed about their retirement rights, change their behaviour by reducing their labour supply. This decline in labour supply translates into higher economic inactivity. On the other hand, individuals highly skilled tend to work longer after being informed about their retirement rights.

We also investigate how information letters affect savings of older workers. Our results confirm that the retirement information increases savings but only for high skilled workers. Information about retirement system and the estimated pension benefit level reinforce the saving for the wealthiest workers. For low and medium skilled workers, the retirement information does not affect their savings. The retirement information has the expected effects of encouraging older workers to increase their savings, but it does not affect all workers. These findings are important in a policy perspective knowing that the policy fails to reach all workers to increase their retirement savings.

References

Aubert, P. (2013). Impacts directs et indirects des systèmes de retraite sur l'emploi des seniors : Résultats récents. *Revue française des affaires sociales*, (4):14–39.

Biggs, A. (2010). Improving the social security statement. *Working Paper WR-794-SSA. Santa Monica, CA and Hanover, NH: Financial Literacy Center.*

Chetty, R. (2015). Behavioral economics and public policy: A pragmatic perspective. *American Economic Review*, 105(5):1–33.

COR (2013). La connaissance de leurs droits par les assurés : synthèse de résultats. Technical report, COR report, available at http://www.cor-retraites.fr/IMG/pdf/doc-2031.pdf.

Dolls, M., Doerrenberg, P., Peichl, A., and Stichnoth, H. (2016). Do savings increase in response to salient information about retirement and expected pensions? Technical report, National Bureau of Economic Research.

El Mekkaoui de Freitas, N. and Legendre, B. (2015). Pension information and retirement planning in france. Technical report, Netspar.

Lusardi, A. and Mitchell, O. S. (2011a). Financial literacy and planning: Implications for retirement wellbeing. Technical report, National Bureau of Economic Research.

Lusardi, A. and Mitchell, O. S. (2011b). Financial literacy and retirement planning in the united states. *Journal of Pension Economics & Finance*, 10(4):509–525.

Mastrobuoni, G. (2009). Labor supply effects of the recent social security benefit cuts: Empirical estimates using cohort discontinuities. *Journal of public Economics*, 93(11-12):1224–1233.

Mastrobuoni, G. (2011). The role of information for retirement behavior: Evidence based on the stepwise introduction of the social security statement. *Journal of Public Economics*, 95(7-8):913–925.

Sass, S. A. et al. (2015). Does the social security statement add value? *Center for Retirement at Boston College.*

Staubli, S. and Zweimüller, J. (2013). Does raising the early retirement age increase employment of older workers? *Journal of public economics*, 108:17–32.

Table 1 – Sample statistics by gender (main regressions)

	Males (1)	Females (2)
Age	54.1	54.1
	(0.0351)	(0.0332)
Married	0.86	0.79
	(0.0045)	(0.0052)
Highest degree		
College/University	0.24	0.28
	(0.0057)	(0.0057)
Baccalauréat	0.10	0.15
	(0.0040)	(0.0045)
Brevet/CAP/BEP	0.50	0.41
	(0.0066)	(0.0063)
No qualification	0.15	0.15
	(0.0047)	(0.0046)
Skill levels		
High skill	0.51	0.40
	(0.0066)	(0.0063)
Medium skill	0.12	0.49
	(0.0043)	(0.0064)
Low skill	0.36	0.11
	(0.0064)	(0.0039)
Observations	5,648	6,071

Notes: This figure shows descriptive statistics for males (Column (1)) and for females (Column (2)) in our sample. The time period is 2005 – 2014. Standard deviations in brackets.
Source: own calculations based on SRCV, 2005-2014.

Table 2 – Sample statistics by gender: Employment rates

In employment	Males (1)	Males (2)	Females (3)	Females (4)
All sample	0.97	0.90	0.97	0.91
	(0.0037)	(0.0048)	(0.0035)	(0.0045)
Contribution> 40				
	0.29	0.21	0.29	0.19
	(0.0082)	(0.0165)	(0.0078)	(0.0160)
Skill levels				
High skill	0.98	0.94	0.98	0.92
	(0.0038)	(0.0055)	(0.0041)	(0.0066)
Medium skill	0.96	0.89	0.96	0.91
	(0.0124)	(0.0144)	(0.0053)	(0.0065)
Low skill	0.96	0.86	0.94	0.86
	(0.0075)	(0.0094)	(0.0157)	(0.0168)
Observations	5,648		6,071	

Notes: This figure shows the proportion of individuals in our sample in employment who report that their savings have increased for all the sample (i.e top panel), for those who have contributed at least 41 years (i.e middle panel), and by skills level (i.e bottom panel). (1)/(3): before the retirement information measure (i.e 2005–2009) (2)/(4): after the retirement information measure. The time period is 2005 – 2014. Standard deviations in brackets.
Source: own calculations based on SRCV, 2005-2014.

Table 3 – Sample statistics by gender: Savings increase

	Males		Females	
	(1)	(2)	(3)	(4)
All sample	0.27	0.27	0.29	0.27
	(0.0100)	(0.0074)	(0.0098)	(0.0071)
$Contribution> 40$	0.29	0.21	0.29	0.19
	(0.0082)	(0.0165)	(0.0078)	(0.0160)
Skill levels				
High skill	0.33	0.34	0.36	0.36
	(0.0147)	(0.0110)	(0.0166)	(0.0119)
Medium skill	0.23	0.21	0.24	0.21
	(0.0266)	(0.0190)	(0.0130)	(0.0093)
Low skill	0.21	0.21	0.24	0.23
	(0.0190)	(0.0110)	(0.0282)	(0.0202)
Observations	5,648		6,071	

Notes: This table shows the proportion of individuals in our sample who report that their savings have increased for all the sample (i.e top panel), for those who have contributed at least 41 years (i.e middle panel), and by skills level (i.e bottom panel). (1)/(3): before the retirement information measure (i.e 2005–2009) (2)/(4): after the retirement information measure. The time period is 2005 – 2014. Standard deviations in brackets.
Source: own calculations based on SRCV, 2005-2014.

Table 4 – Common trend: Effects of retirement information on employment rates

	Males		Females	
	(1)	**(2)**	**(3)**	**(4)**
$D_{Treated} * Post_t * contribution$	0.0388		-0.059	
	(0.0364)		(0.0224)	
$D_{Treated} * Post_t * high\ skill$		-0.0209		0.0101
		(0.0186)		(0.0174)
Observations	9,076	9,076	8,824	8,824
R-squared	0.2046	0.2047	0.2015	0.2614

Notes: Outcome variable: employment rates. In addition to variables shown, an intercept and controls for education, marital status, household composition, number of children, occupational status, partner's employment status, public sector, a dummy for the treatment group and a dummy for the post-treatment period were included in all specifications. The analysis period is 2004–2010 and the 'fictitious' policy change takes place in 2006.

Standard errors in parentheses are clustered at individual level, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Source: own calculations based on SRCV, 2005-2014.

Table 5 – Common trend: Effects of retirement information onsavings

| | Males | | Females | |
	(1)	(2)	(3)	(4)
$D_{Treated} * Post_t * contribution$	-0.0179		-0.0648	
	(0.0435)		(0.0504)	
$D_{Treated} * Post_t * high\ skill$		0.0048		0.0453
		(0.0252)		(0.0276)
Observations	9,044	9,044	8,809	8,809
R-squared	0.0370	0.301	0.0370	0.0305

Notes: Outcome variable: savings increase. In addition to variables shown, an intercept and controls for education, marital status, household composition, number of children, occupational status, partner's employment status, public sector, a dummy for the treatment group and a dummy for the post-treatment period were included in all specifications. The analysis period is 2004–2010 and the 'fictitious' policy change takes place in 2006.
Standard errors in parentheses are clustered at individual level, *** p<0.01, ** p<0.05, * p<0.1
Source: own calculations based on SRCV, 2005-2014.

Table 6 – Effects of retirement information on employment rates

	Males			Females		
	(1)	(2)	(3)	(4)	(5)	(6)
$D_{Treated} * Post_t$	-0.0230			0.0236		
	(0.0251)			(0.0275)		
$D_{Treated} * Post_t$		-0.006			0.026	
		(0.0241)			(0.0251)	
$D_{Treated} * Post_t * contribution$		-0.085***			-0.059***	
		(0.0193)			(0.0224)	
$D_{Treated} * Post_t$			-0.048			0.021
			(0.0281)			(0.0761)
$D_{Treated} * Post_t * high\ skill$			0.0488**			-0.003
			(0.0192)			(0.0182)
Observations	5,648	5,648	5,648	6,071	6,071	6,071
R-squared	0.046	0.074	.0427 0.064	0.059	0.124	0.123

Notes: In addition to variables shown, an intercept and controls for education, marital status, household composition, number of children, occupational status, partner's employment status, public sector, a dummy for the treatment group and a dummy for the post-treatment period were included in all specifications.
Standard errors in parentheses are clustered at individual level, *** p<0.01, ** p<0.05, * p<0.1
Source: own calculations based on SRCV, 2005-2014.

Table 7 – Effects of retirement information on working status

	Males (1)	Females (2)
Retirement		
$D_{Treated} * Post_t$	-0.001	0.004
	(0.0162)	(0.0132)
$D_{Treated} * Post_t * contribution$	0.0340**	-0.003
	(0.0257)	(0.0128)
Unemployment		
$D_{Treated} * Post_t$	0.007	-0.026
	(0.0133)	(0.0190)
$D_{Treated} * Post_t * contribution$	0.021	0.025*
	(0.0159)	(0.0141)
Inactivity		
$D_{Treated} * Post_t$	0.005	-0.006
	(0.0094)	(0.0146)
$D_{Treated} * Post_t * contribution$	0.0263**	0.0294*
	(0.0116)	(0.0172)
Observations	5,648	6,071
R-squared	0.057	0.087

Notes: In addition to variables shown, an intercept and controls for education, marital status, household composition, number of children, occupational status, partner's employment status, public sector, a dummy for the treatment group and a dummy for the post-treatment period were included in all specifications. Standard errors in parentheses are clustered at individual level, *** p<0.01, ** p<0.05, * p<0.1
Source: own calculations based on SRCV, 2005-2014.

Table 8 – Effects of retirement information on working status by skill

	Males (1)	Females (2)
Retirement		
$D_{Treated} * Post_t$	0.0126	-0.0009
	(0.0198)	(0.0145)
$D_{Treated} * Post_t * high\ skill$	-0.0186	0.0155
	(0.0138)	(0.0119)
Unemployment		
$D_{Treated} * Post_t$	0.0203	-0.0230
	(0.0158)	(0.0203)
$D_{Treated} * Post_t * high\ skill$	-0.0135	0.005
	(0.0122)	(0.0128)
Inactivity		
$D_{Treated} * Post_t$	0.0219*	0.0054
	(0.0113)	(0.0168)
$D_{Treated} * Post_t * high\ skill$	-0.0191**	-0.0177
	(0.0095)	(0.0096)
Observations	5,648	6,071
R-squared	0.040	0.1323

Notes: In addition to variables shown, an intercept and controls for education, marital status, household composition, number of children, partner's employment status, public sector, a dummy for the treatment group and a dummy for the post-treatment period were included in all specifications.
Standard errors in parentheses are clustered at individual level, *** p<0.01, ** p<0.05, * p<0.1
Source: own calculations based on SRCV, 2005-2014.

Table 9 – Effects of retirement information on savings

	Males			Females		
	(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**
$D_{Treated} * Post_t$	-0.0159			-0.0452		
	(0.0433)			(0.0451)		
$D_{Treated} * Post_t$		-0.0083			-0.0435	
		(0.0437)			(0.0456)	
$D_{Treated} * Post_t * cotisation$		-0.0166			-0.0367	
		(0.0234)			(0.0229)	
$D_{Treated} * Post_t$			-0.0649			-0.0735
			(0.0446)			(0.0455)
$D_{Treated} * Post_t * high\ skill$			0.1005***			0.0741***
			(0.0230)			(0.0243)
Observations	5,635	5,635	5,635	6,060	6,060	6,060
R-squared	0.0382	0.046	0.0427	0.0340	0.041	0.0363

Note: In addition to variables shown, an intercept and controls for education, marital status, household composition, number of children, partner's employment status, public sector, a dummy for the treatment group and a dummy for the post-treatment period were included in all specifications.
Standard errors in parentheses are clustered at individual level, *** p<0.01, ** p<0.05, * p<0.1
Source: own calculations based on SRCV, 2005-2014.

Table 10 – Summary of early retirement for long career

Age of first contribution	Quarters validated	Quarters contributed	Early retirement age
The 2003 reform			
14	168 (i.e 42 years)	168	56
15	168	168	57
14 or 15	168	164 (i.e 41 years)	58
14, 15 or 16	168	160 (i.e 40 years)	59

Note: The difference between quarters validated and quarters contributed is that periods out of work, such as unemployment, sickness and maternity leaves are credited in the public scheme and occupational pension scheme.

Reading: With the 2003 pension reform, a worker can retire at age of 58 if he started working at 14 or 15, and has validated at least 168 quarters, among them 164 quarters of contribution.

Figure 1 – The 'blue' envelope: an example of the RIS letter

RETRAITE DE BASE	
Régimes - dernière année connue*	Nombre de trimestres
Salarié du régime général de sécurité sociale (CNAV) - 2010	33
Salarié agricole (MSA) - 2002	1
Durée d'assurance totale	**34**

RETRAITE COMPLEMENTAIRE	
Régimes - dernière année connue*	Nombre de points
Salarié du secteur privé (ARRCO) - 2010	604,50
Les valeurs de point diffèrent selon les régimes. Elles vous sont précisées dans les pages propres à ces régimes.	

Figure 2 – The 'blue' envelope: an example of the EIG letter sent in 2007

MONTANT ESTIMATIF ANNUEL BRUT DE VOTRE RETRAITE			
AGES DE DEPART	**60 ans ***	**62 ans**	**65 ans ***
		01/10/2011	
RETRAITE DE BASE			
Salarié du régime général (CNAV)	554 €	805 €	2 847 € (taux plein)
Fonctionnaire des collectivités territoriales et hospitalières (CNRACL)	9 274 €	9 274 € (taux plein)	9 274 €
RETRAITE COMPLEMENTAIRE			
Salarié du secteur privé (ARRCO)	311 €	432 €	564 € (taux plein)
TOTAL ANNUEL	**10 139 €**	**10 511 €**	**12 685 €**
Equivalent par mois	844 €	875 €	1 057 €

Figure 3 – Timetable for sending the 'blue' envelope by birth cohorts

birth cohort \ year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1949	58									
1950		58		60						
1951		57			60					
1952			57			60				
1953			56				60			
1954				56				60		
1955				55					60	
1956					55					60
1957	50					55				
1958		50					55			
1959			50					55		
1960				50					55	
1961					50					55
1962						50				
1963		45					50			
1964			45					50		
1965				45					50	
1966					45					50
1967						45				
1968							45			
1969			40					45		
1970				40					45	
1971					40					45
1972						40				
1973							40			
1974								40		
1975				35					40	
1976					35					40
1977						35				
1978							35			
1979								35		
1980									35	
1981										35
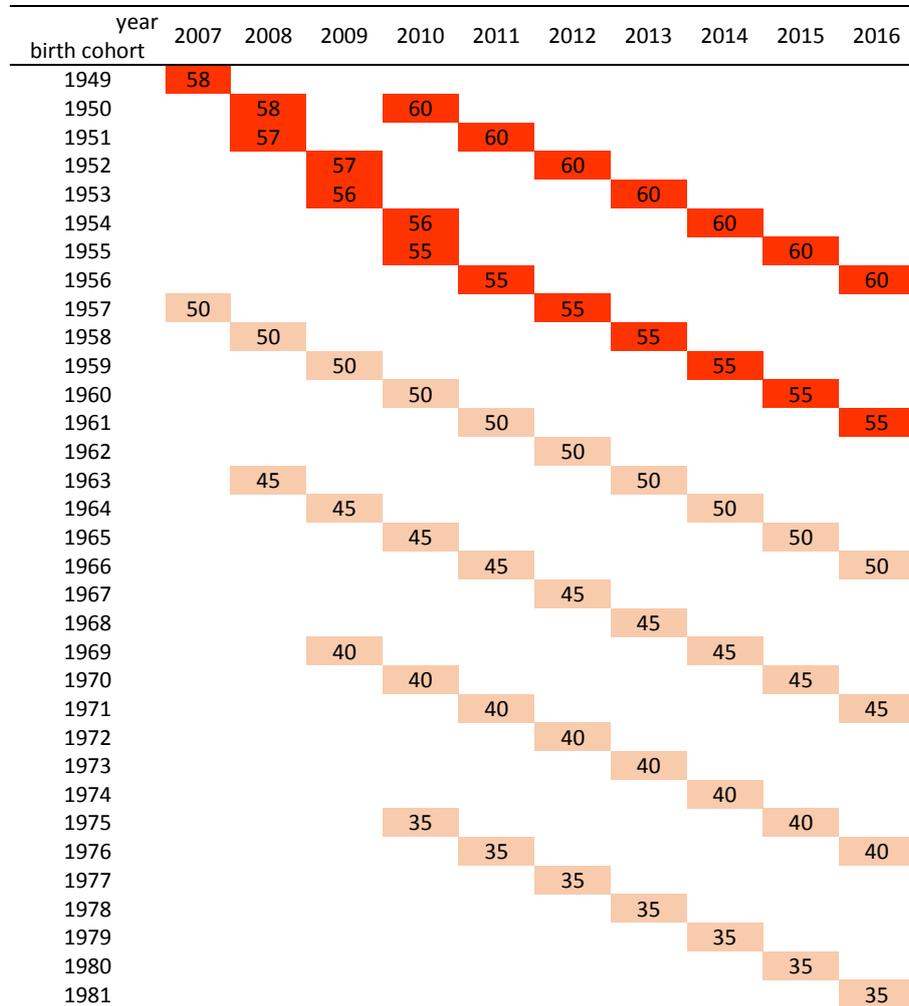
Cohort receiving a personal situation report (RIS)
Cohort receiving an estimate of amount of retirement pensions (EIG)