



**Working Paper 161/16**

**TOO BUSY TO STAY AT WORK. HOW WILLING ARE ITALIAN  
WORKERS “TO PAY” TO ANTICIPATE THEIR RETIREMENT?**

**Riccardo Calcagno  
Flavia Coda Moscarola  
Elsa Fornero**

April 2016

# **Too busy to stay at work. How willing are Italian workers “to pay” to anticipate their retirement?**

Riccardo Calcagno<sup>1</sup>, Flavia Coda Moscarola<sup>2</sup> and Elsa Fornero<sup>3</sup>

*April 2016*

## ***Abstract***

Using a representative sample of Italian workers aged 55 and above, we study their preference for anticipated retirement and their willingness to pay for a year of anticipation after the recent Italian pension reform (2011), which significantly restricted the access conditions to retirement. We distinguish workers by gender and according to whether they have been obliged to postpone their exit by the reform. The preference for anticipated retirement is particularly strong for women and for workers who were directly affected by the reform. As for the “willingness to pay” to anticipate retirement, there is no systematic difference between the two categories, and this finding is common to both men and women. We also investigate whether informal care duties play a role in explaining the willingness to pay, and we find that the effect differs across genders. 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. Our findings suggest that retirement policies produce side effects, which differ according to both gender and being a caregiver or not. These effects signal that when a pension system performs further tasks than the provision of retirement income, its reform may cause social mismatches unless supplemented by appropriate changes in other social programmes.

**Keywords:** Italian pension reform; willingness to anticipate retirement; gender bias; caregiving.

**JEL Classification Codes:** J26; E65; I38.

## ***Introduction***

Retirement decisions have attracted much attention from researchers in recent years, in parallel with the pension reforms that, besides strengthening the financial sustainability of pension systems, have increased individual choices, risks and responsibility. Understanding workers’ reactions to changes in pension rules has important implications for the effectiveness of such policies (see Behaghel and Blau (2012) and Mastrobuoni (2009) regarding 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) of two aspects of (older) workers’ behaviour: their preference for anticipated

---

<sup>1</sup> EMLYON Business School and CeRP-Collegio Carlo Alberto. Email: calcagno@em-lyon.com

<sup>2</sup> Corresponding author. CeRP-Collegio Carlo Alberto. Email: flavia.codamoscarola@carloalberto.org

<sup>3</sup> University of Turin and CeRP-Collegio Carlo Alberto. Email: elsa.fornero@unito.it

retirement and their readiness to pay for it. The Monti–Fornero reform was introduced at the apex of the 2011 financial crisis and, because of the threatening circumstances, had an almost immediate effect, only allowing for a very short transition period, a feature that stands in sharp contrast to past reforms characterised by an excessively long phasing-in period<sup>4</sup> (Fornero 2015). The reform introduced sharp restrictions on early retirement provisions (such as pure seniority pensions, formerly awarded almost irrespective of age) as well as more stringent “age plus seniority” requirements for normal (old age) retirement. It also equalised, as of 2018, the more generous requisites for women (in private employment) than for men and indexed all the requirements to longevity. Finally, it established the immediate application of the defined contribution formula for all future seniorities, irrespective of the distance to retirement. The rather drastic reduction of the pure seniority exit prevented early retirement and meant a forced delay in retirement for the majority of workers (from 1 to 7 years). Given the circumstances, it is fair to say that the Monti–Fornero reform was a significant policy shock, which was largely unexpected in its intensity.

Using a data set drawn from a representative sample of Italian workers aged 55 and above, we measure the willingness to anticipate retirement and the consequent willingness to pay for one year of anticipation. 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 differences in preferences between men and women concerning labour supply when approaching retirement (Been and van Vliet 2014; Belloni and Alessie 2009); women tend to experience retirement differently (Moen 1996; Quick and Moen 1998; Smith and Moen 1998) and often synchronise their career exit with that of their spouse (Quick and Moen 1998). We also chose to focus on informal care of children, grandchildren and adults, because, for women, caring activities are a frequent alternative to regular work, particularly in 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 considered a moral duty by most women.<sup>5</sup> 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 (grand)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 67.06 billion euros (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 our sample we observe widespread willingness to anticipate retirement, which is not always accompanied by a corresponding desire to pay to take advantage of it. The willingness to anticipate retirement is particularly strong for workers who were directly affected by the reform and for women. In terms of the desire to pay to anticipate retirement, however, we see practically no difference between workers affected and those unaffected by the reform. 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 is observed for men. We also check whether the respondent’s degree of comprehension of the reform affects his or her willingness to anticipate

---

<sup>4</sup> The Monti–Fornero 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 phasing-in period, in 2011 there was little room for gradualism, given the necessity to reduce the pension expenditure in the short and medium run under the pressure of the financial emergency (Fornero 2015).

<sup>5</sup> 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.

retirement and readiness to pay for doing so. Interestingly, we find that this variable has almost no significant effect on the workers' reaction to the reform.

Our findings suggest that it is important to quantify the willingness to pay of individuals who have been affected by a reform and not merely to register their desire to return to the previous status quo. Moreover, the different impacts on different subgroups of the population suggest that retirement policies have important side effects that perhaps should be accounted for and/or neutralised with complementary policies. For example, more structured policy interventions for children could alleviate the caring burden of relatives, especially women.

### *Data and sample selection*

In this work we use a data set that was specifically designed to examine the effects of the last Italian pension reform on several aspects of older workers' behaviour. The survey was conducted in July 2014 by GFK-Eurisko (<http://www.gfk.com/it/>), a well-known international institute for marketing research, opinion polls and socio-economic surveys.<sup>6</sup>

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 principal socio-demographic characteristics, namely: region of residence, gender, age, education, occupation and household size.

The survey asked questions about their working activity, care responsibilities towards children (grandchildren) and adults, retirement position and the changes introduced by the pension reform. It also investigated their personal understanding of the motivation and effects of the reform and collects data on wealth and saving and investing choices. The wealth and saving variables refer to the household, not to the individual respondent. Finally, the survey obtained information concerning the standard socio-demographic characteristics of the respondent and his or her occupational background and health status. In Appendix A we provide a detailed description of the variables used in our analysis.

For our purposes we selected the sub-sample of respondents with a complete record of consistent answers. We dropped individuals whose desired age of retirement is greater than the minimum retirement age but who claimed to be willing to pay to anticipate retirement (28 observations). We also omitted individuals who declared that they had been forced to postpone retirement by more than 7 years (19 observations). We left out individuals with missing information relative to their desired or statutory retirement age (214 observations); this rate of non-response to the question about the expected age of retirement is in line with the one observed in the population of employees aged 55 to 65 in the 2014 Bank of Italy Survey of Households Income and Wealth (SHIW). We also dropped from the sample individuals aged 65 and above (10 observations) and individuals who declared their willingness to reduce their pension by more than 20 per cent to be able to retire (9 observations). Therefore, our final sample consists of 525 observations. Table 1 reports the descriptive statistics.<sup>7</sup>

[Insert Table 1 approximately here]

Table 1 shows that the expected age of retirement is about 64 for both men and women, while the desired age of retirement is 61 for women and 62 for men. The desire to anticipate retirement varies according to gender: it involves 77 per cent of women and 70 per cent of men.

---

<sup>6</sup> Since 2012 GFK-Eurisko has run the well-known Bank of Italy Survey on Household Income and Wealth for the Bank of Italy.

<sup>7</sup> The descriptive statistics for employees aged 55–65 in the SHIW data are reported in the Appendix.

The Monti–Fornero pension reform directly affected about 65 per cent of the sample (an average of 61 for women and 68 for men), on average delaying their retirement by about 3.9 years (3.6 for men and 4.3 for women). More than half (56 per cent of the sample: 58 for men and 53 for women) declared themselves to be ready to pay to anticipate retirement.

Finally, 79 per cent of the women and 69 per cent of the men are involved in informal caring activities towards children and/or adults.<sup>8</sup>

In terms of socio-demographic variables, the average age of the respondents is 58 years, 60 per cent of them are men, a third of them have a university degree and white-collar workers (managers, clerks or teachers) represent the large majority.

## **Results**

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

We measured the preference for anticipated retirement as the difference between the expected and the desired retirement age. As a proxy for the respondent's readiness to pay, we used the answer to a specific question asking how much he/she was ready to pay to anticipate retirement by one year.

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. As a consequence, we expect these workers to experience the largest difference between the expected and the desired retirement age. For the same reason, we suppose that they are willing to pay more than younger workers, who were not directly affected by the reform, to gain an additional year of retirement under the new rules. The readiness to pay to anticipate retirement should also be positively correlated with the cost of staying at work. We expect it to be higher for workers with higher salaries, for those involved in informal caregiving activities and for those with a poor health status or an arduous job. Finally, we assume that workers who are better informed about the effects of the reform may react more clearly to the announcement of the new rules in terms of both their willingness to anticipate retirement and their readiness 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 the 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, with respect to men, women declared a significantly larger gap, suggesting a strong gender difference in older workers' preferences regarding work and leisure. Women reported that their gap is 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 anticipate retirement, while the opposite is true for workers occupying arduous jobs. We also find that workers who were directly affected by the reform declared a higher gap between the expected and the desired time to retirement than those who were not directly affected. However, the estimated increase in the dependent variable for those who were directly hit by the reform is only about 0.63 years, while the average delay in retirement imposed by the reform is 3–4 years (3.6 for men and 4.6 for women).

[Insert Table 2 approximately here]

---

<sup>8</sup> 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.

These results are robust if we control for the level of household wealth, proxied by the self-assessed value of the household dwelling<sup>9</sup> (column (2)). Columns (3) and (4) present models in which we consider the degree of comprehension of the reform as an additional explanatory variable. To measure the degree of comprehension of the reform, we check whether the respondent agrees with three statements describing the main objectives of the reform (variable “comprehension index 1” in column (3)) and whether she can correctly anticipate the effects of the reform on her pension benefits (variable “comprehension index 2” in column (4)).<sup>10</sup> We find that only the first measure of comprehension significantly affects the willingness to anticipate retirement: the less the individual understands the scopes underlying the reform, the more she wants to anticipate retirement. However, this effect vanishes if we include wealth in the model<sup>11</sup> (as in column (4)). Overall, we conclude that the willingness to anticipate retirement is affected by the reform insofar as it directly forced the respondent to postpone retirement, but the degree of comprehension of the reform does not play a significant role.

Table 3 reports the results of a Tobit model investigating the determinants of the willingness to pay to anticipate retirement, measured as a percentage of the pension benefit. Under the first specification (column (1)), one can see that only the expected age of retirement and being involved in informal care of children/grandchildren significantly increase the willingness to pay, and this latter effect is true only for women. An increase of one year in the expected age of retirement induces the respondent to give up 0.37 percentage points of his or her pension to anticipate retirement, and this effect is significant at the 1 per cent level. Women who take care of children are on average ready to renounce up to 3.7 percentage points of their pension to anticipate retirement. This effect is economically stronger than the previous one but statistically less significant. All the other socio-demographic variables as well as the occupational status do not produce significant effects. The fact of having been directly affected by the reform now does not produce a significant effect on the worker’s readiness to pay to anticipate 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 the desired retirement age. Many workers who have been constrained to work longer following the reform desire to retire early, but, on average, they are not willing to renounce any part of their pension benefit to do so.

[Insert Table 3 approximately here]

In column (2) we also consider wealth as an explanatory variable. We find that the level of wealth positively affects the readiness to pay. Again, informal caregiving activity has a significant effect but only for women. On average, women in charge of childcare are willing to renounce up to 4.1 percentage points of their pension to anticipate retirement. Informal care of adults, instead, does not produce any significant effect either for men or for women.

Finally, referring to columns (3) and (4), we test whether the degree of comprehension of the reform affects the willingness to pay. Regarding the willingness to anticipate retirement (as in Table 2), we do not observe any significant effect of this variable.

---

<sup>9</sup> Unfortunately, when adding this measure of wealth, we lack this information for 163 out of 525 individuals because they did not report it.

<sup>10</sup> See the Appendix for a precise definition of these two variables.

<sup>11</sup> Unfortunately, only 326 respondents provided information about the value of their real estate, so models (2) and (4) are estimated using only these observations.

## **Conclusions**

In this paper we study the effect of the last reform of the Italian pension system, the so-called “Monti–Fornero” reform introduced in December 2011, on two aspects of older workers’ behaviour: their willingness to anticipate retirement and to pay for doing so. The reform introduced sharp restrictions on early retirement and more stringent age and seniority requirements for standard retirement. It was implemented almost without delay due to the Italian financial emergency conditions and thus produced a large policy shock.

Using a data set drawn from a representative sample of Italian workers aged 55 and older, we find different reactions concerning, respectively, the willingness to anticipate retirement and the possibility to pay for it. While women and workers who were directly affected by the reform show a strong willingness to anticipate retirement, the inclination to pay does not seem to differ across workers who were directly hit by the reform and those who were not. However, informal care duties towards children 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 are willing to pay significantly more than women who are not (as well as men).

Our findings suggest that workers consider retirement rules as unalterable “entitlements” and therefore neglect the collective cost of early retirement. This effect is perhaps a legacy of the rather generous Defined Benefit formulae. Only women involved in childcare are willing to pay to “buy more time” to devote to (grand-)children. This could imply that matching policies offering high-quality care services to children or grandchildren would also increase the acceptance of the pension reforms among the population. Such policies would be particularly appropriate in countries, like Italy, where pensions constitute a very large share of the social expenditure while few resources are addressed to childcare services and grandparents are often asked to compensate for the shortcomings of the child-care system.

## **References**

- Aparicio-Fenoll A. and M. Vidal-Fernandez (2014), “Working Women and Fertility: The Role of Grandmothers’ Labor Force Participation”, CESifo Economic Studies.
- Been J. and O. van Vliet (2014), “Early Retirement across Europe. Does Non-standard Employment Increase Participation of Older Workers?”, Netspar DP 10/2014-44.
- Behaghel L. and D. M. Blau (2012), “Framing social security reform: Behavioral responses to changes in the full retirement age”, *American Economic Journal: Economic Policy*, vol. 4, pp. 41–67.
- Belloni M. and R. Alessie (2009), “The importance of financial incentives on retirement choices: New evidence for Italy”, *Labour Economics*, vol. 16(5), pp. 578–588.
- Bettio F., J. Plantenga and M. Smith (2013), *Gender and the European Labour Market*, Routledge, Taylor and Francis Group, London and New York.
- Brilli Y., D. Del Boca and C. Pronzato (2011), “Exploring the Impacts of Public Childcare on Mothers and Children in Italy: Does Rationing Play a Role?”, IZA DP 5918.
- Ciani E. (2012), “Informal adult care and caregivers’ employment in Europe”, *Labour Economics*, vol. 19, pp. 155–164.
- Coda Moscarola F., E. Fornero and S. Strøm (2016), “Absenteeism, childcare and the effectiveness of pension reforms”, *IZA Journal of European Labor Studies*, vol. 5(1), pp. 1–18.
- Fernández R. (2007), “Women, work and culture”, *Journal of the European Economic Association*, vol. 5(2–3), pp. 305–332.
- Fornero E. (2015), “‘Reform, inform, educate’: A new paradigm for pension systems” in B. Marin (ed.), *The Future of Welfare in a Global Europe*, Ashgate, pp. 297–324.

Mastrobuoni G. (2009), “Labor supply effects of the recent social security benefit cuts: Empirical estimates using cohort discontinuities”, *Journal of Public Economics*, vol. 93, pp. 1224–1233.

Moen P. (1996), “A life course perspective on retirement, gender, and well-being”, *Journal of Occupational Health Psychology*, vol. 1, pp. 131–144.

Quick H. and P. Moen (1998), “Gender, employment and retirement quality: A life course approach to the differential experiences of men and women”, *Journal of Occupational Health Psychology*, vol. 3, pp. 44–64.

Smith D. and P. Moen (1998), “Spouse’s influence on the retirement decision: His, her and their perceptions”, *Journal of Marriage and the Family*, vol. 60, pp. 734–744.



Table 1 – Descriptive statistics of the sample

	<b>Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std Dev.</b>	<b>Min.</b>	<b>Max.</b>	
<i>Women</i>	Age	210	57.7	2.4	55.0	64.0	
	Couple	210	78%	0.4	0.0	1.0	
	North	210	45%	0.5	0.0	1.0	
	Centre	210	30%	0.5	0.0	1.0	
	University degree	210	36%	0.5	0.0	1.0	
	High school diploma	210	53%	0.5	0.0	1.0	
	Manager	210	11%	0.3	0.0	1.0	
	White collar	210	70%	0.5	0.0	1.0	
	Caregiving	210	79%	0.4	0.0	1.0	
	Caregiving children	210	58%	0.5	0.0	1.0	
	Caregiving elderly	210	71%	0.5	0.0	1.0	
	Arduous work	210	44%	0.5	0.0	1.0	
	Poor health	210	5%	0.2	0.0	1.0	
	Expected age of retirement	210	64.4	2.7	58.0	75.0	
	Desired age of retirement	210	60.9	2.6	55.0	70.0	
	Wants to anticipate retirement	210	77%	0.4	0.0	1.0	
	Desired number of years of anticipation	210	3.5	2.9	-3.0	15.0	
	Willingness to pay to anticipate retirement (% of sample)	210	53%	0.5	0.0	1.0	
	Willingness to pay to anticipate retirement as % of pension	210	4.0	5.6	0.0	20.0	
	Treated by Monti–Fornero reform	210	61%	0.5	0.0	1.0	
	Delay in retirement imposed by Monti–Fornero if treated	129	4.3	1.9	1.0	7.0	
	Comprehension index 1	210	9.6	3.7	3	18	
	Comprehension index 2	210	54%	0.5	0	1	
	<i>Men</i>	Age	315	58.2	2.7	55.0	65.0
		Couple	315	90%	0.3	0.0	1.0
		North	315	36%	0.5	0.0	1.0
Centre		315	26%	0.4	0.0	1.0	
University degree		315	33%	0.5	0.0	1.0	
High school diploma		315	48%	0.5	0.0	1.0	
Manager		315	21%	0.4	0.0	1.0	
White collar		315	53%	0.5	0.0	1.0	
Caregiving		315	69%	0.5	0.0	1.0	
Caregiving children		315	52%	0.5	0.0	1.0	
Caregiving elderly		315	57%	0.5	0.0	1.0	
Arduous work		315	33%	0.5	0.0	1.0	
Poor health		315	3%	0.2	0.0	1.0	
Expected age of retirement		315	64.5	3.2	55.0	75.0	
Desired age of retirement		315	62.1	3.0	55.0	70.0	
Wants to anticipate retirement		315	70%	0.5	0.0	1.0	
Desired number of years of anticipation		315	2.4	2.9	-7.0	15.0	
Willingness to pay to anticipate retirement (% of sample)		315	58%	0.5	0.0	1.0	
Willingness to pay to anticipate retirement as % of pension		315	3.3	4.9	0.0	20.0	
Treated by Monti–Fornero reform		315	68%	0.5	0.0	1.0	
Delay in retirement imposed by Monti–Fornero if treated		213	3.6	1.6	1.0	7.0	
Comprehension index 1		315	9.3	3.4	3	18	
Comprehension index 2		315	52%	0.5	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*** (0.037)	-0.424*** (0.047)	-0.426*** (0.037)	-0.425*** (0.047)
Man	-0.872*** (0.203)	-0.919*** (0.238)	-0.851*** (0.203)	-0.907*** (0.241)
Couple	0.140 (0.284)	0.505 (0.335)	0.131 (0.280)	0.467 (0.333)
North	-0.144 (0.231)	-0.348 (0.255)	-0.144 (0.233)	-0.353 (0.255)
Centre	-0.134 (0.259)	-0.145 (0.329)	-0.116 (0.260)	-0.139 (0.328)
University degree	0.013 (0.389)	0.111 (0.524)	0.082 (0.394)	0.209 (0.529)
High school degree	0.364 (0.338)	0.518 (0.455)	0.417 (0.343)	0.596 (0.458)
Manager	-0.706** (0.342)	-0.647 (0.406)	-0.671* (0.342)	-0.609 (0.406)
White collar	-0.217 (0.269)	-0.142 (0.342)	-0.290 (0.271)	-0.208 (0.348)
Caregiving children	-0.248 (0.213)	-0.250 (0.247)	-0.218 (0.214)	-0.224 (0.248)
Caregiving elderly	0.125 (0.225)	0.057 (0.265)	0.137 (0.223)	0.102 (0.262)
Poor health status	0.340 (0.394)	0.340 (0.494)	0.337 (0.388)	0.351 (0.493)
Expected age of retirement	0.580*** (0.041)	0.556*** (0.053)	0.578*** (0.041)	0.551*** (0.053)
Arduous work	0.497** (0.211)	0.500** (0.239)	0.502** (0.212)	0.517** (0.243)
Treated	0.631*** (0.208)	0.562** (0.242)	0.545** (0.212)	0.527** (0.256)
Housing wealth		-0.000 (0.001)		-0.000 (0.001)
Comprehension index 1			0.066** (0.028)	0.055 (0.034)
Comprehension index 2			0.133 (0.194)	-0.069 (0.233)
Constant	-9.750*** (2.577)	-8.597*** (3.124)	-10.388*** (2.599)	-8.754*** (3.161)
R-squared	0.460	0.450	0.465	0.451
N	525	362	525	362

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”. “Comprehension index 1” is lower for those individuals who agreed with three statements describing the main objectives of the reform. “Comprehension index 2” is equal to one if the individual could correctly anticipate the effects of the reform on her pension benefits.

Table 3 – Tobit – Dependent variable: amount of pension the individual is willing to renounce to anticipate retirement

	(1) b/se	(2) b/se	(3) b/se	(4) b/se
Age	0.008 (0.150)	-0.099 (0.173)	0.011 (0.150)	-0.093 (0.173)
Man	0.941 (1.501)	2.926* (1.698)	0.883 (1.504)	2.884* (1.718)
Couple	1.134 (1.183)	1.560 (1.729)	1.186 (1.186)	1.590 (1.717)
North	1.417 (0.943)	1.238 (1.047)	1.386 (0.944)	1.249 (1.050)
Centre	-0.062 (0.980)	0.563 (1.088)	-0.118 (0.982)	0.574 (1.093)
University degree	1.709 (1.548)	2.374 (1.811)	1.633 (1.543)	2.303 (1.801)
High school degree	0.405 (1.375)	0.513 (1.634)	0.387 (1.375)	0.463 (1.638)
Manager	0.731 (1.426)	0.278 (1.628)	0.515 (1.446)	0.093 (1.670)
White collar	-0.036 (1.172)	-0.435 (1.380)	-0.033 (1.170)	-0.515 (1.381)
Caregiving children*men	0.150 (0.991)	-1.063 (1.122)	0.096 (0.993)	-1.120 (1.120)
Caregiving children*women	3.704** (1.478)	4.146** (1.651)	3.635** (1.472)	4.139** (1.643)
Caregiving elderly*men	0.212 (1.015)	-0.041 (1.137)	0.201 (1.013)	-0.067 (1.129)
Caregiving elderly*women	-0.937 (1.607)	0.484 (1.795)	-0.981 (1.605)	0.402 (1.798)
Poor health status	0.475 (2.444)	0.942 (2.449)	0.420 (2.413)	0.876 (2.424)
Expected age of retirement	0.373*** (0.141)	0.467*** (0.164)	0.384*** (0.141)	0.481*** (0.166)
Arduous work	0.987 (0.827)	2.126** (0.940)	0.968 (0.826)	2.146** (0.943)
Treated	-0.002 (0.824)	-0.473 (0.941)	0.008 (0.855)	-0.567 (0.975)
Housing wealth		0.007** (0.003)		0.007** (0.003)
Comprehension index 1			-0.097 (0.118)	-0.031 (0.130)
Comprehension index 2			0.471 (0.791)	0.702 (0.894)
Constant	-27.687** (11.450)	-30.544** (12.894)	-27.776** (11.475)	-31.632** (13.102)
Sigma _constant	7.851*** (0.382)	7.241*** (0.409)	7.849*** (0.383)	7.238*** (0.409)
N	525	362	525	362

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”. “Comprehension index 1” is lower for those individuals who agreed with three statements describing the main objectives of the reform. “Comprehension index 2” is equal to one if the individual could correctly anticipate the effects of the reform on her pension benefits.

## ***Appendix: The Eurisko questionnaire***

In October 2014 CeRP-Collegio Carlo Alberto commissioned Eurisko-GFK to conduct a survey on a representative sample of Italian dependent workers aged 55 and above. The participants were interviewed about many aspects of their working position, their contribution patterns to the social security schemes, their comprehension and knowledge of the aims and scopes of the pension reform that occurred in Italy at the end of 2011, their saving and investment decisions, their health status and their informal caregiving activities. Here follows a list of the sections into which the survey was organised and a detailed description of the questions of the survey used in the empirical analysis of this paper.

### **A Socio-demographic information**

A1: Age

A2: Occupational status

A3: Sex

A4: Education

A5: Marital status

A6: Region of residence

### **B Occupational status and pension scheme**

B1: What is your pension scheme?

B2: What is your seniority in the pension scheme?

B3: What is your desired age of retirement?

B4: According to the current rules, when do you expect to retire?

B6: To access retirement one year before the expected retirement age, what percentage of pension benefit are you willing to renounce?

### **C Expectations and perceptions about the aims and scopes of the social security system**

### **D Expectations and perceptions about the social security reform that occurred in 2011 (the so-called Monti–Fornero reform)**

D1: How much do you agree with the statements below:

(very much, much, so and so, not much, not at all, I do not know)

The objective of the Monti–Fornero reform is:

- To contrast the effects of population ageing on public finances
- To convince the financial markets that the Italian pension system does not threaten the sustainability of the public debt
- To improve the equilibrium of the pension system also for the young and the future generations

D3: As a consequence of the Monti–Fornero reform, has your retirement been delayed?

D4: By how many years? (1, 2, 3, 4, 5, more than 5 (specify)...) )

D8: As a consequence of an increase in the retirement age and of the introduction of the NDC pension rule (Monti–Fornero reform), do you expect an increase, a reduction or no effect on your pension benefit?

D9: What change in the amount of pension benefit do you expect as a consequence of the increase in the age of retirement and of the adoption of the notional defined contribution rule from 2012?

(an increase, a decrease, no variation, I do not know)

### E Household savings and wealth

E1: In your opinion, how much would you receive if you sold your house today?

### F Health status and informal caregiving duties

F1: Would you say your health is excellent/very good/good/fair/poor?

F5: Do you think your work is arduous?

F6: How often altogether have you given personal care or practical household help to an elderly family member? (0 hours, 1–10 hours, 11–30 hours, 31 hours or more)

F7: How often altogether have you given personal care or practical household help to a young family member (child or grandchild)? (0 hours, 1–10 hours, 11–30 hours, 31 hours or more)

## Comparison with the Bank of Italy sample 2014

Table 1 – Descriptive statistics – BI-SHIW 2014 sample of employees aged 55–65

<b>Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std Dev.</b>	<b>Min.</b>	<b>Max.</b>
<i>Women</i>					
Age	488	58.35	2.56	55	65
Couple	488	0.72	0.45	0	1
North	488	0.50	0.50	0	1
Centre	488	0.22	0.41	0	1
University degree	488	0.27	0.45	0	1
High school diploma	488	0.43	0.50	0	1
<i>Men</i>					
Age	668	58.69	2.86	55	65
Couple	668	0.83	0.38	0	1
North	668	0.39	0.49	0	1
Centre	668	0.19	0.39	0	1
University degree	668	0.21	0.41	0	1
High school diploma	668	0.39	0.49	0	1

Note: sample of waged employees aged 55–65.

## Latest CeRP Working Papers

N° 161/16	Riccardo Calcagno Flavia Coda Moscarola Elsa Fornero	Too busy to stay at work. How willing are Italian workers “to pay” to anticipate their retirement?
N° 160/16	Elisa Luciano Antonella Tolomeo	Information effects in longevity-linked vs purely financial portfolios
N° 159/16	Margherita Borella Michele Belloni	Self-Employment in Italy: the Role of Social Security Wealth
N° 158/16	Claudio Morana	Macroeconomic and Financial Effects of Oil Price Shocks: Evidence for the Euro Area
N° 157/16	Riccardo Calcagno Maela Giofr�e Maria Cesira Urzi-Brancati	To trust is good, but to control is better: how do investors discipline financial advisors’ activity
N° 156/16	Elisa Luciano Mariacristina Rossi Dario Sansone	Financial Inclusion and Life Insurance Demand; Evidence from Italian households
N° 155/16	Claudio Morana	The US\$/� exchange rate: Structural modeling and forecasting during the recent financial crises
N° 154/15	Vincenzo Andrietti	Auto-enrollment, Matching, and Participation in 401(k) Plans
N° 153/15	Donatella Baiardi Claudio Morana	Financial deepening and income distribution inequality in the euro area
N° 152/15	Ewa Ga�ecka-Burdziak Marek G�ra	The impact of easy and early access to old-age benefits on exits from the labour market: a macro-micro analysis
N° 151/15	Margherita Borella Flavia Coda Moscarola	The 2011 Pension Reform in Italy and its Effects on Current and Future Retirees
N° 150/15	Anna Lo Prete	Labour market institutions and household consumption insurance within OECD countries
N° 149/15	Flavia Coda Moscarola Ugo Colombino Francesco Figari Marilena Locatelli	Shifting Taxes from Labour to Property. A Simulation under Labour Market Equilibrium
N° 148/15	Flavia Coda Moscarola Elsa Fornero Steinar Str�m	Absenteeism, Pension Reforms and Grandmothers
N° 147/14	Matteo Morini Simone Pellegrino	Personal Income Tax Reforms: a Genetic Algorithm Approach
N° 146/14	Mariacristina Rossi Eva Sierminska	Single again? Asset and portfolio changes due to widowhood shock
N° 145/14	Johannes G. Hoogeveen Mariacristina Rossi Dario Sansone	Drivers of performance in primary education in Togo
N° 144/14	Elsa Fornero	Economic-financial literacy and (sustainable) pension reforms: why the former is a key ingredient for the latter

The full series is available at: <http://www.cerp.carloalberto.org/category/publications/working-papers/>