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Pension information and women's awareness

Marta Angelici, Daniela Del Boca, Noemi Oggero, Paola Profeta, Maria Cristina Rossi and Claudia Villosio

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Marta Angelici - marta.angelici@unimib.it
Bicocca University

Daniela Del Boca - daniela.delboca@carloalberto.org
University of Turin and CEPR

Noemi Oggero - noemi.oggero@unito.it
University of Turin

Paola Profeta - paola.profeta@unibocconi.it
Bocconi University

Maria Cristina Rossi - mariacristina.rossi@unito.it
University of Turin

Claudia Villosio - claudia.villosio@carloalberto.org
Collegio Carlo Alberto

Pension information and women's awareness[1]

Marta Angelici[2], Daniela Del Boca[3], Noemi Oggero[4], Paola Profeta[5], Maria Cristina Rossi[6], Claudia Villosio[7]

Abstract

We explore the role of financial and pension information in increasing women's knowledge and awareness of their future pension status and interest for pension information. We interview a representative sample of 801 Italian working women to assess their knowledge about pensions, financial issues and their own savings. The responses show that their knowledge and awareness of retirement planning is limited. We then run a randomized experiment to evaluate the effect of increased information regarding pensions on women's awareness, knowledge, and behaviors. Women in the treated group are provided information in the form of three short online tutorials. A follow-up survey shows that these women become more interested and aware of pension schemes and retirement options after completing the tutorials and are more likely to be better informed and keener to obtain further information. When looking at changes in behavior, we find that treated women who are closer to retirement are more likely to believe that they would make different work-life decisions if they received specific pension information in a timely fashion. Middle-aged women are also more likely to have a supplementary pension fund if they are concerned about their standards of living after retirement.

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[2] Bicocca University
[3] Collegio Carlo Alberto, CEPR and IZA
[4] University of Turin and CeRP-CCA. Corresponding author. Address: Corso Unione Sovietica, 218 bis, 10134 Torino, Italy.
[5] Bocconi University and Axa Research Lab on Gender Equality
[6] Commissione di Vigilanza sui Fondi Pensione, University of Turin and Collegio Carlo Alberto
[7] Collegio Carlo Alberto

1. Introduction

The world is rapidly ageing. Ageing poses serious financial pressures to the PAYG pension systems. To deal with them, in recent decades, many countries have switched from defined-benefit to defined-contribution pension schemes. In the new pension schemes, pension information becomes a crucial factor for workers in order to make rational retirement decisions. The ability to make optimal choices for work, savings and consumption may be hindered by a lack of knowledge, leading many workers to retire earlier and with lower pensions than if they had received better pension information. Since public pensions make up a large part of the total retirement income for many workers, it is important for governments to provide individuals with information about their public retirement benefits.

Gender differences are important in this ageing scenario. Women tend to live longer than men,[8] meaning they need to save more, and they are likely to spend a larger part of their retirement in widowhood. Moreover, women tend to have less attachment to the labor market than men, with interrupted careers because of childbearing and potentially relatively lower earnings over their life cycle. With fewer available resources and higher life expectancies, women's financial security after retirement is potentially more at risk than men's one. As reported in Bettio, Tinios, and Betti (2013), Tinios et al. (2015) and Lis and Bonthuis (2019), "pensions of women are substantially lower than those of men, by 27% on average across the EU but by more than 40% in a few European countries. This average gap is higher than the one for hourly earnings at 14%." Figure 1 reports the gender difference in pension coverage. At the same time, women appear to be less informed than men (Lusardi and Mitchell, 2008). In the absence of adequate information, gender differences risk being exacerbated by recent pension system reforms.

[FIGURE 1]

Italy represents a relevant case in this context. The gender pension gap at 35% is higher than the European average. Under the pressure of a very pronounced ageing process, the country has introduced a continuous series of reforms of the pension system. One of these was the country's introduction in 1995 of a Notional Defined Contribution (NDC) scheme within the PAYG system, which tightly links pension entitlements to pension contributions. Within this new scheme, gender wage gaps over the worker's career translate into gender pension gaps. The country's 2011 pension reform sharply raised the retirement age to 67; this was a significant change for women, whose retirement age used to be five years lower than men's. Such reforms have increased both individual responsibility and the complexity of the formulae that determine benefits (Fornero, Oggero, and Puglisi, 2019). Women, in particular, seem to be ill-informed when it comes to retirement planning. In this increasingly complex environment, basic financial knowledge has become a requisite for avoiding major mistakes and improving choices both in terms of labor supply and savings. In the current system, an employee's future pension is determined by the individual's labor history, as well as

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[8] Women in Europe live on average 3.4 years longer than men after age 65. In Italy, the difference is close to the EU average (Lis and Bonthuis, 2019).

general economic (GDP growth) and demographic (general life expectancy) factors. Clear and transparent information is essential in this new framework, where the risk has shifted from the state to the worker. The gender divide could widen if women are not correctly informed (Elinder et al. 2020).

In this context, the European Commission has encouraged governments to develop a clear communication system to assist individuals with retirement planning. The Italian Social Security Institute (INPS) now sends workers annual statements of their estimated pension benefits. Since 2016, private-sector employees and the self-employed can go to the INPS website to get information about the date of retirement and predicted replacement rate, or to map out the various scenarios for different career patterns.

This paper fills an important gap in the literature on the role of financial and pension information. We analyze whether pension information channeled through tutorials[9] can increase women's knowledge and awareness about their future pensions and change their actual planning behavior for retirement.

To carry out our analysis we run a randomized experiment, specifically we interview a sample of 801 Italian working women representative of Italian working woman aged 25-64. In the initial questionnaire, we ask them to provide information about their personal characteristics, their family, working conditions, savings, and retirement. The data show a general lack of awareness among women about pensions and retirement planning. Then, to assess the role of information, we randomize our sample into two sub-groups. The first group (control group consisted of 388 women) receives no treatment, while the second group (treated group consisted of 413 women) completes three short tutorials providing information about the functioning of the pension system, the relationship between labor market dynamics and pensions, and basic elements of wealth accumulation and savings patterns. We then ask both groups to respond to a second questionnaire. By comparing the answers of the control and the treated group, we should be able to evaluate the impact of the information provided on women's awareness, knowledge and savings plans. The results indicate that women in the treated group are more likely to have better knowledge of the pension system and to be interested in obtaining further information about pensions. Furthermore, pension information has an impact on the actual behavior, by making women in their accumulation life phase (middle age) save more specifically for retirement purposes. Our analysis shows to what extent pension information programs has an impact on women's pension knowledge, their willingness to increase information on the subject and their active retirement planning behavior.

The paper is organized as follows: the next section reviews the literature, section 3 presents the main features of the Italian pension system, section 4 introduces data and descriptive statistics from our first wave of the questionnaire, section 5 describes the randomized experiment, section 6 presents the results of the experiment and empirical analysis and section 7 concludes.

2. Literature review

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[9] Tutorials are video-pills sent by e-mail.

A large literature has analyzed the role of financial education on individual's choices and behaviors (see Lusardi and Mitchell, 2014 for a review), showing that financial education produces desirable outcomes. Policies meant to enhance the level of financial knowledge in the population have substantial impact on awareness and outcomes in the short run, while the long-term effects on savings and pension behavior are less conclusive. Influential studies based on randomized control trials assess the causal impact of information on enrollment in retirement plans (see for example Duflo and Saez, 2003).

More recently, pension and demographic education have also been investigated together with general financial education (see for example Billari et al., 2017). Research shows that, while providing pension information has a positive impact on workers' knowledge about their benefits, whether workers actually change their retirement behavior after receiving pension information is more ambiguous. Needless to say, taking action after receiving information on pension is not necessarily optimal if individuals are already well-prepared for their retirement. In countries like the US, where mandatory contribution rates and the private propensity to save are lower, saving for retirement is a major issue. In countries such as Italy, which have high levels of wealth, a high propensity, and high mandatory contributions, many workers might be in a better position to face retirement. However, even in settings where mandatory contributions and savings levels are high, wealth can be tied to non-liquid forms, which are difficult to use, particularly with thin financial markets, where products for decumulation are virtually non-existent (Fornero, Rossi, and Urzì Brancati, 2016). Moreover, in the case of fragmented careers (typical of many women), workers may end up with insufficient pension resources.

Using the Health and Retirement Study data, Mastrobuoni (2011) analyzed the introduction of the annual Social Security Statement in 1995, and found that after receiving the Statement, workers were more likely to be able to provide a benefit estimate and their benefit estimate tended to be more precise, but the additional information did not have significant effects on retirement behavior. More recently, Debets et al. (2020) found that receiving a letter containing pension information might have a small positive effect on pension knowledge, and pension knowledge has a positive causal effect on active pension decision-making. Ghafoori et. al. (2021) study the effect of a nationwide retirement seminar program that is administered by a major Australian pension fund and they find that older workers who are confident about the changes accompanying retirement report higher well-being. Clark et. al. (2006) find that financial education can affect how individuals think and plan for retirement. They also find that women are more responsive and they more likely to raise their desired retirement age and alter their savings behavior.

The gender dimension has also attracted specific interest of researchers. Women have historically been less engaged in financial decisions in the household and are hence more exposed to the risk of bad wealth management and having an inadequate pension when they are older. Lusardi and Mitchell (2008) show that women are much less likely to plan - and thus less likely to be prepared - for their retirement than men. Analyzing the case of Italy, Baldini, Mazzaferro, and Onofri (2019) explored the discrepancy between individuals' subjective expectations and the correct objective expectations of pension eligibility age (the retirement age) and replacement rates. According to their results, a significant proportion of workers, more frequently women, are not able to predict the correct level of their pension benefit or their retirement age.

3. The Italian pension system

Public pension spending in Italy is about 16.2% of GDP, higher than the average OECD, which is equal to 8%. The Italian Pension System (first pillar) is Pay-as-you-go: the pensions of current retirees are financed with contribution paid by active workers.

In 2011 the pension formula changed from defined benefit to notional defined contributions (NDC).[10] The contribution rate is 33%, of which about one-third is paid by the employee and two-thirds by the employer. At retirement, the accumulated notional capital is converted into an annuity. The pension benefit is calculated as the annuity generated by the pension pot accumulated lifelong through pension contributions, which appreciate at the nominal GDP growth rate (the so-called notional rate). The transformation coefficient used to convert the pension pot into an annuity (the pension benefit) is a function based on life expectancy: the higher life expectancy at retirement, the lower the pension benefit. As a consequence, benefits are strongly related to retirement age – the lower the age, the lower the pension (earnings-related scheme).

The transformation coefficients are reviewed every three years up to 2019 and every two years as of 2021, to be aligned with life expectancy.

This calculation method applied to all workers for seniority accrued since January 1st 2012 (pro-rata). Individuals already retired continue to receive their pension on the basis of the previous defined-benefit formulas. All Italian workers, irrespective of their gender, will retire on the basis of the notional defined contribution system, which calculates pension on the basis of the contributions paid each year.

Retirement age is fixed for private and public employees at 67 years in 2019. It increased gradually in the last years in line with life expectancy. Some flexibility with regards to retirement was reintroduced for fully NDC workers, up to a maximum of three years before the 'normal' old-age requirement (provided the benefit was at least 2.8 times the social pension).

In 2017, the so-called Anticipo pensionistico sociale (APE) was introduced: workers older than 62 years of age and with at least 30 years of contribution were given the opportunity to retire provided they were unemployed, in poor health or acting as a care-giver for a disabled relative.

A part from the first pillar, there exist also an additional voluntary supplementary scheme. It consists of occupational and open funds. They can be funded by both employers and employees as well as from the voluntary transformation of TFR (private severance pay). The open funds provide an annuity based on contributions. However, the number of workers enrolled in a private pension fund is very low and the first pillar remains the fundamental one.

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[10] The reform process started in 1992, when it appeared clear that the existing pension formula, eligibility conditions and indexation rules granted rates of return that were considerably higher than the rate of growth of the social security tax base and thus the pension system was unsustainable. Before 1992 the pension system was characterized by a Defined Benefit (DB) pension formula, based on the last few years of earnings. In 1995 a long transition towards a NDC formula was introduced. Workers with more than 18 years of contributions as of January 1st, 1996 were not affected by the reform, thus the transition period was supposed to end in 2030. See Franco and Tommasino (2020).

4. The data

Within the framework of the EU Rights, Equality & Citizenship (REC) project "CLEAR – Closing the gender pension gap by increasing women awareness," we interview a representative sample of 801 working women (aged 25-64) in Italy[11].

The sample was drawn from a panel of respondents built by a survey company. Respondents' recruitment takes place only upon company invitation and through a well-balanced mix of differentiated channels (for example: display & affiliate marketing, email marketing, mobile marketing, social media marketing…). Reliability of the respondents are periodically checked by the company to avoid the presence of duplicates, unreliable respondents or those only interested in incentives. Incentives are collected through a system of points and includes vouchers (Amazon, BestChoice), money transfers (PayPal) or donations to charitable organizations (WWF, Amnesty International). Respondents for this study have been selected by the survey company uniquely based on their demographic characteristics in order to reproduce the national distribution of working women by geographical areas.

We first provide a questionnaire[12] to gather information about the socio-economic characteristics of the respondents, their work and employment status, their knowledge of pensions, savings, and personal wealth planned for retirement. The questionnaire shows that women have scarce information about the pension system and their income at retirement, they have poor financial knowledge and are generally in fragile financial conditions in terms of ensuring adequate income for their old age. This double shortcoming raises serious concerns about the ability of women to be prepared for retirement. This scenario motivates our randomized experiment, aimed at exploring the role of information in increasing women's awareness, knowledge and behaviors.

This section presents the scenario, by using the answers from the questionnaire. The next section will explain the experiment.

4.1 Characteristics of the sample

Table 1 describes the sample. The geographical distribution of the sample maps the national scenario, with most working women living in the Northern regions of Italy. Most respondents have a high school diploma or a university degree, and over 70% of the women in our sample live with a partner/husband, with half of them also living with children. 13% of these women have children aged 0–3 years, 8% have children aged 4–5 years, and 46% have children older than 5. Among children less than 3, about 58% attend childcare, while among children aged 4–5, 97% attend pre-school.

Two-thirds of the women (67.3%) work full time and less than 20% have a net income lower than €1,000 per month. Surprisingly, 4.6% of working women do not have a bank account.

[TABLE 1]

To assess the representativeness of our sample with respect to Italian working women, we looked at the characteristics of the population of working women in Italy in 2018, as provided by the Italian National Institute of Statistics (ISTAT). With regard to the geographical areas, as already noted, our sample shows the same distribution as the national population (ISTAT reports that 54% of working women live in the northern regions of Italy, the same percentage as in our sample). As for the distribution by educational level, ISTAT reports that the share of working women age 25–64 with a degree is 31%, while 45% have a high school diploma. Hence, as 45.8% of the respondents of our sample have a college degree or higher and 49.4% have a high school diploma, our sample is biased toward more educated women, who all have access to the online survey. Thus, our statistics on the level of pension information and awareness are un upper bound of the actual retirement preparedness of Italian working women. Moreover, more educated women tend to have more stable employment and better IT skills.

As discussed in the introduction, one of the most important explanations for the large gender gap in pensions is related to women's labor-market behavior. Most women in the sample work in the private sector and 23% work in the public sector. A large majority (67.3%) of the women in the sample work full-time and only 29.8% work part-time. Again, this percentage is consistent with that of the entire population of working women in Italy, as ISTAT reports that 68% of working women aged 15+ are full-time workers. Our sample also includes 144 self- employed women, representing 18% of the sample. This percentage is also in line with that provided by ISTAT, which reports that 16% of working women aged 15–64 are independent workers.

4.2 Pension knowledge

The information regarding individual future pensions is available on the INPS website and from labor consultants and unions. Our survey shows that less than half (44%) of the sample have tried to obtain information about their future pension through the official channels. More than half of women (56.8%) believe they are not sufficiently informed about pension rules, while more than one in five (22.8%) reply that they will take care of it in due time. Therefore, only 20.3% of women consider themselves as being informed. Figure 2 shows that as women grow older, they gradually feel more informed about pensions, reaching a peak at age 64.

[FIGURE 2]

Almost one out of three women do not know their retirement age (29.2%) or how much their pension (29.7%) will be; more than 74% of women believe their pension will be lower than their current salary. Women were also asked the following four questions about the functioning of the pension system in order to test their actual knowledge:

1) The pensions of current retirees are financed with contributions paid today by active workers and employers: In your opinion, is this true or false? (3 possible answers: true, false, I don't know; correct

answer: true);

2) Future pensions will be financed by future workers. In your opinion, is this true or false? (3 possible answers: true, false, I don't know; correct answer: true);

3) Which of the following statements is correct? 3 possible answers: my future pension benefit will be calculated on the basis of the average of my last wages, my future pension benefit will be calculated on the basis of the amount of contributions paid every year, I don't know (correct answer: my future pension benefit will be calculated on the basis of the contributions paid every year);

4) Which of the following statement is true? (4 possible answers: if life expectancy increases, the monthly pension benefit will increase, if life expectancy increases, the monthly pension benefit will decrease, monthly pension benefit does not depend on life expectancy, I don't know; correct answer: if life expectancy increases, the monthly pension benefit will decrease).

The number of correct answers is reported in Figure 3: only 9.5% of the sample correctly answered all the questions on pension knowledge, and more than 12.2% got all of the questions wrong.

[FIGURE 3]

Looking specifically into the four questions, 30% of women do not know that current pensions are financed by the contributions of current workers and employers, and 44.9% do not know that the mechanism will be the same for their future pension. 40% of the sample do not know that their future pension will be based on the contributions paid and 74% do not know that if life expectancy increases, the pension decreases. Women are, however, interested in improving their knowledge about pensions through different channels. They declare that they would like to receive information from specialized consultants. A letter containing the future amount of pension sent by the national pension agency would also be appreciated.

4.3 Wealth planning for retirement

According to the life-cycle theory, people should accumulate wealth while working and start decumulating after retirement. However, recent cohorts face more financial insecurity as they near retirement than their predecessors (Lusardi, Mitchell, and Oggero, 2018). Wealth accumulation is one way to counteract financial vulnerability: wealth, indeed, can be transformed into annuities and generate a flow of income. At retirement, having savings to fall back on is the first way to offset financial distress.

The primary measure of financial inclusion is holding a checking account. As noted in the previous section, 4.6% of working women do not have a bank account, while 38.6% of the sample are also co-owners of checking accounts. More than half of the respondents without a checking account have a net monthly income below €1,500, while their age distribution is almost uniform.

While personal wealth does represent a means to combat financial vulnerability at older ages, it can be a problem if the assets are not liquid: it is difficult, if not impossible in financial markets offering few products for smooth decumulation as in Italy, to transform wealth into a stream of income for topping up income. What we actually see in our sample is that the majority of women (58.9%) think that their future pension resources will not suffice to keep their standards of living aligned to their desired level (Table 2). Also, more than one-fourth (28.4%) state that they do not know the answer. When we divide women into two age groups (with equal number of years, i.e. 25-44 and 45-64), the percentage is even higher among

younger women (32.3% of women aged 25-44 answer "Don't know" versus 22.9% of women older than 44). While we expect young individuals to be less worried, 22.9% is a remarkably large share for women that are approaching retirement.

[TABLE 2]

What actions can be taken to counterbalance the reduction in the perceived standards of living? One strategy for increasing savings would be to set aside more, for example, by subscribing to a pension fund or accumulating more. However, more than one-third (31%) of the women report that they are not saving anything, and 19.7% are saving just 1–5% of their annual income. Figure 4 shows the breakdown by age. The percentage of non-savers is much higher among respondents over the age of 44. On average, their younger counterparts save more.

[FIGURE 4]

A large majority of the sample (71.8%) does not have a separate pension fund. This means that the majority of working women rely entirely on their public pensions as a flow of future income after retirement. Moreover, many pension fund owners do not know how much their personal fund is worth, indicating that pension-fund planning is not a conscious form of retirement planning, but perhaps more of a passive choice. The percentage of women with a pension fund has an inverse U-shaped relation with age, with women in their forties most likely to be invested in a fund (Figure 5). Low percentages among older people could be the result of a cohort effect, as those people used to belong to a more generous defined-benefit public pension system.

[FIGURE 5]

5. The experiment

This section explains a randomized control trial experiment introduced to understand if the provision of information about pensions and financial planning is effective at increasing women's awareness. The main empirical questions we explore regard the impact of the release of information on i) knowledge about the pension system; ii) interest in more pension information; iii) work-life decisions; iv) having supplementary pension funds.

To provide an answer to these questions, our sample of 801 working women is randomized into two sub-groups. The first (control) group received no treatment and the second (treated) group was provided information through a series of booklets and videos that we specifically designed.

The experiment was conducted over the Internet between 2-15 July 2019. All the information materials (video and booklets) were developed in Italian[13]. Since our sample of working women was provided by the survey company and selected uniquely based on demographic characteristics of respondents, this should

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[13] See https://www.carloalberto.org/research/competitive-projects/clear-closing-the-gender-pension-gap-by-increasing-womens-awareness/). The English translation of the booklets is provided in the Appendix. One video is also available in English: https://youtu.be/8tmOGT43mTI

reduce at the minimum any element of participant self-selection into the study, therefore allowing us to have results which are valid for the general Italian population.

Women in the treated group had the opportunity to watch three short tutorials (3-5 minutes each) providing information about the relationship between labor market dynamics and pensions, the functioning of the pension system, and the link between pensions and wealth and savings. The same information provided by the video-tutorials was also available in form of short booklets. The aim of the tutorials was to convey basic notions about the functioning of the pension system, its link with the career in the labour market and the role played by savings and wealth during retirement in a simple, engaging and easy to remember way.

The first video (booklet) includes information and explanation of the gender gap in the Italian labour market; simplified examples of the effect on the pension level of interrupted working careers; indications on where to find legislative measures and tools that can help reconcile care needs within the family and work.

The second video (booklet) provides some details about the pension system in Italy: how does it works, how pensions are financed and calculated, which is their yield. Then, concepts about the effect of demographic ageing and of different working career by gender on pensions are presented.

The third video (booklet) is about Savings, Wealth and Pension Income. It includes basic notion of savings, wealth, life-cycle theory, consumption smoothing, wealth decumulation and the invitation to check the individual retirement situation in the website of the Italian Social Security System (INPS).

The treated group received by mail an invitation with the link to access the short videos. It was possible to record the extent to which the video was accessed and the duration of the access in order to check that the videos were actually watched[14].

Within two weeks after the delivery of the tutorials, the entire sample, both treated and non-treated women, was asked to complete a second questionnaire covering questions about their working activities, characteristics of the pensions system and intentions regarding retirement and investment in pension funds.

By comparing the answers of the treated and non-treated women, we can evaluate the impact of the tutorials and explore the determinants of gender pension gaps.

Table 3 shows the characteristics of the sample of 801 working women divided by treated or control group and confirms that the sample is correctly balanced among observable characteristics.

[TABLE 3]

Since the impact of the treatment may depend on how close the woman is to retirement, our analysis considers heterogeneity by age and divides the sample in two large groups: women older and younger than 44. This divides women between 25 and 64 years old into two subgroups of equal number of years each: younger women (between 25 and 44), and older women (between 45 and 64). To ensure that our randomization holds when we consider these sub-groups, in Table 4 we also perform balance tests by age groups.

[TABLE 4]

Next, we estimate the impact of treatment on the four outcomes of interest splitting the sample in narrower

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[14] Incentives for participation were provided by the survey company (see section 4)

age groups.

6. Results

In this section we report the results for each research question addressed here.

First, the online tutorials were highly appreciated by the treated women: over 80% rated the choice of contents and the clarity of the tutorials as excellent or good for each of the three topics. Furthermore, about 80% of them declared that they learned a lot about and become more interested in the topics covered.

By making clear that information is important, our treatment encourages women to acquire better knowledge and to try to better understand their own pension situation. Interestingly, after the provision of the tutorials, treated and control women show different knowledge about the pension system and have a different perception about the importance of the information itself.

In order to estimate the effects of our tutorials, we specify a reduced form for our outcomes of interest, assuming that they are linear functions of the treatment and socio-demographic characteristics. Since the dependent variables are dichotomous, we use probit models specified as follows:

$$Y_i = \beta_0 + \beta_1 X_i + \beta_2 \, Treatment_i + \varepsilon_i$$

where $i = \{1, ..., 801\}$ are individual identifiers. X_i is a set of controls for individual i including age, educational attainment, and a dummy indicating whether the respondent has children; ε_i is the error term of the model. Among the regressors we include *Financial Literacy,* a dummy variable whose value is 1 if the respondent correctly answered three questions assessing the understanding of fundamental concepts like interest rate, inflation, and risk diversification (Hastings, Madrian, and Skimmyhorn, 2013).[15] *Treatment* is a dummy variable whose value is 1 if the woman has been randomly assigned to the treatment group. β_2 is our coefficient of interest, i.e., it measures the change over different dimensions due to having attended our online tutorial.[16] For each outcome being investigated, we split the sample into two age groups, as we expect older women closer to retirement to be more responsive to the treatment.

6.1 The impact on pension knowledge

The first outcome we analyze is the impact of treatment on knowledge about the pension system. Figure 6 reports the share of women in the treated and control groups by the number of correct answers to the four questions on the functioning of the pension system. Although knowledge is still quite limited (only 11% of the treated women correctly answered all four questions), treated women answered more questions correctly than the women in the control group.

[FIGURE 6]

This result is partially confirmed in our regression analysis in Table 5. In fact, the estimates show that treated women learned more about pensions, measured by the correct answer given to question 4 specified

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[15] The regression results do not change if we use an alternative measure of financial literacy that is the sum of correct answers.
[16] We perform a t test on all the outcome variables investigated through a multivariate analysis to make sure that pre-treatment variables were not statistically different in the two groups.

above, i.e., the one related to the link between life expectancy and pension benefit. The improvement in knowledge involved both younger and older respondents (below and above age 44). However, we did not find a statistically significant effect on the other three questions. We also notice that having a university degree and being financially literate are strongly related to pension knowledge.

[TABLE 5]

Splitting further the sample by age groups in Table 6, our results show that pension knowledge increases non linearly with age, indicating significance for the very young (25-34) and the middle aged (45-54). Not surprisingly, the women closest to pension are not impacted by the information campaign, probably because they are too close to retirement and hence less reactive to receiving more information on pension. Among regressors, financial literacy is the strongest driver of pension knowledge, with the exception for the oldest group, increasing pension knowledge by up to 19 percentage points. Previous research has also demonstrated that financial literacy is a key factor in reducing financial vulnerability on the verge of retirement (Lusardi, Mitchell, and Oggero, 2020), and women are on average much less financially literate than men (Klapper and Lusardi, 2019).

[TABLE 6]

6.2 The impact on the interest in more pension information

Next, we investigate the impact of treatment on women's awareness about their future retirement, measured by their desire to learn more about their personal pension situation. The regression results reported in Table 7 show that treated women want to have more information than non-treated ones. Interestingly, treated women older than 44 are more interested in acquiring additional information than the untreated women, while for younger women this effect is not significant. This finding proves that more information increases women's awareness of their lack of knowledge about the pension system and the importance of the information itself.

[TABLE 7]

However, when we go deeper into the details of the functioning of the pension system, we find that the knowledge of women concerning both their retirement age and the chance to swap earlier retirement for future pension benefits do not seem to be strongly affected by the treatment. Indeed, a non-marginal part of both groups (14%), when asked, answered that they do not know at what age they expect to retire. Moreover, when we ask women whether they are willing to give up a certain percentage of their pension benefit (5%, 10%, 20%, 30% respectively) in order to move up their retirement by three years, treated women showed higher percentages of answers accepting this exchange than the controls; however, the differences are not statistically significant. In other words, the information treatment does not change the knowledge of women regarding a crucial aspect of their pension (the age of retirement and the trade-off between early retirement and the amount of pension), thus making the role of information more salient.

Splitting further the sample by age groups, we find that only middle-aged women are interested in receiving more information after being treated (Table 8). Other groups do not show any significant impact of the treatment on the willingness to acquire more pension information, once again stressing that the age group

mostly affected by the campaign is the one not too far from retirement but still able to plan for a better pension. Financial literacy is not important in determining the desire to acquire pension information once we consider each decade separately.

[TABLE 8]

6.3 The impact on work-life planning and decisions

Does more awareness translate into better planning, which, in turn, drives behaviors? To answer this question, we investigate whether the treatment has impacted women's economic decisions too. To this end, we exploit data on whether women think that having more information about their retirement could lead them to making different life and work choices.

The estimates reported in Table 8 show that older treated women are more likely to think that additional pension information can change their work-life decisions. On the other hand, younger women are not affected by the treatment, indicating that once again that they may see retirement as too far off to plan for.

[TABLE 9]

When looking at stated changes in economic behavior by narrower age groups in Table 10, we find once again that younger women are not affected by the treatment. On the other hand, treated women aged 45-54 and, at a lower significance level, women older than 55, are more likely to report that additional information on their future pensions could change their work-life decisions.

[TABLE 10]

As Tables 9 and 10 show, pension information can have an impact on women's labor-market decisions, so we now move to retirement decisions, and wealth planning in particular.

6.4 The impact on investment in supplementary pension funds

As stated above, more than half of the sample think that their future pension resources will not suffice to maintain their current standards of living. Hence, we expect that the treatment would be effective only on the economic behavior of that particular sub-sample. In other words, we expect people to react only if they are not satisfied with their standard of living after retirement. If the pension maintains the standard of living, instead, there is no reason to modify one's behavior. Put it differently, those who are not concerned about their standard of living after retirement, are not expected to change their behavior of intension to behave.

We thus identify, within the sub-sample of women over 44 years of age, those stating they are concerned about their standard of living during retirement and those who are not. Table 11 shows balance tests for these sub-groups, which guarantee that the randomization is still valid, so we can perform a valid analysis on these sub-groups.

[TABLE 11]

Table 12 shows the effect of the treatment on having a supplementary pension fund for the whole sample and for the two sub-samples. While the effect on the whole sample is not significant, we find more active wealth planning for retirement among older women who are worried about their standard of living at retirement. In fact, treated women are more likely to hold a pension fund than the untreated ones. The size

of the effect is marginally significant, but positive. Hence, the information we provide with our online tutorials increases women's awareness (in the immediate future), translating into a positive effect on women's choices to ensure a more adequate income for their retirement age, by having a pension fund. Having received information on pension was translated into additional saving behavior, despite the relative short period between the treatment and the interview. This can be explained by the effect of the information on pushing those women already marginally inclined to subscribe to a pension fund. The incentive given by the course might have induced those who had a propensity for that behavior to finally take action. It is interesting to note that the general attitude to saving (the propensity to save out of income) did not change. Instead, what changed was the specific take up of pension plan products. This evidence suggests that specific information on retirement and pension adequacy can have a direct effect on actual behavior, by saving more for that specific purpose.

[TABLE 12]

Finally, Table 13 shows that among the women who are worried about their standard of living at retirement, only the treated middle aged are more likely to hold a pension fund. Women older than 55 are reasonably very close to retirement to decide to take such an action.

[TABLE 13]

7. Conclusions

Through a randomized experiment, we explore the role of pension information channeled through online tutorials. We evaluate the impact of these short tutorials on women's awareness and knowledge as well as on their savings patterns.

A questionnaire is administered immediately after the tutorials to determine whether the tutorials increased women's information and knowledge on pension. Our results show that treated women are indeed more likely to be keen to gather information about their future pension. The tutorials also make women more likely to have a better knowledge of the pension system. When looking at changes in behavior, we find that treated women who are closer to retirement are more likely to think that pension information can change their work-life decisions, and more likely to invest in a pension fund if they are concerned about their standard of living after retirement.

We have to keep in mind that the women in our sample belong to a generally more educated population segment, with more stable employment and good IT skills. However, we find that their overall level of knowledge about the Italian pension system and their familiarity with the notions of basic finance are very limited. Nonetheless, they are aware of their limited knowledge on the subject, and most of them would like to learn more, in the belief that this might lead them to make different choices. Information policy could be important not only because it is likely to increase women's knowledge about their pension and financial situations, and stimulate additional information, but also because it can potentially improve women's economic decisions regarding their future, with particularly relevant consequences in our ageing societies.

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Figures

Figure 1. Gender gap in pensions and in wages across countries (%) 2018
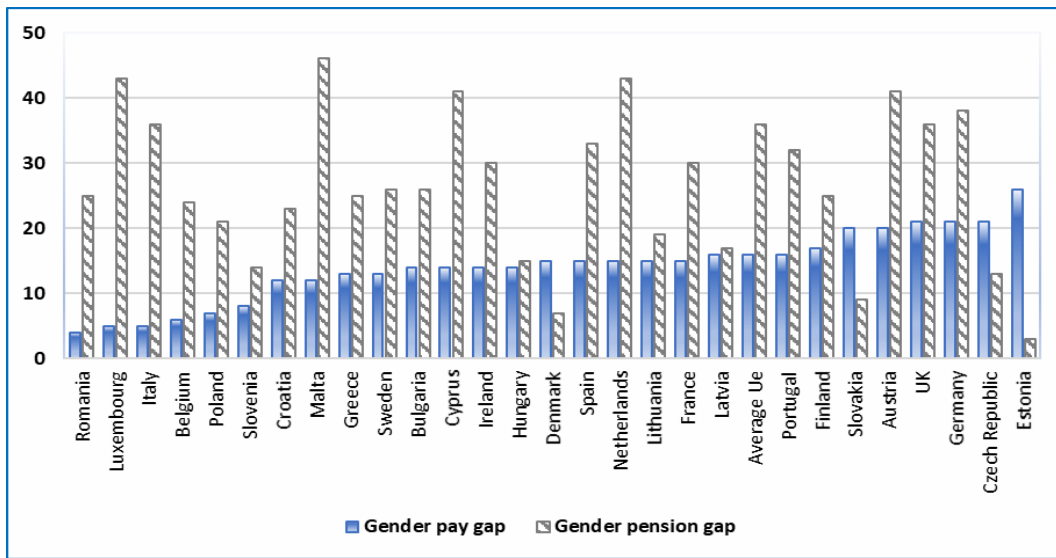
Source: Eurostat

Figure 2. Information about pensions and women's age
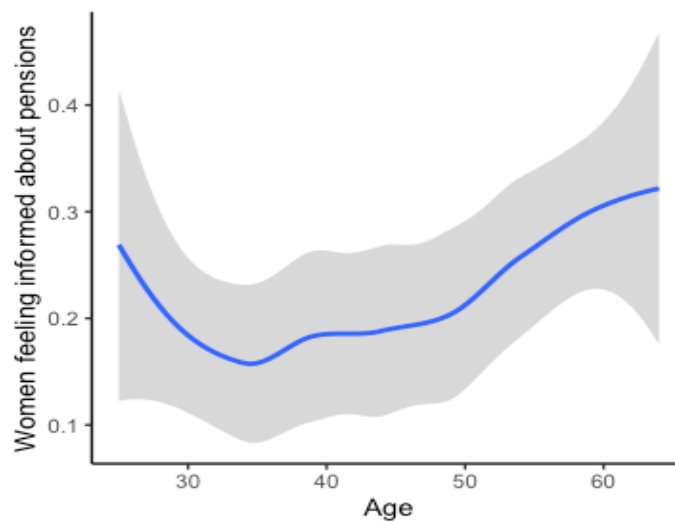
Figure 3. Knowledge of the Italian pension system: Proportion of correct answers
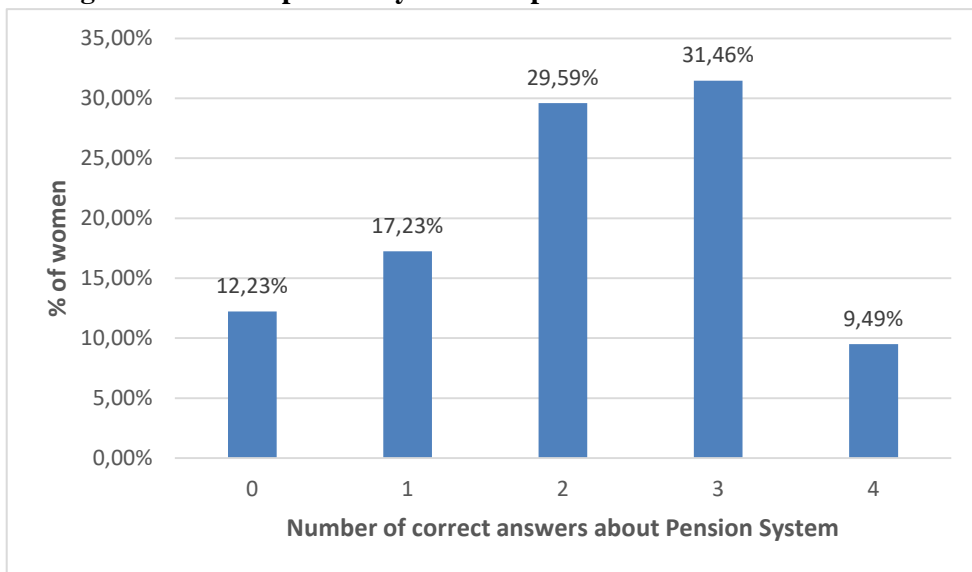
Figure 4. Saving behavior by age
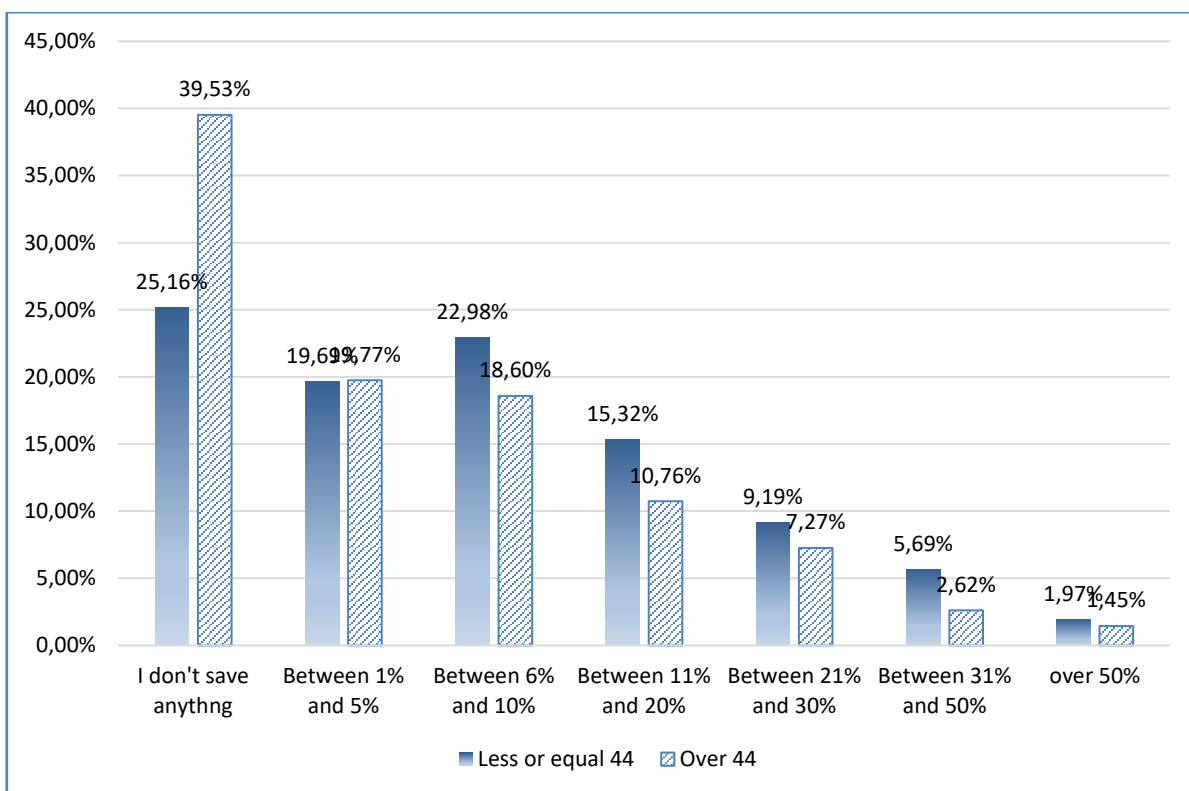
Figure 5. Pension funds and age
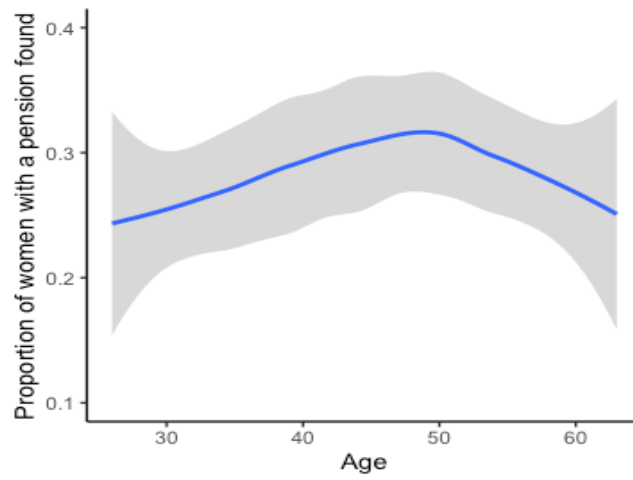
Figure 6. Share of correct answers on pension knowledge
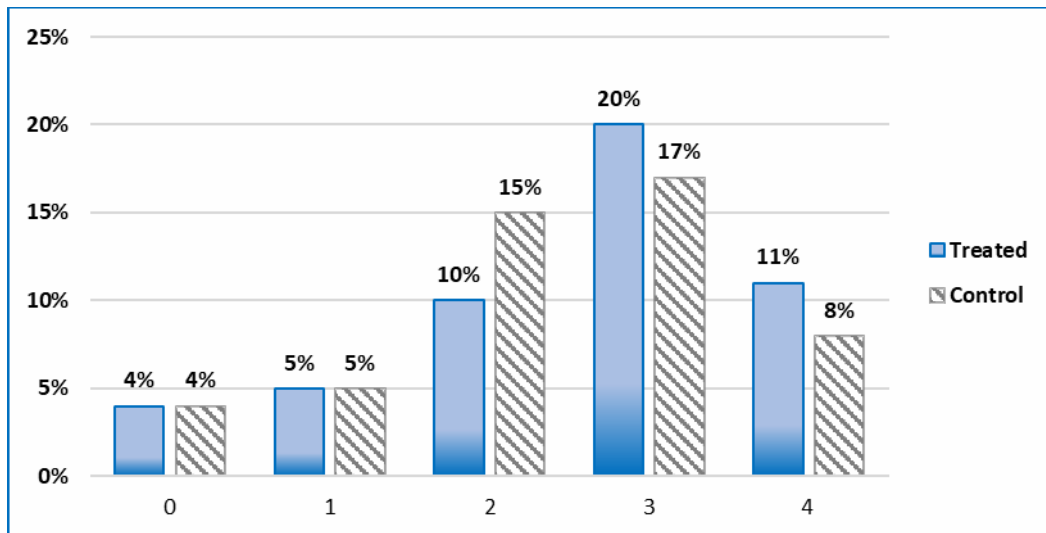
Table 1. Sample descriptive statistics

AGE		Sample (N=801)	
Mean		42.68	
GEOGRAPHIC AREA		**Sample**	
North-West		251	31.3%
North-East		190	23.7%
Center		165	20.6%
South and Islands		195	24.4%
	Total	**801**	**100%**
EDUCATION		**Sample**	
Tertiary education		367	45.8%
High school degree		396	49.4%
Lower secondary education		38	4.8%
	Total	**801**	**100%**
HOUSEHOLD COMPOSITION		**Sample**	
Live alone		92	11.5%
Couple without children		191	23.8%
Couple with 1 child		182	22.7%
Couple with 2 children		160	20%
Couple with 3 or more children		40	5 %
Single parent		61	7.6%
Other typologies		75	9.4%
	Total	**801**	**100%**
OCCUPATION		**Sample**	
Full-time		539	67.3%
Part-time		239	29.8%
Occasional		23	2.9%
	Total	**801**	**100%**
NET MONTHLY INCOME		**Sample**	
Up to 500 €		41	5.1%
From 501 to 1000 €		111	13.9%
From 1001 to 1500 €		208	26%
From 1501 to 2000 €		154	19.2%
From 2001 to 3000 €		115	14.4%
From 3001 to 5000 €		58	7.2%
Over 5000 €		10	1.2%
Prefer not to answer		87	10.9%
I do not know		17	2.1%
	Total	**801**	**100%**

Table 2. Pension and standard of living

Do you think your pension will enable you to have the desired standard of living?

Answers	Frequency	Percent
Yes	102	12.7
No	472	58.9
Don't know	227	28.4
Total	**801**	**100.0**

Table 3. Descriptive characteristics and balance test of treated and control groups

Variables	Treated		Controls		T-stat	p-value
	N	Mean	N	Mean		
AGE	413	42.92	388	42.96	-0.05031	0.959
GEOGRAPHIC AREA						
North-West	129	0.314	122	0.312	-0.063	0.949
North-East	102	0.247	90	0.232	0.497	0.619
Center	84	0.203	81	0.209	-0.188	0.851
South and Islands	98	0.237	95	0.245	-0.249	0.803
EDUCATION						
Tertiary education	198	0.479	171	0.441	1.098	0.273
High school degree	192	0.518	201	0.465	-1.504	0.133
Lower secondary						
Education	23	0.056	16	0.041	0.949	0.343
HOUSEHOLD COMPOSITION						
Live alone	48	0.116	45	0.116	0.0107	0.991
Couple without children	100	0.242	93	0.240	0.0806	0.936
Couple with 1 child	90	0.218	86	0.222	-0.127	0.899
Couple with 2 children	82	0.199	80	0.206	-0.269	0.788
Couple with 3 or more						
Children	20	0.048	22	0.057	-0.525	0.600
Single-parent	37	0.09	25	0.064	1.331	0.184
Other typologies	36	0.087	37	0.095	-0.402	0.688
OCCUPATION						
Full-time	284	0.688	259	0.668	0.609	0.543
Part-time	117	0.283	118	0.304	-0.647	0.518
Occasional	12	0.029	11	0.028	0.0597	0.952
INCOME						
Up to 500 €	23	0.056	14	0.036	1.321	0.187
From 501 to 1000 €	49	0.119	55	0.142	-0.972	0.332
From 1001 to 1500 €	106	0.257	107	0.276	-0.611	0.541
From 1501 to 2000 €	82	0.199	73	0.188	0.372	0.71
From 2001 to 3000 €	65	0.157	54	0.139	0.724	0.469
From 3001 to 5000 €	31	0.075	25	0.064	0.589	0.556
Over 5000 €	6	0.015	6	0.015	-0.109	0.913
Prefer to not answer	41	0.099	46	0.119	-0.876	0.381
I do not know	10	0.024	8	0.021	0.343	0.732

Table 4. Balance test of age groups

Variables	Age≤44		Age>44		T-stat	p-value
	N	Mean	N	Mean		
GEOGRAPHIC AREA						
North-West	146	0.321	105	0.303	-0.526	0.599
North-East	101	0.222	91	0.263	1.347	0.178
Center	97	0.213	68	0.197	-0.577	0.564
South and Islands	111	0.244	82	0.237	-0.228	0.819
EDUCATION						
Tertiary education	242	0.532	127	0.367	-4.603	0.00***
High school degree	195	0.429	198	0.572	4.066	0.00***
Lower secondary						
Education	18	0.040	21	0.061	1.377	0.169
HOUSEHOLD COMPOSITION						
Live alone	56	0.123	37	0.107	-0.706	0.481
Couple without children	124	0.273	69	0.199	-2.402	0.0165*
Couple with 1 child	105	0.231	71	0.205	-0.865	0.387
Couple with 2 children	85	0.187	77	0.223	1.247	0.213
Couple with 3 or more						
Children	19	0.042	23	0.066	1.555	0.124
Single-parent	14	0.031	48	0.139	5.773	0.00***
Other typologies	52	0.114	21	0.061	-2.618	0.009**
OCCUPATION						
Full-time	308	0.677	235	0.679	0.0679	0.946
Part-time	132	0.290	103	0.298	0.233	0.816
Occasional	15	0.033	8	0.023	-0.826	0.409
INCOME						
Up to 500 €	20	0.044	17	0.049	0.345	0.729
From 501 to 1000 €	66	0.145	38	0.110	-1.469	0.142
From 1001 to 1500 €	131	0.288	82	0.237	-1.616	0.106
From 1501 to 2000 €	90	0.198	65	0.188	-0.352	0.725
From 2001 to 3000 €	67	0.147	52	0.150	0.119	0.905
From 3001 to 5000 €	26	0.057	30	0.087	1.626	0.104
Over 5000 €	7	0.015	5	0.014	-0.108	0.914
Prefer to not answer	35	0.077	52	0.150	3.324	0.00***
I do not know	13	0.029	5	0.014	-1.335	0.182

Table 5. Regression on pension knowledge

	Whole sample Pension knowledge	Age≤44 Pension knowledge	Age>44 Pension knowledge
Treated	0.109***	0.091**	0.135***
	(0.033)	(0.045)	(0.049)
Age	0.020	-0.065	0.094
	(0.016)	(0.062)	(0.103)
Age squared	-0.000	0.001	-0.001
	(0.000)	(0.001)	(0.001)
Degree	0.127***	0.137***	0.121**
	(0.034)	(0.045)	(0.051)
Having children	0.015	0.004	0.040
	(0.036)	(0.047)	(0.055)
Financial literacy	0.162***	0.193***	0.127**
	(0.037)	(0.052)	(0.054)
Observations	801	455	346

Note: *Pension knowledge* is a dummy variable equal to 1 if the respondent answered correctly to the question: "Which of the following statement is true? If life expectancy increases, the monthly pension benefit will increase; *If life expectancy increases, the monthly pension benefit will decrease*; Monthly pension benefit does not depend on life expectancy." Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 6. Regression on pension knowledge by age groups

	Whole sample Pension knowledge	Age 25-34 Pension knowledge	Age 35-44 Pension knowledge	Age 45-54 Pension knowledge	Age>54 Pension knowledge
Treated	0.109***	0.168**	0.044	0.169***	0.080
	(0.033)	(0.070)	(0.057)	(0.058)	(0.084)
Age	0.020	-0.410	0.184	0.773*	-1.672**
	(0.016)	(0.362)	(0.300)	(0.433)	(0.708)
Age squared	-0.000	0.007	-0.002	-0.008*	0.014**
	(0.000)	(0.006)	(0.004)	(0.004)	(0.006)
Degree	0.127***	0.104	0.153***	0.097	0.137
	(0.034)	(0.074)	(0.056)	(0.062)	(0.086)
Having children	0.015	-0.064	0.036	-0.011	0.102
	(0.036)	(0.078)	(0.059)	(0.065)	(0.103)
Financial literacy	0.162***	0.178**	0.189***	0.156**	0.074
	(0.037)	(0.085)	(0.066)	(0.065)	(0.091)
Observations	801	171	284	238	108

Note: *Pension knowledge* is a dummy variable equal to 1 if the respondent answered correctly to the question: "Which of the following statement is true? If life expectancy increases, the monthly pension benefit will increase; *If life expectancy increases, the monthly pension benefit will decrease*; Monthly pension benefit does not depend on life expectancy." Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 7. Regression on interest in pension information

	Whole sample More information	Age≤44 More information	Age>44 More information
Treated	0.061**	0.028	0.101**
	(0.031)	(0.040)	(0.048)
Age	-0.022	-0.041	0.151
	(0.015)	(0.056)	(0.100)
Age squared	0.000	0.001	-0.001
	(0.000)	(0.001)	(0.001)
Degree	0.081**	0.060	0.103**
	(0.032)	(0.040)	(0.051)
Having children	0.035	0.083**	-0.022
	(0.033)	(0.041)	(0.054)
Financial literacy	0.065*	0.114**	0.028
	(0.037)	(0.051)	(0.055)
Observations	801	455	346

Note: *More information* is a dummy variable equal to 1 if the respondent answered yes to the question: "Would you like to have more information on your future pension situation?" Standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 8. Regression on interest in pension information by age groups

	Whole sample More information	Age 25-34 More information	Age 35-44 More information	Age 45-54 More information	Age>54 More information
Treated	0.061**	0.011	0.039	0.150***	0.015
	(0.031)	(0.065)	(0.050)	(0.056)	(0.085)
Age	-0.022	-0.430	-0.266	-0.173	-0.387
	(0.015)	(0.363)	(0.265)	(0.423)	(0.819)
Age squared	0.000	0.007	0.003	0.002	0.003
	(0.000)	(0.006)	(0.003)	(0.004)	(0.007)
Degree	0.081**	0.074	0.052	0.020	0.261***
	(0.032)	(0.065)	(0.051)	(0.061)	(0.088)
Having children	0.035	0.111	0.076	-0.062	0.030
	(0.033)	(0.070)	(0.051)	(0.064)	(0.097)
Financial literacy	0.065*	0.133	0.102	-0.021	0.063
	(0.037)	(0.086)	(0.063)	(0.065)	(0.093)
Observations	801	171	284	238	108

Note: *More information* is a dummy variable equal to 1 if the respondent answered yes to the question: "Would you like to have more information on your future pension situation?" Standard errors in parentheses, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 9. Regression on different work-life decisions

	Whole sample Different decisions	Age≤44 Different decisions	Age>44 Different decisions
Treated	0.059*	0.004	0.128**
	(0.033)	(0.043)	(0.050)
Age	-0.027*	-0.083	0.152
	(0.016)	(0.060)	(0.105)
Age squared	0.000	0.001	-0.001
	(0.000)	(0.001)	(0.001)
Degree	0.055	0.067	0.035
	(0.034)	(0.043)	(0.055)
Having children	0.056	0.103**	-0.002
	(0.035)	(0.044)	(0.057)
Financial literacy	-0.046	-0.005	-0.077
	(0.038)	(0.051)	(0.057)
Observations	801	455	346

Note: *Different decisions* is a dummy variable equal to 1 if the respondent answered certainly yes or probably yes to the question: "Do you think if you had more information on your future pension you would make different work and life decisions?" Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 10. Regression on different work-life decisions by age groups

	Whole sample Different decisions	Age 25-34 Different Decisions	Age 35-44 Different decisions	Age 45-54 Different decisions	Age>54 Different decisions
Treated	0.059*	-0.077	0.056	0.121**	0.164*
	(0.033)	(0.064)	(0.056)	(0.060)	(0.089)
Age	-0.027*	-0.437	0.132	0.233	-0.915
	(0.016)	(0.340)	(0.293)	(0.438)	(0.846)
Age squared	0.000	0.007	-0.002	-0.002	0.008
	(0.000)	(0.006)	(0.004)	(0.004)	(0.007)
Degree	0.055	0.109*	0.057	0.010	0.074
	(0.034)	(0.064)	(0.057)	(0.065)	(0.099)
Having children	0.056	0.249***	0.026	-0.005	-0.034
	(0.035)	(0.070)	(0.058)	(0.067)	(0.108)
Financial literacy	-0.046	-0.034	0.003	-0.125*	0.008
	(0.038)	(0.078)	(0.068)	(0.068)	(0.101)
Observations	801	171	284	238	108

Note: *Different decisions* is a dummy variable equal to 1 if the respondent answered certainly yes or probably yes to the question: "Do you think if you had more information on your future pension you would make different work and life decisions?" Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 11. Balance test of "worried" and "not worried" (subsample of age over 44)

Variables	Age>44 & Not worried		Age>44 & Worried		T-stat	p-value
	N	Mean	N	Mean		
GEOGRAPHIC AREA						
North-West	49	0.358	56	0.268	-1.778	0.076
North-East	33	0.241	58	0.278	0.755	0.451
Center	28	0.204	40	0.191	-0.297	0.767
South and Islands	27	0.197	55	0.263	1.414	0.158
EDUCATION						
Tertiary education	56	0.409	71	0.340	-1.303	0.194
High school degree	75	0.547	123	0.589	0.754	0.452
Lower secondary						
Education	6	0.044	15	0.072	1.064	0.288
HOUSEHOLD COMPOSITION						
Live alone	17	0.124	20	0.096	-0.834	0.405
Couple without children	38	0.277	31	0.148	-2.967	0.00322 **
Couple with 1 child	25	0.182	46	0.220	0.846	0.398
Couple with 2 children	27	0.197	50	0.239	0.920	0.358
Couple with 3 or more						
Children	8	0.058	15	0.072	0.487	0.626
Single-parent	17	0.124	31	0.148	0.636	0.525
Other typologies	5	0.036	16	0.077	1.527	0.128
OCCUPATION						
Full-time	104	0.759	131	0.627	-2.597	0.0982**
Part-time	31	0.226	72	0.344	2.364	0.0186*
Occasional	2	0.015	6	0.029	0.852	0.395
INCOME						
Up to 500 €	5	0.036	12	0.057	0.879	0.380
From 501 to 1000 €	10	0.073	28	0.134	1.777	0.076
From 1001 to 1500 €	23	0.168	59	0.282	2.462	0.014*
From 1501 to 2000 €	24	0.175	41	0.196	0.488	0.626
From 2001 to 3000 €	23	0.168	29	0.139	-0.739	0.459
From 3001 to 5000 €	21	0.153	9	0.043	-3.62	0.00034***
Over 5000 €	4	0.029	1	0.005	-1.865	0.063
Prefer to not answer	26	0.190	26	0.124	-1.666	0.097
I do not know	1	0.007	4	0.019	0.901	0.368

Table 12. Regression on pension funds

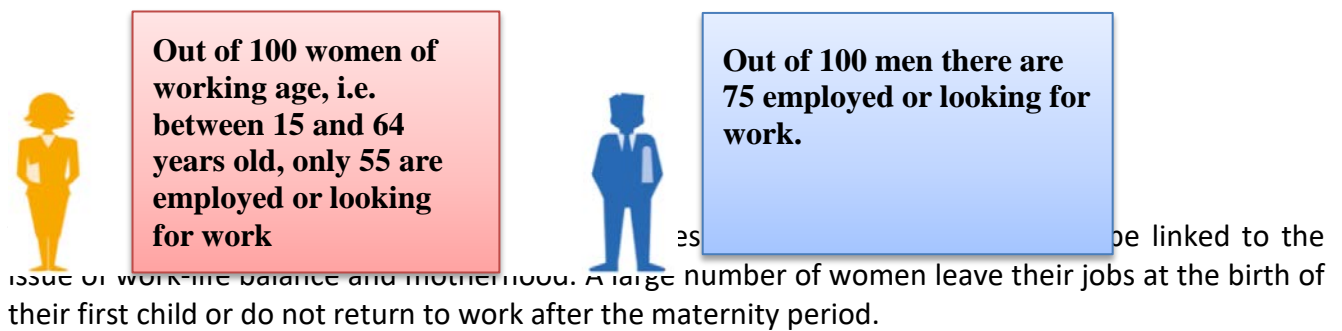|	Whole sample Pension fund	Age>44 & not worried Pension fund	Age>44 & worried Pension fund
Treated	-0.041	-0.015	0.097*
	(0.033)	(0.083)	(0.057)
Age	0.012	0.171	0.292**
	(0.015)	(0.167)	(0.131)
Age squared	-0.000	-0.002	-0.003**
	(0.000)	(0.002)	(0.001)
Degree	0.052	0.136	0.074
	(0.033)	(0.083)	(0.060)
Having children	0.090***	0.033	0.061
	(0.034)	(0.087)	(0.066)
Financial literacy	0.013	0.070	-0.018
	(0.038)	(0.094)	(0.063)
Observations	801	137	209

Note: *Pension fund* is a dummy variable equal to 1 if the respondent reports she has a supplementary pension fund. *Worried* is a dummy variable equal to 1 if the respondent answered no to the question: "Do you think your pension will enable you to have the desired standard of living?" Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 13. Regression on pension funds by age groups

		Not worried		Worried	
	Whole sample Pension fund	Age 45-54 Pension fund	Age>54 Pension fund	Age 45-54 Pension fund	Age>54 Pension fund
Treated	-0.041	0.064	-0.139	0.143**	-0.010
	(0.033)	(0.104)	(0.132)	(0.069)	(0.103)
Age	0.012	0.190	0.587	0.660	0.401
	(0.015)	(0.765)	(1.132)	(0.502)	(1.079)
Age squared	-0.000	-0.002	-0.005	-0.007	-0.004
	(0.000)	(0.008)	(0.010)	(0.005)	(0.009)
Degree	0.052	0.123	0.150	0.041	0.135
	(0.033)	(0.105)	(0.142)	(0.074)	(0.096)
Having children	0.090***	0.064	-0.014	0.024	0.147
	(0.034)	(0.107)	(0.160)	(0.079)	(0.139)
Financial literacy	0.013	0.076	0.077	-0.007	-0.031
	(0.038)	(0.121)	(0.163)	(0.078)	(0.109)
Observations	801	85	52	153	56

Note: *Pension fund* is a dummy variable equal to 1 if the respondent reports she has a supplementary pension fund. *Worried* is a dummy variable equal to 1 if the respondent answered no to the question: "Do you think your pension will enable you to have the desired standard of living?" Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

BOOKLET 1:

The Italian labor market in Italy and the link with the pension system, with a focus on women

Labor market: the reference context

In Italy, even more than in most other European countries, there is a large gap in participation, both in entry and in terms of permanence, within the labor market.

> **Out of 100 women of working age, i.e. between 15 and 64 years old, only 55 are employed or looking for work**

> **Out of 100 men there are 75 employed or looking for work.**

issue of work-life balance and motherhood. A large number of women leave their jobs at the birth of their first child or do not return to work after the maternity period.

It should also be noted that the gap, although to a lesser extent, also remains at the wage level.

On average, women's wages are 16% lower than men's are. Since lower wages correspond to lower social security contributions, the gender gap also affects pensions. This gender pension gap to the detriment of women has an even greater weight if we consider that female life expectancy is greater than that of men. This means that women are living longer on lower incomes.

It is very important to be aware of the choices made today regarding participation in the labor market because the latter will have a strong impact on the pension that will be received.

Continuity of employment can help reduce the pension gap between men and women.

In particular, in Italy, the pension of women is about 35% lower than that of men (against 10% of the gap recorded in Northern European countries. Source: European Commission 2015)

An example:

With **40 years of social security contributions** paid, a worker can count on a **pension almost equal to her last salary (93%)**	However, if the contributions **drop to 35 years**, for example in the case of suspension of work for a few years due to childcare needs, **the pension that will be obtained will be only 80% of the salary**	If pension **contributions** were paid only **for 20 years,** the **pension obtained would be just over half of the salary (65%)**

Regulatory box

The legislation provides some measures and tools that can help reconcile care needs within the family and work:

It is possible to find out on the website of the Department for Family Policies of the Presidency of the Council of Ministers, in particular in the section: Regulations

http://www.politichefamiglia.it/

It is also possible to consult the special section dedicated to maternity, paternity and marriage leave on the INPS website:
https://www.inps.it/nuovoportaleinps/default.aspx?iprestazioni=110&itema=7627

The Pension System

1. What are pensions

Transfer of resources for the elderly
Workers pay compulsory contributions in proportion to their income during their working life and expect to receive a pension when they are elderly, in the form of an annuity, for all years from retirement to death. The choices made today regarding participation in the labor market will have strong repercussions on the pension that will be received. Continuing employment can help reduce the pension gap between men and women.

2. How pensions are financed: two types

Pay-as-you-go system: the revenue collected in each period from employee contributions is used to finance the pensions paid in that same period
Fully Funded system: the contributions paid by workers are invested on the capital market. Everyone will receive as a pension the one who paid the most of his return on the market

3. How pensions are financed in Italy

The system in Italy is pay-as-you-go as in most countries in the world; there is no accumulation of reserves
- The contributions paid by today's workers are immediately spent to pay the pensions of today's retirees
- Today's workers will receive their pension when they retire, funded by the workers of that time
- There is no guarantee that the system will continue to work in the future. The only promise is the maintenance of the system

4. Yield

In a pay-as-you-go system, pensions are financed by contributions paid by workers, which are proportional to their wages.
- The more workers there are and the more they earn, the greater the contributions paid and therefore the resources for pensions
- If wages rise and / or the working population increases, the resources for pensions are greater
- If, on the other hand, wages do not grow (for example because the economy is not growing) and / or the working population does not increase (for example because the birth rate is low), the resources for pensions are lower

5. Ageing of the population

If the population ages, we need more resources for pensions … But if the economy and employment do not grow, what can we do?

Possibilities:

- Reduce pensions - for example by changing the way they are calculated
- Paying higher contributions - difficult because they are already considered high
- Retire later

6. The calculation of the pension

Within the pay-as-you-go pension system there are two methods of calculating the pension:

a) Salary calculation method

The amount of pension received by each depends on his salary for a defined period, eg. the last wage, an average of the last wages, the average of all wages of working life.

Therefore

If the individual has a career with increasing wages, the more the pension depends on the final salary period, the greater the pension he receives

b) Contributive method of calculation

The amount of pension received by each person depends on the sum of all the contributions he has paid, increased by the rate of growth of the economy, divided by the presumed retirement period (which depends on the average life expectancy - not differentiated between men and women)

Therefore

- If the individual contributes for several years, the pension increases
- If the economy grows, the pension increases
- If life expectancy increases, retirement decreases

In Italy

- The Dini reform (1995) introduced the contribution calculation method but with a long transition period.
- The Fornero reform (2011) established that starting from 1/1/2012 the contribution calculation method (pro-quota) applies

7. Differences men / women

With the Contributive method

All the differences between men and women that exist in the labor market are found in pensions.
In particular:

- If women earn less than men, they will have a lower pension
- If women have interrupted and discontinuous careers and therefore years of non-contribution, they will have a lower pension
- Retirement is more important for women, because by living longer they will receive it for more years than men

8. The retirement age

Suppose you retire after working for 30 years paying 10 in contributions every year (in total 10x30 = 300).
If the individual lives 10 years, he will receive a pension of 30 years each year.

To retire a year in advance without public finance costs means

- Pay 290 total contributions (10 less)
- Divide the 290 by 11 instead of 10, so you get 26.36!

Reforms that promise to retire earlier while continuing to receive 30 cost…. Who pays the bill?

Fornero reform: It is the same for men and women (even if women live longer on average): 67 years.

Gradually increasing since 2014 Quota 100: you can retire if the sum between the years of contributions paid and your age is 100. From 62 years of age + 38 years of contributions. Difficult for women to qualify!

Woman option: employed women can retire at 57 (58 for self-employed) and 7 months and 35 years of MA contributions with a penalty, i.e. they will receive a lower pension. Is it convenient?

BOOKLET 3:
Savings, Wealth and Pension Income

Savings as future wealth

Savings represent the first form of do-it-yourself pension. Indeed, savings are an answer to future income reductions.

If a pension system did not exist, people would respond by saving, in order to draw from their savings once reached the retirement.

Consumption constant over time

Consumption is more constant than families' income. As general rule, people wish to maintain a constant standard of living over time.

Income fluctuations are softened by drawing from savings or resorting to indebtedness in an attempt to maintain a constant level of consumption.

A simple but effective theory, Modigliani's life-cycle hypothesis, suggests how constant consumption is the one families derive most satisfaction form.

Once the amount of the inheritance to be left has been decided upon, wealth will only be used to maintain one's level of consumption.

Pensions help implement the constant consumption plan, thus reducing the need for private savings
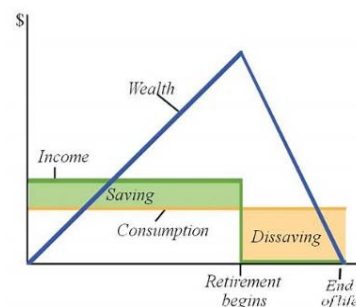
Wealth to draw on in old age

If the income after retirement is zero, only private savings can be used.

With a pension system, the income decreases but is not reduced to zero after retirement.

The less "generous" the pension system, the more substantial the need for private savings.

In the absence of a pension system, people should draw uniquely from their savings in order to maintain a standard of living similar to the pre-retirement one, thus eroding their wealth.

The presence of a pension system means that drawing from one's wealth becomes the instrument to increase the retirement income and allow homogeneity in the level of consumption over time.

Knowledge of retirement

The younger generations, despite working as intensely as the older ones, will receive a pension a fraction lower than their last income from work. This is to guarantee a balanced pension system.

It is important to find out, with the greatest possible accuracy, how much the pension I will rely on is worth. Visit the INPS website «la mia pensione futura».

If consumption levels are to be kept constant after retirement, then additional resources are required in order to increase the retirement income.

The risk of not having enough resources to draw from falls entirely upon individuals.

Private wealth and retirement

The lower the pension, the higher the need to save.

It is therefore crucial to know the precise amount of one's pension and the age at which one will be entitled to start drawing it.

If I want to raise my standard of living beyond the pension income, I will have to draw from my savings in order to guarantee a flow of resources sufficient to avoid brisk changes in the levels of consumption.

Wealth can be a valuable ally to be turned into flows of additional income after retirement.

How is our wealth made up?

If much wealth is made up of real estate, the portfolio is illiquid. Although the value of real estate is important, it might be hardly usable.

How can one decumulate wealth if the latter is mainly real estate? It is possible to convert it into a pension through a reverse mortgage.

Reverse mortgage allows to transform the value of one's home into a cash flow constant over time, permitting the heirs the possibility of repaying the debt without losing the property, unlike it happens with the bare ownership.

A balanced capital should include all the forms of investment (shares, bonds, real estate and so on).