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Too busy to stay at work. How willing are Italian workers "to pay" for earlier retirement?

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Abstract

Using a representative sample of Italian workers aged 55+, we survey their understanding of the recent (2011) pension reform and analyse their preference for earlier retirement and willingness to pay for exiting the workforce a year earlier. The preference for earlier retirement is particularly strong for women and for workers who were obliged by the reform to postpone retirement. As for the willingness to pay, we find that women who are involved in informal care of children are willing to pay significantly more than women who are not caregivers, and more than men. In terms of policy, our findings point to the need for considering side effects of reforms and of integrating policy measures. In particular, when a pension system compensates for gaps in other welfare programs (like providing early retirement as a substitute for lack of public care services), its reform may cause social mismatches unless supplemented by appropriate changes in these other programs.

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Too busy to stay at work. How willing are Italian workers "to pay" to anticipate their retirement?

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Abstract

Using a representative sample of Italian workers aged 55+, we survey their understanding of the recent (2011) pension reform and analyse their preference for anticipated retirement and availability to pay for exiting a year earlier. The preference for anticipated retirement is particularly strong for women and for workers who were obliged by the reform to postpone retirement. As for the "willingness to pay", we find that women who are involved in informal care of children are available to pay significantly more than women who are not caregivers, and even more than men. In terms of policy, our findings point to the need of considering side effects of reforms and of integrating policy measures. In particular, when a pension system compensates for gaps in other welfare programs (like providing early retirement as a substitute for lack of public care services), its reform may cause social mismatches unless supplemented by appropriate changes in these other programs.

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1. Introduction

Retirement decisions have attracted much attention from researchers in recent years, in parallel with pension reforms that, besides restricting eligibility requirements to strengthen the systems' financial sustainability, have increased individuals' options, risk and responsibility. Understanding workers' reactions to changes in pension rules has important implications for the effectiveness of such policies (see for instance Behaghel and Blau, (2012) and Mastrobuoni, (2009) concerning the 1983 US Social Security reform).

In this paper, we study the effects of the latest Italian pension reform - the so-called "Monti–Fornero reform" (law 214/2011) - on two aspects of (older) workers' behaviour: their preference for earlier retirement and their willingness to pay for it. The reform was introduced at the apex of the 2011 financial crisis and came almost immediately into effect, only allowing for a very short transition period, a feature that stands in sharp contrast to past pension reforms characterised by an exasperatingly long phase-in period[1] (Fornero 2015).

The reform introduced important restrictions to early retirement provisions (such as pure seniority pensions, formerly awarded largely irrespective of age) as well as more stringent "age plus seniority" requirements for "normal" (old age) retirement. It also equalised, as of 2018, women-men requisites (in private employment they were much more generous for women, while in the public sector they had already been levelled out following an indictment of the European Court of Justice). It further indexed all requirements to life expectancy. Finally, it stipulated the immediate application of the Defined Contribution (DC) formula to all future seniorities, irrespective of the time to retirement.[2]

The rather drastic reduction of the pure seniority exit precluded the early retirement option for a large fraction of workers and meant for them additional years of work (from 1 to 7 years). Given the circumstances, it is fair to say that the reform was a significant policy shock, largely unexpected in its intensity, irrespective of the international pressure for a "real" (i.e. not symbolic because of its too lengthy implementation) change.

Using a data set drawn from a representative sample of Italian workers aged 55 and above, we measure the demand for early retirement and the consequent willingness to pay for retirement one year earlier. We focus on three elements: i) gender; ii) informal care activities provided by the prospective retirees; and iii) whether or not the worker was forced to postpone retirement by the reform.

The literature on retirement decisions has shown significant differences in preferences between men and women concerning labour supply when approaching retirement (Been and van Vliet, (2014); Belloni and Alessie, (2009)); retirement seems to imply different consequences for the lives of men and women (Moen, (1996); Quick and Moen, (1998); Smith and Moen, (1998)), with the latter often synchronising their career exit with that of their husband (Quick and Moen, (1998)).

An important aspect of post-retirement years for women, and an alternative to regular work, is often (informal) caregiving towards children, grandchildren and adults. This is particularly relevant in countries (typically, in Europe, the Mediterranean Countries) where family ties are very strong, the formal provision of care suffers from rationing problems (Brilli et al., (2011)) and filling the gaps is

[1] The 2011 reform is the last stage of the very long and slow restructuring process undertaken by the Italian pension system since 1992. While all the previous reforms had accommodated an extremely long phase-in period, in 2011 there was little room for gradualism, given the necessity to reduce pension expenditure in the short and medium run under the pressure of the financial emergency (Fornero 2015).

[2] For more detailed description of the Monti-Fornero reform, we refer to Appendix A.

considered a moral duty by most women.[3] Research has shown that the availability of formal (public or market) care affects households' decisions in general and mothers' labour supply specifically.

Particularly important is the role of (grand) mothers, as their availability for childcare is positively correlated with the labour force participation and fertility of their daughters (Aparicio-Fenoll and Vidal-Fernandez, (2014)). In the same vein, Coda Moscarola et al., (2016) document the impact of the pension reform on grandmothers' absenteeism. In terms of magnitude, the total amount of unpaid family care in Italy has been estimated to be around 67 billion Euros (i.e. circa 4 per cent of Italian GDP, see Bettio et al., 2013), and the majority of women aged 55 and above declare themselves to be engaged in it (Coda Moscarola et al., (2016)). In this context, we focused our attention on the relationship between the desire for earlier retirement, willingness to pay and caregiving.

As for workers' reactions to increases in the statutory retirement age, Duggan et al (2007) for the US find evidence of an increase in disability pensions, while Staubli and Zweimuller (2013) for Austria document an increase in unemployment.

To summarize the main findings from our data, we observe a widespread demand for earlier retirement; this demand, however, is accompanied by a less common willingness to pay for its realization. The demand for early retirement is particularly strong for workers who were directly affected by the reform, for women and for respondents who show a low degree of understanding of the reform. In terms of willingness to pay for earlier retirement, however, we see practically no difference between workers directly affected and those unaffected by the reform. We observe that many respondents are simply not willing to pay for earlier retirement. We conjecture that these workers consider pensions as an entitlement ("acquired right" is the term often used in public debates as well as in judiciary sentences), a "promise" by the state more than the result of own contributions, and thus to be maintained by public finances irrespective of the gap (in present values) between the amount of contributions and the amount of benefits. We also checked whether the respondent's degree of understanding of the reform affects his or her willingness to pay for earlier retirement. Somewhat disappointingly, we find that this variable has almost no effect on the workers' reaction to the reform.

On the other hand, respondents who are prepared to pay a positive amount for earlier retirement seem to be willing to offer even more than the average of the actuarially fair amount. Informal care duties play a role in explaining the willingness to pay and, interestingly, this role differs across genders. Women who are involved in informal care of children (or grandchildren) are willing to pay significantly more than women who are not, while no effect of caregiving duties on willingness to pay is observed for men.

Our findings suggest that it is important to quantify the workers' willingness to pay for earlier retirement. Although this attitude is not necessarily tied to a reform (since workers can simply prefer to retire earlier), a restriction of eligibility requirements necessarily upset people's programs and may cause the reaction to be stronger. Our survey was conducted a couple of years after a comprehensive reform, and shows a stronger desire of affected workers for earlier retirement. The different impacts of the reform on different subgroups of the population also suggest that retirement policies have important side effects that perhaps should be accounted for and/or neutralised with complementary policies. For example, more structured care services could alleviate the burden on relatives, especially women.

2. Data and sample selection

Our analysis is based on an ad hoc data set specifically designed to examine the effects of the 2011 Italian pension reform on several aspects of older workers' behaviour. The survey was conducted in

[3] The effect of adult care, however, seems to be of lesser importance. Ciani (2012) finds that the effect on the caregivers' probability of being employed is quite small, even in Southern European countries, if one focuses expressly on adult care.

July 2014 by GFK-Eurisko (http://www.gfk.com/it/), a well-known international institute for marketing research, opinion polls and socio-economic surveys.[4]

The sample concerns employees aged 55 and above and was extracted from two GFK panels (GFK "dialogue" and "Toluna"), both statistically representative of the Italian population with respect to the standard socio-demographic characteristics, namely: region of residence, gender, age, as well as education, occupation and household size.

The survey asked questions about the respondents' working activity, retirement position, health status, care responsibilities towards children (grandchildren) and adults. It also enquired about the personal understanding of the motivation and effects of the pension reform, with explicit questions about the respondent's *expected* and *desired* retirement ages[5]. Further, it asked questions concerning saving, wealth and portfolio choices, although these variables refer to the household, not to the individual respondent. In Appendix B we provide a detailed description of the questions and variables used in our analysis.

Given the focus of our paper on the demand for earlier retirement and the willingness to pay for it, we selected the sub-sample of respondents who answered in a consistent way. We thus excluded individuals with missing information relative to their desired or expected retirement age (214 observations); this rate of non-response is in line with the one observed in the 2014 Bank of Italy Survey of Households Income and Wealth (SHIW) for a similar population. We also omitted workers aged 65 and above (10 observations); those whose desired retirement age is greater than the expected retirement age (52 observations[6]); those who stated a willingness to reduce their pension by more than 20 per cent (9 observations) and those who declared that they had been forced to postpone retirement by more than 7 years (19 observations). Our final sample consists thus of 501 observations. Table 1 reports the descriptive statistics.[7]

The average age of respondents is 58 years; 59 per cent of them are men; a third of them have a university degree; the majority are white-collars (managers, clerks or teachers). About 80 per cent of the women and 70 per cent of the men are engaged in care activities towards children and/or adults.[8]

Table 1 shows that the expected age of retirement is about 64.5 for both men and women (in consequence of the progressive harmonization across genders of the eligibility requirements), while the desired age of retirement is 61 for women and 62 for men. The desire for earlier retirement varies according to gender: it involves 78 per cent of women and 74 per cent of men.

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[4] Since 2012 GFK-Eurisko runs the well-known Bank of Italy Survey on Household Income and Wealth for the Bank of Italy.

[5] The "expected" retirement age refers to the age at which the worker can retire according to his/her interpretation/knowledge of the pension rules; "desired" is the age at which the worker would like to retire. See questions B3 and 4 of the survey in Appendix B.

[6] We could have included workers whose desired retirement age is greater than the expected age. These are presumably people who would prefer to work longer. However, given our interest in earlier retirement and willingness to pay for it, we considered these individuals as outliers.

[7] The descriptive statistics for employees aged 55–65 in the SHIW data are reported in the Appendix to facilitate comparison.

[8] The great majority of caregivers (around 68 per cent) looking after adults are involved in caregiving activities for up to 10 hours per week, about 22 per cent from 11 to 30 hours and only 9 per cent more than 30 hours per week. Similar patterns are observed for caregivers looking after children: 62 per cent provide care from 1 to 10 hours per week, 26 per cent from 11 to 30 hours and 12 per cent for more than 30 hours per week. On average the involvement of women in caring activities is more intensive. As for caregiving towards children about 21 per cent of female caregivers provides from 11 to 30 hours and about 14 per cent provides more than 30 hours (the residual 64 per cent provides up to 10 hours). Among male caregivers these percentages decrease to 15 per cent and the 5 per cent respectively (that implies that about 80 per cent of male caregivers provides up to 10 hours). As for caregiving addressed to adults this gap is even bigger: 31 per cent of women versus 20 per cent of men are involved in caregiving towards adults from 11 to 30 hours and 16 per cent versus 10 per cent are providing more than 30 hours per week (that implies that 54 per cent of female caregivers versus 71 per cent of male caregivers provides up to 10 hours per week).

The 2011 pension reform directly affected about 66 per cent of the sample (62 per cent of women and 69 per cent of men), on average delaying their retirement by about 3.9 years (3.7 for men and 4.3 for women). About 59 per cent of the sample (63 per cent for men and 54 per cent for women) declared themselves to be willing to pay for earlier retirement – this percentage rises to 63 among those who want to anticipate. Finally, the average willingness to pay is highly skewed towards zero. The mean computed on all the sample, including the zeros is 3.7 per cent (in line with an almost actuarially fair amount, see Appendix A, Table A.1), while the median is 1 per cent. If we consider only the subsample of workers willing to pay for earlier retirement, the average amount of pension they are willing to renounce reaches 6.3 per cent, while the median amount reaches 5 per cent.

[INSERT TABLE 1 HERE]

The survey also tried to appraise how well the reform is understood by the workers. The relevant questions are again reported in Appendix B (D1-D8). From the answers, we calculated two indexes. Index 1 is built up on the questions asking whether the workers agree with three statements describing the rationale of the reform, essentially that it: a) is the necessary response to population ageing; b) aims at restoring the credibility in financial markets of the Italian sovereign debt; c) involves a rebalancing of the economic relationships between generations. The respondents were asked to say whether they agree: very much (1), much (2), so and so (3), not much (4), not at all (5) or whether they don't know (6). The higher the score, the lower is the understanding of the reform objectives.

Index 2 is based on the answer to a question on the worker's expected variation in the amount of the pension benefit resulting from the combined effect of the increase in the retirement age and of the application to future seniority of a DC formula. Considering that the DC formula is applied on a pro-rata basis, the increase in the retirement age makes the new DC formula more rewarding than the previous DB formula. Consequently, if individuals expect a reduction in the pension benefit, we can infer that they misunderstood the reform.

The average score for index 1 is 9.5; that is, on average, respondents only mildly agree with the three statements. Individuals who fully agree (i.e., answered much or very much, getting max score 6) with the reform are 21 per cent of the sample. As for index 2, less than 50 per cent of the sample seems to understand that, given the postponement of the retirement age implied by the reform, the DC rule will be more rewarding than the DB one.[9]

3. Results

In this section we study how the respondents' characteristics affect their desire for earlier retirement and their willingness to pay for it, and we present the main results of our paper.

We measure the preference for earlier retirement as the difference between the expected and the desired retirement age and we define this difference (when positive) as the demand for earlier retirement. As a proxy for the respondent's willingness to pay, we used the answer to a specific question asking how much he/she was willing to pay to retire one year earlier.[10]

As an immediate consequence of the reform, some older workers were unexpectedly forced to stay longer at work than they had planned under the previous pension rules. Thus, we expect these workers to experience the largest difference between the expected and the desired retirement age. For the same reason, we suppose that these respondents are willing to pay more than other workers, who were not directly affected by the reform, in order to get an additional year of retirement under the new rules.

[9] Indeed about 53 per cent show an index equal to one.
[10] See Appendix B for the description of the full survey and a precise definition of the variables we use in the analysis.

The willingness to pay for earlier retirement should also be positively correlated with the cost of staying at work and the opportunity cost of retiring. We expect it to be higher for workers involved in informal caregiving activities and for those with poor health status or an arduous job. Finally, we assume that workers who are less informed/knowledgeable about the effects of the reform to be less consistent, for example by declaring a higher demand for earlier retirement and a lower willingness to pay for it.

In Table 2 we report the results of OLS regressions using four different specifications. Column (1) presents a model that regresses the gap between the expected and desired retirement age on standard socio-demographic variables, occupational status, involvement in informal caregiving activities, a dummy indicating poor health status and a dummy that identifies workers who were directly forced to postpone their retirement due to the reform. We see that, relative to men, women declared a significantly larger gap, suggesting a strong gender difference in older workers' preferences regarding work and leisure. Women reported a gap approximately 0.8 years higher than that of men, and this difference is significant at the 1 per cent level. Interestingly, informal caregiving activities, towards either children or adults, do not significantly affect this gap. Being a highly qualified worker (manager) unsurprisingly reduces the willingness to retire early, while the opposite is true for workers with arduous jobs. We also find that workers who were directly affected by the reform declared a higher gap between the expected and desired time to retirement than those who were not directly affected. However, the estimated increase in the gap for those who were directly hit by the reform is only about 0.57 years, while the average delay in retirement imposed by the reform is 3–4 years (3.7 years for men and 4.3 years for women).

[INSERT TABLE 2 HERE]

These results are robust to controls for the level of household wealth, proxied by the self-assessed value of the household dwelling[11] (column (2)). Columns (3) and (4) present models in which we consider the degree of understanding of the reform as an additional explanatory variable (see section 2). We find that only Index 1 significantly affects the willingness to retire: the less the individual understands the scope of the reform, the more she wants to anticipate retirement. However, this effect becomes less precisely estimated if we include wealth in the model[12] (as in column (4)). Overall, we conclude that the willingness to retire earlier is affected by the reform insofar as it directly forced the respondent to postpone retirement, but the degree of understanding of the reform seems to play a minor role.

Table 3 reports the results (marginal effects) of a Probit regression where the dependent variable equals one if the respondent declares a positive willingness to pay and zero otherwise. Using the first specification (column (1)), the only factors influencing the willingness to pay appear to be gender, marital status, the demand for earlier retirement and being involved in informal care of children/grandchildren. Women are less willing to pay than men, and single less than coupled individuals. Respondents who demand earlier retirement exhibit a 21 percentage points higher probability of being willing to pay, and this effect is significant at the 1 per cent level.[13] Again, informal caregiving activity has a significant effect but only for women. Women who take care of children are 18 percentage points more likely to be willing to pay for earlier retirement.[14] Informal care of adults, instead, does not produce any significant effect for either men or women. All the other

[11]However, when adding this measure of wealth, we lack the information for 163 out of 525 individuals because they did not report it.

[12]Unfortunately, only 326 respondents provided information about the value of their real estate, so models (2) and (4) are estimated using only these observations.

[13] This marginal effect refers to the subsample of respondents declaring a positive willingness to pay for earlier retirement.

[14] The interpretation is analogous to the previous marginal effect, see footnote 13.

socio-demographic variables, as well as occupational status, have no significant effects. Also, having been directly affected by the reform does not affect the worker's willingness to pay for earlier retirement. This is in sharp contrast to the findings in Table 2, especially for women, since they declared a larger gap between the expected and desired retirement age. Many workers who were constrained to work longer due to the reform desired to retire early, but, on average, they are not willing to renounce part of their pension benefit in order to do so. In column (2) we also consider wealth as an explanatory variable. We find that the level of wealth does not affect the likelihood to be willing to pay for earlier retirement. Referring to columns (3) and (4), we test whether the degree of understanding of the reform affects the willingness to pay. We find a weak effect of this variable; that is, individuals who do not understand the reform – and probably also do not know that pensions are a form of insurance for longevity – are less keen to pay for earlier retirement.

[INSERT TABLE 3 HERE]

In order to capture the quantitative effects of the explanatory variables on the willingness to pay, we estimated a Tobit model where willingness to pay is measured as a percentage of the pension benefit. We show the results in Table 4.

[INSERT TABLE 4 HERE]

As for the Probit model in Table 3, only the desire for earlier retirement and being involved in informal childcare have significant, and positive, effects on the willingness to pay. Conditional on being willing to pay a positive amount, women who are involved in the care of children and grandchildren are willing to pay 1.7 percentage points of their pensions in order to retire one year earlier (see Table 5, column 2, model 1). According to the Italian Social Security Institute official statistics, the average pension in 2014 amounted to 17.200 euro gross per year, so our finding means that women who are involved in caregiving are willing to renounce to 290 euro per year on average. At first, this seems to represent a small amount if compared to the yearly cost of a nanny. However, one should consider that they would renounce to that amount permanently and the expected residual life at retirement is 20 years on average; moreover, the more intensive caregiving should be provided for a few years only, during children' earliest age and the average number of grandchildren per women in Italy is very low (as fertility rate reaches 1.4 children per woman). The desire for earlier retirement increases by 1.2 percentage points the amount of pension benefits that the individual is willing to pay, again conditional on being willing to pay a positive amount. Similar results are obtained when we include housing wealth as regressor (the specification in Table 4 columns 2 and 4), and when we add the indexes measuring the understanding of the reform (Table 5, column 2, model 4).

[INSERT TABLE 5 HERE]

4. Conclusions

The focus of our paper is on people's desire to retire earlier than expected (on the basis of their knowledge of the pension rules) and their corresponding willingness to pay – in terms of a pension benefit reduction - to hasten their exit. We apply our analysis to Italian data, drawn from a survey of older (55 plus) workers, conducted two years after a major pension reform (the 2011 "Monti–Fornero" reform) to appraise people's understanding and reactions to the reform. Due to the Italian financial emergency, the new law was implemented almost straight away, and produced a large unexpected policy shock by introducing sharp restrictions on early retirement and more stringent age and seniority requirements for standard retirement.

We find different reactions concerning, respectively, the demand for earlier retirement and the willingness to pay for it. While workers who were directly affected by the reform, women, and those with a low degree of understanding of its objectives and content, show a strong demand for earlier retirement, the willingness to pay for a year of anticipation is generally negligible, and does not differ between workers who were directly hit by the reform and those who were not or between workers with different degrees of understanding of the reform.

We read these findings as evidence of a widespread interpretation of pensions as an "acquired right" a "promise" that the state has a duty to honour, irrespective of the wedge, at the individual level, between (the present value of) contributions and benefits, and of the cost to society (i.e., to young and future generations) of early retirement provisions. This misinterpretation is perhaps a legacy of the former generous pension system.

Informal care responsibilities towards children play a significant role in explaining the willingness to pay for earlier retirement. Interestingly, this role differs across genders, in that women are willing to pay more than men, and women who look after their grandchildren are willing to pay significantly more than women who do not.

From our analysis, we derive two main implications. First, public understanding of the societal consequences of the reform increases its social sustainability, a finding that we connect to the lower demand for retirement of workers who have a better understanding of the reform's objectives and contents. This implication is in line with Litwin et al. (2009). Second, policies offering high-quality care services to children could increase the acceptance of a pension reform among the population. Such policies would be particularly appropriate in countries, such as Italy and other Mediterranean states, where pensions constitute a very large share of social expenditures, with few resources addressed to childcare services, and where grandparents are often asked to compensate for the inadequacies of publicly funded care.

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Table 1 – Descriptive statistics of the sample

	Variables	Obs.	Mean	Std Dev.	Min.	Max.
Women	Age	207	57.7	2.4	55	64
	Couple	207	78%	0.4	0	1
	North	207	45%	0.5	0	1
	Centre	207	30%	0.5	0	1
	University degree	207	36%	0.5	0	1
	High school diploma	207	53%	0.5	0	1
	Manager	207	12%	0.3	0	1
	White collar	207	70%	0.5	0	1
	Caregiving	207	79%	0.4	0	1
	Caregiving children	207	57%	0.5	0	1
	Caregiving elderly	207	71%	0.5	0	1
	Arduous work	207	44%	0.5	0	1
	Poor health	207	5%	0.2	0	1
	Expected age of retirement	207	64.40	2.7	58	75
	Desired age of retirement	207	60.86	2.5	55	68
	% of people who want to retire earlier	207	78%	0.4	0	1
	Desired number of years of earlier retirement	207	3.5	2.8	0	15
	Willingness to pay for earlier retirement (% of sample)	207	54%	0.5	0	1
	Willingness to pay for earlier retirement (% of pension)	207	4.0%	5.6	0	20%
	Treated by Monti–Fornero reform	207	62%	0.5	0	1
	Delay in retirement imposed by reform if treated	128	4.3	1.9	1	7
	Understanding index 1	207	9.6	3.7	3	18
	Understanding index 2	207	54%	0.5	0	1
Men	Age	294	58.1	2.6	55	65
	Couple	294	90%	0.3	0	1
	North	294	36%	0.5	0	1
	Centre	294	26%	0.4	0	1
	University degree	294	34%	0.5	0	1
	High school diploma	294	49%	0.5	0	1
	Manager	294	21%	0.4	0	1
	White collar	294	54%	0.5	0	1
	Caregiving	294	70%	0.5	0	1
	Caregiving children	294	52%	0.5	0	1
	Caregiving elderly	294	59%	0.5	0	1
	Arduous work	294	33%	0.5	0	1
	Poor health	294	3%	0.2	0	1
	Expected age of retirement	294	64.6	3.2	55	75
	Desired age of retirement	294	61.9	2.9	55	70
	% of people who want to retire earlier	294	74%	0.4	0	1
	Desired number of years of earlier retirement	294	2.7	2.5	0	15
	Willingness to pay for earlier retirement (% of sample)	294	63%	0.5	0	1
	Willingness to pay for earlier retirement (% of pension)	294	3.5%	5.0	0	20%
	Treated by Monti–Fornero reform	294	69%	0.5	0	1
	Delay in retirement imposed by reform if treated	202	3.7	1.7	1	7
	Understanding index 1	294	9.4	3.4	3	18
	Understanding index 2	294	52%	0.50	0	1

Table 2 – OLS – Dependent variable: difference between the expected age of retirement and the desired age of retirement

	(1) b/se	(2) b/se	(3) b/se	(4) b/se
Age	-0.428***	-0.425***	-0.429***	-0.428***
	(0.036)	(0.047)	(0.036)	(0.047)
Man	-0.774***	-0.850***	-0.750***	-0.835***
	(0.189)	(0.221)	(0.190)	(0.224)
Couple	0.164	0.610*	0.149	0.568*
	(0.258)	(0.332)	(0.253)	(0.329)
North	-0.151	-0.362	-0.155	-0.366
	(0.218)	(0.234)	(0.220)	(0.234)
Centre	-0.007	0.008	0.014	0.013
	(0.237)	(0.286)	(0.237)	(0.284)
University degree	-0.409	-0.452	-0.345	-0.350
	(0.336)	(0.443)	(0.342)	(0.448)
High school degree	0.019	0.046	0.060	0.122
	(0.288)	(0.369)	(0.293)	(0.373)
Manager	-0.576*	-0.607*	-0.522	-0.554
	(0.321)	(0.365)	(0.326)	(0.369)
White collar	-0.161	-0.116	-0.220	-0.174
	(0.253)	(0.301)	(0.256)	(0.309)
Caregiving children	-0.140	-0.071	-0.107	-0.040
	(0.189)	(0.220)	(0.190)	(0.219)
Caregiving elderly	-0.053	-0.175	-0.033	-0.119
	(0.200)	(0.229)	(0.198)	(0.225)
Poor health status	0.318	0.331	0.319	0.352
	(0.410)	(0.515)	(0.405)	(0.515)
Expected age of retirement	0.561***	0.542***	0.558***	0.536***
	(0.037)	(0.046)	(0.037)	(0.045)
Arduous work	0.372**	0.347*	0.383**	0.365*
	(0.188)	(0.205)	(0.189)	(0.207)
Treated	0.567***	0.462**	0.493**	0.443*
	(0.198)	(0.228)	(0.202)	(0.241)
Housing wealth		-0.000		0.000
		(0.001)		(0.001)
Understanding index 1			0.071***	0.058*
			(0.026)	(0.030)
Understanding index 2			0.061	-0.168
			(0.181)	(0.215)
Constant	-8.041***	-7.110***	-8.544***	-7.069***
	(2.309)	(2.620)	(2.311)	(2.611)
R-squared	0.469	0.469	0.476	0.472
N	501	349	501	349

Note: Significance levels: * 0.10, ** 0.05, *** 0.01; robust standard errors in parentheses. Omitted dummies: female, single, south, blue collar, good health status. "Treated" stands for: "obliged to postpone retirement because of the Monti–Fornero reform". "Understanding index 1" is lower for those individuals who agreed with three statements describing the main objectives of the reform. "Understanding index 2" is equal to one if the individual could correctly anticipate the effects of the reform on her pension benefits.

Table 3 – Probit – Dependent variable: dummy for the willingness to pay for earlier retirement - marginal effects

	(1) mfx/se	(2) mfx/se	(3) mfx/se	(4) mfx/se
Age	0.016*	0.007	0.016*	0.007
	(0.009)	(0.012)	(0.009)	(0.012)
Man	0.163*	0.282***	0.159*	0.278***
	(0.085)	(0.099)	(0.085)	(0.100)
Couple	0.119*	0.231**	0.122*	0.234***
	(0.067)	(0.091)	(0.067)	(0.091)
North	0.088	0.086	0.086	0.087
	(0.055)	(0.065)	(0.056)	(0.065)
Centre	0.050	0.107	0.045	0.108
	(0.058)	(0.068)	(0.058)	(0.068)
University degree	0.062	0.122	0.053	0.105
	(0.089)	(0.107)	(0.089)	(0.108)
High school degree	-0.019	-0.015	-0.020	-0.027
	(0.080)	(0.098)	(0.080)	(0.099)
Manager	0.153*	0.154	0.139*	0.145
	(0.081)	(0.097)	(0.083)	(0.098)
White collar	0.027	0.021	0.029	0.024
	(0.070)	(0.087)	(0.070)	(0.087)
Caregiving children*men	0.006	-0.093	-0.001	-0.101
	(0.064)	(0.078)	(0.064)	(0.077)
Caregiving children*women	0.184***	0.193**	0.176***	0.188**
	(0.067)	(0.077)	(0.068)	(0.077)
Caregiving elderly*men	0.005	0.014	0.003	0.008
	(0.066)	(0.077)	(0.066)	(0.076)
Caregiving elderly*women	-0.036	0.061	-0.040	0.050
	(0.083)	(0.098)	(0.084)	(0.099)
Poor health status	-0.087	-0.049	-0.094	-0.060
	(0.119)	(0.125)	(0.118)	(0.125)
Expected age of retirement	0.004	0.008	0.005	0.009
	(0.009)	(0.011)	(0.009)	(0.011)
Arduous work	0.027	0.074	0.025	0.073
	(0.050)	(0.058)	(0.050)	(0.058)
Treated	-0.009	-0.029	-0.008	-0.036
	(0.050)	(0.060)	(0.051)	(0.062)
Demand for earlier retirement	0.213***	0.208***	0.218***	0.216***
	(0.060)	(0.076)	(0.060)	(0.076)
Housing wealth		0.000		0.000
		(0.000)		(0.000)
Understanding index 1			-0.011*	-0.007
			(0.007)	(0.008)
Understanding index 2			0.048	0.061
			(0.047)	(0.057)
Constant				
Pseudo R2	0.059	0.103	0.064	0.106
N	501	349	501	349

Note: Significance levels: * 0.10, ** 0.05, *** 0.01; robust standard errors in parentheses. Omitted dummies: female, single, south, blue collar, good health status. "Treated" stands for: "obliged to postpone retirement because of the Monti–Fornero reform". "Understanding index 1" is lower for those individuals who agreed with three statements describing the main objectives of the reform. "Understanding index 2" is equal to one if the individual could correctly anticipate the effects of the reform on her pension benefits.

Table 4 – Tobit – Dependent variable: amount of pension the individual is willing to renounce for a one-year earlier retirement.

	(1) b/se	(2) b/se	(3) b/se	(4) b/se
Age	0.215	0.046	0.222	0.057
	(0.154)	(0.178)	(0.154)	(0.178)
Man	1.752	3.597**	1.684	3.524**
	(1.475)	(1.680)	(1.476)	(1.699)
Couple	1.240	1.405	1.269	1.456
	(1.190)	(1.734)	(1.192)	(1.722)
North	1.641*	1.403	1.630*	1.405
	(0.936)	(1.033)	(0.935)	(1.035)
Centre	0.145	0.981	0.084	0.973
	(0.975)	(1.082)	(0.976)	(1.088)
University degree	0.717	1.113	0.597	0.968
	(1.568)	(1.830)	(1.566)	(1.830)
High school degree	-0.495	-0.573	-0.561	-0.685
	(1.386)	(1.640)	(1.387)	(1.651)
Manager	1.166	0.769	0.985	0.584
	(1.419)	(1.585)	(1.432)	(1.625)
White collar	0.105	-0.172	0.187	-0.166
	(1.167)	(1.338)	(1.161)	(1.340)
Caregiving children*men	0.250	-1.084	0.202	-1.151
	(0.966)	(1.108)	(0.968)	(1.103)
Caregiving children*women	4.073***	4.312***	3.988***	4.276***
	(1.442)	(1.616)	(1.434)	(1.608)
Caregiving elderly*men	-0.183	-0.476	-0.206	-0.526
	(0.997)	(1.125)	(0.996)	(1.115)
Caregiving elderly*women	-0.867	0.594	-0.912	0.455
	(1.585)	(1.767)	(1.578)	(1.769)
Poor health status	0.348	0.745	0.310	0.661
	(2.490)	(2.502)	(2.467)	(2.479)
Expected age of retirement	0.143	0.287	0.147	0.299
	(0.159)	(0.189)	(0.160)	(0.191)
Arduous work	0.518	1.695*	0.483	1.689*
	(0.828)	(0.937)	(0.825)	(0.941)
Treated	-0.691	-0.975	-0.595	-1.010
	(0.821)	(0.927)	(0.850)	(0.965)
Demand for earlier retirement	2.932***	2.445**	3.032***	2.518**
	(1.064)	(1.219)	(1.069)	(1.224)
Housing wealth		0.007**		0.007**
		(0.003)		(0.003)
Understanding index 1			-0.139	-0.075
			(0.117)	(0.130)
Understanding index 2			0.163	0.629
			(0.787)	(0.896)
Constant	-26.158**	-28.179**	-25.507**	-28.967**
	(11.459)	(13.037)	(11.466)	(13.242)
Sigma _constant	7.646***	7.073***	7.638***	7.069***
	(0.376)	(0.402)	(0.379)	(0.402)
Pseudo R2	0.013	0.026	0.014	0.026
N	501	349	501	349

Note: Significance levels: * 0.10, ** 0.05, *** 0.01; robust standard errors in parentheses. Omitted dummies: female, single, south, blue collar, good health status. "Treated" stands for: "obliged to postpone retirement because of the Monti–Fornero reform". "Understanding index 1" is lower for those individuals who agreed with three statements describing the main objectives of the reform. "Understanding index 2" is equal to one if the individual could correctly anticipate the effects of the reform on her pension benefits.

Table 5 – Marginal effects of Table 4, models 1 and 4

	(1)			(4)		
	Unconditional expected value	Conditional on being uncensored	Probability uncensored	Unconditional expected value	Conditional on being uncensored	Probability uncensored
Age	0.127	0.089	0.011	0.035	0.025	0.003
Man	1.032	0.728	0.089	2.201	1.545	0.189
Couple	0.730	0.515	0.063	0.91	0.638	0.078
North	0.966	0.681	0.083	0.878	0.616	0.075
Centre	0.086	0.060	0.007	0.608	0.427	0.052
University degree	0.422	0.298	0.036	0.605	0.424	0.052
High school degree	-0.291	-0.205	-0.025	-0.428	-0.3	-0.037
Manager	0.687	0.484	0.059	0.365	0.256	0.031
White collar	0.062	0.043	0.005	-0.103	-0.073	-0.009
Caregiving children*men	0.147	0.104	0.013	-0.719	-0.504	-0.062
Caregiving children*women	2.398	1.691	0.207	2.671	1.874	0.229
Caregiving elderly*men	-0.107	-0.076	-0.009	-0.329	-0.231	-0.028
Caregiving elderly*women	-0.510	-0.360	-0.044	0.284	0.2	0.024
Poor health status	0.205	0.144	0.018	0.413	0.29	0.035
Expected age of retirement	0.084	0.060	0.007	0.187	0.131	0.016
Arduous work	0.305	0.215	0.026	1.055	0.74	0.091
Treated	-0.407	-0.287	-0.035	-0.631	-0.443	-0.054
Demand for earlier retirement	1.726	1.217	0.149	1.573	1.104	0.135
Housing wealth				0.005	0.003	0
Understanding index 1				-0.047	-0.033	-0.004
Understanding index 2				0.393	0.276	0.034

Note: Significance levels: * 0.10, ** 0.05, *** 0.01; marginal effects obtained with dtobit2 Stata command. Omitted dummies: female, single, south, blue collar, good health status. “Treated” stands for: “obliged to postpone retirement because of the Monti–Fornero reform”. “Understanding index 1” is lower for those individuals who agreed with three statements describing the main objectives of the reform. “Understanding index 2” is equal to one if the individual could correctly anticipate the effects of the reform on her pension benefits.