

# Train to retain

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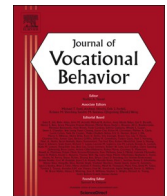
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# Train to retain: Training opportunities, positive reciprocity, and expected retirement age

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## ABSTRACT

This article contributes to research on older workers' sustainable employment by investigating the relation between training and expected retirement age. Past research has produced inconsistent findings, partly because studies rarely distinguish between the effects of training opportunities and actual training participation. To address this limitation, we examine the incremental effect of training opportunities over and above actual training participation. Grounded in social exchange theory, we argue that the effect of training opportunities on expected retirement age depends on employees' positive reciprocity orientation. Using matched employer–employee data (880 employees matched to 284 employers) our findings show that training opportunities associate with expected retirement age over and above employees' actual training participation, but only for employees with strong positive reciprocity beliefs. Moreover, a supplementary analysis showed that the strengthening effect of positive reciprocity only holds for organizations that are financially healthy. These findings are consistent with the idea that positive reciprocators will only avoid early retirement as a response to training opportunities when it is seen as a credible gesture to facilitate employees' future employability.

## 1. Introduction

Scarcity of human resources, both with respect to sheer numbers and competency, continues to be a major topic of concern around the world (Ulrich, 2015). As qualified labor becomes scarcer, the ability to attract and retain talent is a key issue for most human resource managers. Against this backdrop, employers have recognized the strategic importance of offering *sustainable* employment to their older employees. That is, they want to keep their older, most experienced, employees active and motivated at work, as to not lose their skills, knowledge and abilities that contribute to building a sustained competitive advantage (Beazley, Boenisch, & Harden, 2002; Kooij & van de Voorde, 2015; Van der Heijden, 2005; Van der Horst, Klehe, & Van der Heijden, 2017).

At the same time, older workers have choices other than staying with their employer: they have the possibility to enter bridge employment, to change jobs, to become self-employed, or, what is the focus of this article, to retire early. While the decision to retire early is just one of many career-related decisions that individuals make over the course of a professional life (De Vos & Segers, 2013), it is a massively important one. Retirement is a challenging, life-changing event (Wang, Henkens, & van Solinge, 2011), and therefore the decision to enter early retirement requires the careful balancing of personal needs (e.g., more family time versus meaningful

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work), and financial possibilities, while simultaneously considering the expectations of other career stakeholders, most notably the expectation by one's employer to sustain employment (De Vos, Van der Heijden, & Akkermans, 2019, this issue).

If organizations want to slow down early labor market withdrawal, they are well advised to be responsive to older workers' needs and preferences as to create an environment in which they find meaning in their work. After all, conducting meaningful work and finding meaning in life are particularly important to older workers (Steger, Oishi, & Kashdan, 2009). One way in which organizations could contribute to older workers' sense of meaningfulness and thereby help them to sustain their career is by offering training (Appelbaum, Bailey, Berg, & Kalleberg, 2000; Boxall & MacKy, 2009; Polat, Bal, & Jansen, 2017; Wright & Nishii, 2013). Training develops older workers' potential and human capital in terms of skills, competencies and abilities which keeps them productive. Also, the availability of training can provide older workers with a sense of recognition, resulting in increased motivation to do something in return. Both aspects, ability and motivation, are known to foster meaningfulness (Froidevaux & Hirschi, 2015).

Empirical evidence about the effect of training on retirement age is scarce and inconsistent. Some studies show that developmental opportunities for older workers can have motivation-enhancing effects (Polat et al., 2017), reduce intentions to retire early (Armstrong-Stassen & Schlosser, 2008; Armstrong-Stassen & Ursel, 2009), and push back actual retirement decisions (Herrbach, Mignonac, Vandenberghe, & Negrini, 2009). Yet, contrasting these findings, other studies show that training has no effect on retirement age (Stenberg, De Luna, & Westerlund, 2012; Van Solinge & Henkens, 2014), and that HR practices other than training (e.g., job flexibility) are more influential in affecting older workers' motivation to continue working (Bal, de Jong, Jansen, & Bakker, 2012; Göbel & Zwick, 2013; Veth, Emans, Van der Heijden, Korzilius, & De Lange, 2015). We offer three possible explanations for these inconsistent findings.

First, across studies, the term "training" has been used very differently, referring to the (objective or perceived) *opportunity* to participate in training (mostly by OB/HRM scholars, e.g., Dysvik & Kuvaas, 2008), or to actual training *participation* (mostly by labor economists, e.g., Montizaan, Cörvers, & De Grip, 2010). Second, studies differ widely with respect to sample size and composition, and have used different research designs and timeframes, rendering comparisons across studies problematic. Third, the inconsistent research findings suggest the presence of variables that modify the strength and/or direction of the relationship between training and retirement age. Hence, whereas recent empirical studies linking training to older workers' early retirement attitudes and behaviors are valuable for their contribution to our understanding of the role of training as an instrument to develop sustainable careers, additional work is needed to establish if training participation and training opportunities are equally important for the prediction of retirement expectations, and to identify for whom and when training affects retirement age most.

In light of these research needs, the purpose of the present research is threefold.<sup>1</sup> The first objective is to investigate the incremental contribution of training availability over and beyond actual training participation on expected retirement age. Both availability and participation may contribute to keeping older workers from retiring early, but for different reasons. Older workers *participating* in training activities remain productive and therefore continue to be an asset to their firm (ability explanation); older workers being given the *opportunity* to participate in training feel supported by their organization (motivational explanation). In this study, we compare both explanations and examine whether the availability of training opportunities adds to the prediction of expected retirement age over and beyond actual training participation. The second objective is to identify person-related factors that modify the effect of training opportunities on expected retirement age. Drawing on social exchange theory (Blau, 1964; Cropanzano & Mitchell, 2005), we propose that workers who hold strong positive reciprocity beliefs, that is, who tend to return positive treatment for positive treatment (Perugini, Gallucci, Presaghi, & Ercolani, 2003), are more attentive to and are more willing to react to the offering of training opportunities by avoiding early retirement. Third, we aim to avoid some of the methodological limitations previous studies may have suffered from, most notably the use of single-source data and the subsequent threat of common source bias, by using matched employer–employee data. We measure training opportunities in an employer survey and actual training participation and retirement expectations in an employee survey. In doing so, we avoid common method bias that may occur in employee surveys when employees' knowledge of their employer's training policy is related to their own training participation.

## 2. Theory and hypotheses development

In view of the societal need to extend working life (e.g., Fasbender, Wang, Voltmer, & Deller, 2016), for many employees, early retirement may no longer be the default option. However, it is by no means self-evident to avoid early retirement and to sustain employment. After all, to remain productive, older workers need to invest time and energy in keeping their skills updated. Also, factors situated in the private sphere (e.g., poor health, spousal pressure) may force the person into early retirement (Topa, Depolo, & Alcover, 2018; Topa, Moriano, Alcover, & Morales, 2009; Wang & Shultz, 2010). Finally, employees, agentic in shaping their own career trajectory, may decide that time has come to leave the organization to take up new challenges, which could be either business-related (e.g., bridge employment, starting own business) or family-related (e.g., spending time with grandchildren).

This agentic perspective of careers does not mean, though, that organizations are relieved from their responsibility to create an environment in which older workers are encouraged to remain employable (Van der Heijden & De Vos, 2015). One way to do so is to offer meaningful work, that is, work experienced as significant and holding positive meaning (Froidevaux & Hirschi, 2015). The perception of meaningfulness partly derives from mastery experiences, the ability to effectively perform job tasks, and from the experience that one's actions contribute to the service of the greater good (Rosso, Dekas, & Wrzesniewski, 2010; Schnell, Höge, & Pollet, 2013; Steger & Dik, 2010).

<sup>1</sup> This article builds on an earlier working paper version by Montizaan, de Grip, and Fouarge (2015).

Developmental opportunities, such as training courses, may add to the perception of meaningfulness, and hence, to sustained employment of older workers in two key ways. First, training improves employees' individual knowledge, skills, and abilities (KSAs). It provides employees with an update of their KSAs and, as such, is instrumental in compensating for older workers' skills depreciation (Beier, Teachout, & Cox, 2012; Bishop, 1997; De Grip & Van Loo, 2002). Research shows that older workers benefit from training, specifically if the training is designed to accommodate their needs (Callahan, Kiker, & Cross, 2003). Because of the performance and productivity increases that follow from training (Barrett & O'Connell, 2001; Conti, 2005; Konings & Vanormelingen, 2015; Zwick, 2006), and the sense of meaningfulness that accompanies such mastery experiences (Schnell et al., 2013), older workers remain employable and continue to be an asset to their firm. As long as older workers deliver a high rate of return, companies will want to keep them on board (Hermansen & Midtsundstad, 2015).

Second, training is presumed to influence workers' retirement age through a motivational pathway. Social exchange theory (Blau, 1964; Cropanzano & Mitchell, 2005) posits that as employees observe that their organization offers them support, they develop an obligation to reciprocate (Gouldner, 1960). Organizations are generally reluctant to invest in older workers. This is because of managerial stereotypical beliefs about older workers' declining abilities (Maurer, Andrews, & Weiss, 2003; Ng & Feldman, 2012), and because cost-benefit analyses rooted in human capital theory (Becker, 1964) predicts that offering training to older workers does not contribute to the company's economic interests (Tsui, Pearce, Porter, & Tripoli, 1997). If organizations, in spite of the psychological and economic barriers, then decide to provide training opportunities to older workers, this may be seen as an act of goodwill and helpfulness toward older workers. As such, older workers, who are known to put a high premium on maintaining and developing one's skills (Kooij, de Lange, Jansen, & Dikkers, 2008), may interpret the provision of training as a strong signal of organizational support (Armstrong-Stassen & Ursel, 2009; Herrbach et al., 2009; Polat et al., 2017).

To the extent that training opportunities are seen as a gesture of organizational support, the norm of reciprocity (Gouldner, 1960) would suggest that older workers reciprocate the benevolent treatment through increased commitment, identification with organizational goals, and prolonged employment (Ehrhardt, Miller, Freeman, & Hom, 2011; Rhoades & Eisenberger, 2002; Steger & Dik, 2010). In exchange for the goodwill and helpfulness on the part of the organization, older workers are willing to "return the favor" by extending their working life. It is generally favorable for employers when older workers avoid early retirement (unless older workers are underperforming), as this allows companies to reap the benefits of both current and past investments in the human capital of their employees for a longer time. Moreover, it reduces turnover costs, such as replacement costs and indirect costs related to the loss of production or costly overtime hours of the remaining workforce in cases when workers who leave cannot easily be replaced by equally skilled and experienced workers.

So far, we have argued that training participation positively associates with the expected retirement age (ability), as well as that having training opportunities positively associates with the expected retirement age (motivation). For the purpose of this study, we go one step further by positing that training opportunities explain variance in the expected retirement age above and beyond actual training participation. Although older workers can directly benefit from a training when it accommodates their needs and keeps their skills up to date, we expect the offering of training opportunities on top of that to signal organizational support which is independent of the current skills and needs of the worker. The fact that workers are given the opportunity to train, even when they currently do not need to be trained nor suffer from skills depreciation can be interpreted as an act of goodwill as it not only signals employers' concern for the current performance and well-being, but also their concern about future employees' well-being and their desire to develop long-term relationships with them and to provide organizational support (Gould-Williams, 2016). The motivational pathway explaining the positive relationship between training opportunities and expected retirement age is therefore likely to have an impact over and beyond the pathway via skills, knowledge and abilities.

**Hypothesis 1.** We expect a positive relation between training opportunities and expected retirement age over and beyond the relation between actual training participation and expected retirement age.

### 2.1. *The moderating role of positive reciprocity beliefs*

Sustainable careers imply a long-term perspective and a focus on continuity (De Prins, De Vos, Van Beirendonck, & Segers, 2015; De Vos et al., 2019). For organizations this means retaining valuable human capital and promoting the workforce's capabilities. For individuals this means developing competencies and talent to ensure sustained employability, while preserving their health and well-being (De Vos et al., 2019). A new employability-based psychological contract has thus emerged (Cavanaugh & Noe, 1999; Guest, 2007), in which employees no longer expect lifetime employment in one organization, but they do expect employers to provide them with opportunities to develop their skills and will safeguard their health and well-being. In return, employers expect employees to reciprocate these corporate investments by showing commitment and flexibility (Baruch, 2015). It follows that reciprocity can stimulate the stability of contemporary organization-employee relationships and have a positive impact on career sustainability (Florea, Cheung, & Herndon, 2013).

As indicated above, the norm of reciprocity (Gouldner, 1960) prescribes that employees, when offered the possibility to follow training, should return the favor by acting in a way that benefits the organization, for example by avoiding early retirement. However, norms of reciprocity do not by themselves determine that employer-employee interactions will occur in a *quid pro quo* fashion (Umphress, Bingham, & Mitchell, 2010). There is strong evidence that individuals differ in the degree to which they endorse reciprocity in social exchange relationships (Cropanzano & Mitchell, 2005), referred to as positive reciprocity beliefs (Perugini et al., 2003).

Positive reciprocity beliefs involve the tendency to return positive treatment for positive treatment. People who hold strong

positive reciprocity beliefs – positive reciprocators – are especially “attentive to and preferentially willing to react to positive interpersonal behavior” (Perugini et al., 2003, p. 255). Positive reciprocators feel more obliged to reciprocate beneficial behavior to other exchange partners, such as their employing organization. Over time, they have learned to return kindness with kindness, and developed a strong preference for behaving in this way. Their counterparts, i.e., those who do not strongly endorse positive reciprocity beliefs, feel little, if any obligation to reciprocate behavior, regardless of the favors provided by their exchange partner (Umphress et al., 2010). We posit that strong positive reciprocity beliefs will influence individuals' decision to avoid early retirement when given access to training. Employees who are offered training feel obliged to return the favor by prolonging their stay with the organization. This effect will intensify if they have strong positive reciprocity beliefs.

**Hypothesis 2.** The positive relation between training opportunities and expected retirement age is stronger for workers with high than for workers with low levels of positive reciprocity.

### 3. Method

#### 3.1. Procedure and participants

We use matched employer–employee survey data for the Dutch public and privatized sectors to examine the relation between provision of training opportunities as reported by employers and the expected retirement age of their employees as measured in an employee survey. The employer–employee surveys were gathered in 2012. In the first week of April 2012 12,600 employees born between 1946 and 1975 received an email to participate in our web-based survey.

The survey included questions about retirement expectations, training participation and employee personality. 5716 individuals completed the questionnaire. For the employer survey, we sent an e-mail in April 2012 to all 2500 employers in the public and privatized sectors with a link to the web-based survey. The employer survey included questions on training provision and the financial health of the organization. The e-mail was sent to HR-managers and managing directors who are responsible for HR practices and all retirement related issues within their organizations.<sup>2</sup> The survey was answered by 783 employers.

We were able to match the survey data of 1337 employees to the answers of 363 employers. Because of partial non-response to questions relevant to our analyses, we base our estimations on 880 employees matched to 284 employers (37% is female; 70% is highly educated). The average expected retirement age = 65.1 years. However, there are considerable peaks in the distribution at specific retirement ages: 28% of the sample population expects to retire at age 65 and 25% at age 67. Employees are on average 55.7 years old (range: 35–65) and have 11.5 years of firm tenure (range: 0–47). The advantage of having relatively older workers in our estimation sample is that they are likely to have more precise expectations regarding their retirement compared to younger workers (Ekerdt, Kosloski, & DeViney, 2000).

Important to note here is that no serious selection issues are at play when we match data from the employee survey to the data from the employer survey. For example, the overall distribution of workers across sectors in our estimation matched sample is roughly similar to that in the sample of workers before the match. More importantly, the characteristics of employees who could be matched to their organization are very similar to those of employees who could not be matched. Likewise the characteristics of employers who could be matched to their employees are very similar to those of employers who could not be matched (tables are available from the authors upon request).

#### 3.2. Measures

##### 3.2.1. Employee survey

*Retirement expectations* are measured using the item “At what age do you expect to retire?” to which respondents could reply in full years using pre-coded answers ranging from 55 to 70 years old (in steps of one year). This measure has been widely used in previous research on retirement expectations and behavior, and has been shown to be a good predictor for actual retirement behavior (Das, Dornitz, & van Soest, 1999; Dornitz, 2001; Hurd, 2009; Keane & Runkle, 1990; Stephens Jr., 2004). Lindeboom and Montizaan (2018) further showed that Dutch public sector employees are well informed about their pension rights and can predict adequately their retirement date. They calculated the correlation between the expected retirement age in 2010 and the actual retirement age measured in 2014 of public sector employees born in the years 1949 or 1950. Expected retirement was measured using the exact same survey question as used in this study, while actual retirement was measured in registered data from the public sector's pension fund. Lindeboom and Montizaan found a strong correlation ( $r = 0.49$ ,  $p = 0.00$ ) between retirement age expectations and the later actual retirement age.

*Positive reciprocal orientation* is measured with the reciprocity scale developed by Perugini et al. (2003). They performed comprehensive validation tests and assessed the predictive power of their reciprocity scale. We included the three items with the highest factor loadings for positive reciprocity in our survey. The behavioral validity of these items is further confirmed by others (Dohmen, Falk, Huffman, & Sunde, 2009; Montizaan, De Grip, Cörvers, & Dohmen, 2016). Respondents had to indicate how well they identified

<sup>2</sup> Of these HR-managers and managing directors, 7.0% were Personnel or HR director, 53.0% were Personnel or HR advisor, 17.8% were Personnel or junior managers, 2.5% were General or senior managers, 1.9% were general director, and 17.8% had another job description (e.g., board members, team managers, management assistant, school principal, rector, coordinator, or administrator).

themselves with each of the following three statements: 1) “If someone does me a favor, I am prepared to return it”; 2) “I go out of my way to help somebody who has been kind to me before”; 3) “I am ready to undergo personal costs to help somebody who helped me before”. Participants responded on a five-point Likert scale ranging from 1 “does not apply to me at all” to 5 “applies perfectly to me”.

We first take the arithmetic average of a respondent's answers to these three items. Cronbach's alpha was 0.704. The indicator for positive reciprocity is divided into quartiles – from low reciprocal (Q1) to high reciprocal (Q4). There are two main reasons why we use an ordinal approach: First, the tail on the left side of the distribution is rather long and we have only a few observations for scores 1 until 2.5. Including this long tail would lead to serious problems in our estimations of the interaction effects and the calculation of the corresponding margin plots. Second, previous studies showed that the impact of reciprocal inclinations on behavior is often non-linear (e.g., [Montizaan et al., 2016](#)). By using an ordinal scale, we do not have to maintain the restrictive assumption that the interaction effect of positive reciprocity and training opportunities is linear (for an in-depth discussion, see [Hainmueller, Mummolo, & Xu, 2019](#)).

### 3.2.2. Employer survey

Training opportunities for older workers in the company are evaluated by employers using two items (“Extra education or training participation”, and “Training aimed at rethinking the professional career and retirement”). Employers could answer these items on a five-point Likert scale ranging from 1 “not applied to any older employee” to 5 “applied to all older employees”. We standardized our measure of training opportunities to mean 0 and standard deviation 1. The interitem correlation is 0.569.

### 3.2.3. Control variables

Actual *training participation* is measured by a dummy variable asking employees whether they participated in any training course in the preceding year (0 = “no”; 1 = “yes”). Other control variables that are included in our analyses are: age (in years), gender (0 = “woman”; 1 = “man”), married (0 = “no”; 1 = “yes”), wage (measured in natural logarithm), educational level (“low”, “intermediate” and “high”), and the sector of employment (“government”, “education”, “privatized sector”). Age is a vital control variable to include in analyses on retirement behavior as the generosity of pension rights has continuously declined over the last decade in the Netherlands. Due to transition arrangements in the Dutch pension system older cohorts retain higher benefits compared to younger cohorts, enabling them to retire earlier ([De Grip, Fouarge, & Montizaan, 2013](#)). Firm tenure is included as individual pension rights increase with each year of additional tenure. Firm tenure is derived from register data from the public sector's pension fund which is matched on the individual level to the employee survey. Wage and education levels are further proxies for the degree to which workers can afford early retirement. Higher wages and higher education levels are associated with more private pension wealth. Gender, and marital status are important as control variables because the decision to retire is often taken on the household level where both partners have different bargaining positions ([Szinovacz & DeViney, 2000](#); [Van Solinge & Henkens, 2005](#)). The sector of employment is included in the analyses because pension schemes are negotiated on the sectoral level in the Netherlands, implying that small differences exist in the pension schemes across sectors.

## 3.3. Analyses

Our hypotheses were tested using the marginal effects from ordered probit analyses (using Stata). As the distribution of the expected retirement age has peaks at certain ages we cannot use ordinary least squares (OLS) regressions. The ordered probit model takes these peaks explicitly into account as it is used to estimate relations between an ordinal dependent variable and a set of independent variables. In ordered probit, an underlying score is estimated as a linear function of the independent variables and a set of cutpoints.

We also need to deal with the nested structure of our data, as we observe multiple employee observations for a number of organizations. We therefore checked whether the use of multilevel ordered probit models should be preferred over simple ordered probit models (see [Appendix A](#)). Although our data has a nested structure, our sample is not large enough to uncover within-employer variation in expected retirement age. This is because we match only 880 employees to 284 employers, implying that the average number of employees per employer is still rather small. When we take a closer look at the data, we observe that for 142 employers (about 50% of the employer sample), we only have one employee observation. For 56 employers, we only have two employee observations. It is therefore not surprising that we are not able to identify within employer-variation in this sample. Moreover, it is important to realize that all employees are covered by the same pension fund and that most basic labor conditions in the public sector in the Netherlands, except for training policies, are arranged on the sector level in so called collateral agreements. As such, it is also not surprising that most variation in the expected retirement age resides at the individual level.

We therefore proceed with ordered probit models without the multilevel structure in our main analyses. However, to take into account that we have for half of our sample multiple observations per employer, we follow [Rogers' \(1993\)](#) and [Wooldridge's \(2002\)](#) suggestion to use a sandwich estimator to allow for intragroup correlation on the organizational level. With our type of data, it remains generally wise to cluster on the dimension of the organizational effect as heteroskedasticity is almost certain to exist in the residuals at the organizational level ([Rogers, 1993](#); [Wooldridge, 2002](#)).

## 4. Results

[Table 1](#) shows the means, standard deviations and Pearson product-moment correlations for all the variables. [Table 2](#) shows the results of the ordered probit model with clustered standard errors with which we test [Hypothesis 1](#), stating that there exists a positive

**Table 1**  
Sample means, standard deviations, and correlations.

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Expected retirement age	65.08	2.24													
<b>Training</b>															
2 Training opportunities	0.41	0.96	0.01												
3 Training participation	0.62	0.49	0.04	0.01											
<b>Employee characteristics</b>															
4 Age	55.72	6.18	-0.13***	-0.04	-0.13***										
5 Gender (male = 1)	0.61	0.48	-0.02	0.09***	-0.11***	0.18***									
6 Married	0.84	0.37	-0.10***	0.00	0.01	0.14***	0.14***								
7 Wage (in log)	10.86	0.28	-0.01	-0.02	-0.01	0.13***	0.29***	0.13***							
8 Firm tenure	11.50	8.84	-0.09***	0.11***	-0.04	0.23***	0.15***	0.03	0.06**						
9 Low education level	0.05	0.23	-0.03	0.02	-0.12***	0.08**	0.04	0.05	-0.27***	-0.01					
10 High education level	0.70	0.45	0.07**	-0.15***	0.13***	-0.01	-0.09***	-0.04	0.49***	-0.07**	-0.36***				
11 Positive reciprocity	3.99	0.47	0.01	-0.04	-0.01	-0.06**	0.02	-0.00	0.04	-0.05	-0.06	0.10***			
<b>Other Employer characteristics</b>															
12 Sector: Government	0.44	0.50	-0.05	0.27***	-0.12***	-0.07**	0.13***	-0.04	-0.07**	0.14***	0.02	-0.16***	-0.04		
13 Sector: Education	0.43	0.50	0.07**	-0.28***	0.10***	0.09***	-0.25***	-0.01	0.02	-0.15***	-0.06	0.32***	0.02	-0.77***	
14 Bad financial health	0.64	0.48	0.03	-0.02	-0.01	0.00	-0.01	0.04	-0.04	-0.12***	0.03	0.06	-0.01	-0.01	0.01***
Observations	869	869	869	869	869	869	869	869	869	869	869	869	869	869	869

Note. For educational level, intermediate vocational education serves as reference category; for sector, private sector serves as reference category.

\*\*\*  $p < 0.01$ .

\*\*  $p < 0.05$ .

**Table 2**  
Results of the Ordered Probit Model with Clustered Standard Errors.

Dependent variable: Expected retirement age	Unstandardized probit coefficients (B) without training opportunities in the equation		Unstandardized probit coefficients (B) with training opportunities in the equation	
<b>Training</b>				
Training opportunities			0.086***	(0.042)
Training participation	0.062	(0.062)	0.056	(0.062)
<b>Employee characteristics</b>				
Age	-0.032***	(0.007)	-0.032***	(0.006)
Gender	0.084	(0.084)	0.088	(0.082)
Married	-0.328***	(0.088)	-0.336***	(0.087)
Wage (in log)	0.053	(0.148)	0.042	(0.148)
Low education level	0.003	(0.156)	0.013	(0.160)
High education level	0.067	(0.111)	0.087	(0.109)
Firm tenure	-0.007***	(0.004)	-0.007***	(0.003)
<b>Other Employer characteristics</b>				
Sector: Government	0.096	(0.134)	0.079	(0.124)
Sector: Education	0.185	(0.151)	0.212	(0.142)
Pseudo R-square	0.0227		0.0239	
Observations	869		869	

Note. For educational level, intermediate vocational education serves as reference category; for sector, private sector serves as reference category. Clustered standard errors in parentheses.

Training opportunities and all other employer characteristics are measured in the employer survey. Training participation and the employee characteristics are measured in the employee survey.

\*\*\*  $p < 0.01$ .

association between training opportunities and expected retirement age over and beyond the association between training participation and expected retirement age. As can be seen from the table, the expected age of retirement of employees is positively related to the organization's provision of training opportunities ( $\beta = 0.084$ ,  $p < 0.05$ ). This finding is consistent with [Hypothesis 1](#) and indicates that a one standard deviation increase in training opportunities is associated with a 1 month later retirement. We do not find a significant relation between actual training participation and the expected retirement age. We do observe that age ( $\beta = -0.034$ ,  $p < 0.01$ ) and being married ( $\beta = -0.336$ ,  $p < 0.01$ ) both are negatively associated with the expected retirement age.

We then tested whether the relation between training opportunities and expected retirement age is stronger when positive reciprocity beliefs are high versus low. [Table 3](#) presents the results of the ordered probit estimations in which we add our indicator for positive reciprocity (Column 1) and the estimations in which we include the interaction terms between the four quartiles of positive reciprocity and our training opportunities indicator (Column 2). The results show a significant positive interaction effect between the highest positive reciprocity quartile and training opportunities ( $\beta = 0.503$ ,  $p < 0.05$ ). The main effect of training opportunities is no longer significant when the interaction term is included. As can be seen from [Fig. 1](#), the positive relation between training opportunities and expected retirement age is indeed stronger for employees with strong positive reciprocal inclinations. Employees who are strongly positively reciprocal and have training opportunities expect to work approximately 6 months longer than strongly positively reciprocal employees without training opportunities and 5 months longer than employees with training opportunities who are the least positive reciprocal. This result also holds when in a robustness analysis we replace the interaction terms between the four quartiles of positive reciprocity with a continuous reciprocity variable. The coefficient of the interaction effect between training and the continuous reciprocity variable is statistically significant at the 1%-level ( $\beta = 0.236$ ,  $p < 0.01$ ). [Hypothesis 2](#) is thus confirmed.

#### 4.1. Supplementary analyses

Aside from the empirical validation of our hypotheses, we performed a supplementary analysis to examine whether training opportunities, positive reciprocity and financial health of the organization interact in predicting expected retirement age. Specifically, we tested the possibility that positive reciprocators are more appreciative of training opportunities if their company is financially healthy, and that they are less inclined to 'return the training favor' if their company is experiencing financial turmoil. In the latter case, training opportunities may signal the exact opposite of favor-doing, namely that management aims to increase organizational flexibility, to identify skill gaps within the existing workforce, to redeploy staff and to find suitable alternative employment within the organization. In short, when organizations experience financial distress, training opportunities may reflect management's interest in increasing cost effectiveness rather than serving employees' well-being and development. As a proxy for the *financial health of the organization* we make use of the answers to two employer survey items. The first item asked employers to describe the financial situation of your organization (0 = "good"; 1 = "bad"). The second item asked employers whether they expect reductions in their workforce in the coming year (0 = "no"; 1 = "yes"). Previous studies have shown that financial shocks and workforce reductions are closely related (e.g., [Boeri, Garibaldi, & Moen, 2013](#); [Greenwood, Díaz, Li, & Lorente, 2010](#)). Moreover, many corporate executives believe that when a company gets into financial trouble due to declining sales or rising costs, cutting the size of the organization to reduce fat and waste is a normal, effective response ([De Meuse, Bergmann, Vanderheiden, & Roraff, 2004](#)).



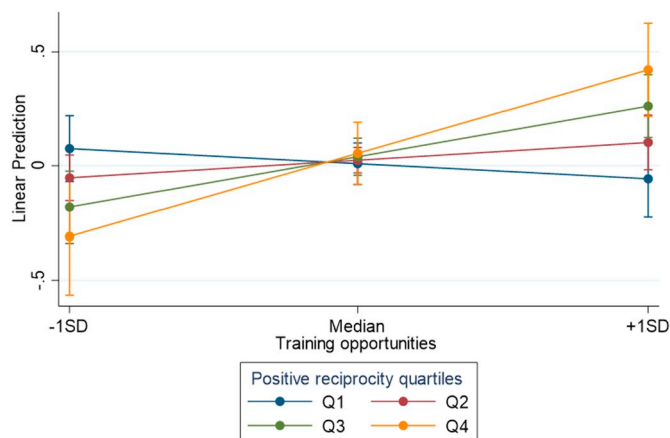
**Table 3**  
Two-way interaction between training opportunities and positive reciprocity.

Dependent variable: Expected retirement age	Unstandardized probit coefficients (B) without interaction terms in the equation		Unstandardized probit coefficients (B) with interaction terms in the equation	
<b>Training and reciprocity</b>				
Training opportunities	0.086**	(0.042)	0.018	(0.060)
Training participation	0.055	(0.062)	0.048	(0.062)
Positive reciprocity Q1	-0.060	(0.079)	-0.064	(0.089)
Positive reciprocity Q3	-0.092	(0.102)	-0.102	(0.113)
Positive reciprocity Q4	0.022	(0.132)	-0.117	(0.113)
Training opportunities * Positive reciprocity Q1			0.008	(0.087)
Training opportunities * Positive reciprocity Q3			-0.001	(0.130)
Training opportunities * Positive reciprocity Q4			0.510***	(0.120)
<b>Employee characteristics</b>				
Age	-0.031***	(0.006)	-0.032***	(0.006)
Gender	0.084	(0.082)	0.092	(0.081)
Married	-0.340***	(0.089)	-0.355***	(0.090)
Wage (in log)	0.037	(0.148)	0.059	(0.150)
Low education level	0.014	(0.158)	0.031	(0.153)
High education level	0.086	(0.107)	0.070	(0.104)
Firm tenure	-0.007***	(0.004)	-0.008***	(0.004)
<b>Other Employer characteristics</b>				
Sector: Government	0.080	(0.124)	0.072	(0.129)
Sector: Education	0.214	(0.143)	0.212	(0.147)
Pseudo R-square	0.0242		0.0304	
Observations	869		869	

Note. Marginal effects of an ordered probit analyses. Clustered standard errors in parentheses. For educational level, intermediate vocational education serves as reference category; for sector, private sector serves as reference category; for positive reciprocity, quartile 2 is the reference category. Training opportunities and all other employer characteristics are measured in the employer survey. Training participation, positive reciprocity and the employee characteristics are measured in the employee survey.

\*\*\*  $p < 0.01$ .

\*\*  $p < 0.05$ .



**Fig. 1.** Marginal effects of training opportunities on expected retirement age, by level of positive reciprocity (95% confidence intervals).

We construct our measure of financial health by taking the arithmetic average of to these two items ( $r = 0.14$ ).

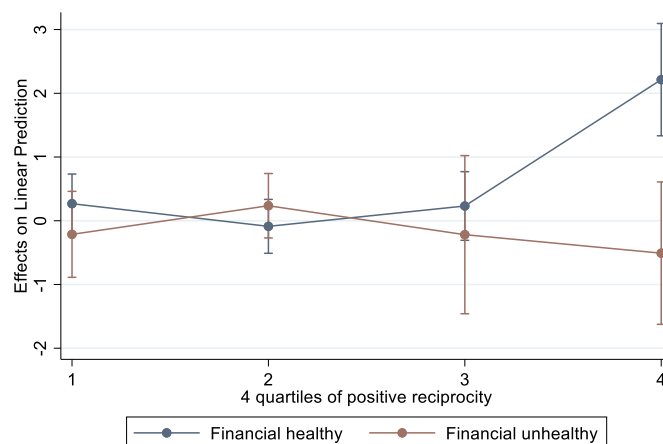
Table 4 shows the estimation results. We again find a positive interaction effect between training opportunities and reciprocity ( $\beta = 0.897, p < 0.05$ ). But we also find that the three-way interaction effect between training opportunity, positive reciprocity beliefs and our proxy for financial health of the organization is negative and statistically significant for the highest quartile of the reciprocity distribution ( $\beta = 0.546, p < 0.05$ ). Fig. 2 shows in more detail how we can interpret this result. The most positively reciprocal employees both react to training opportunities by increasing their expected retirement age more than employees who are less positively reciprocal. However, this effect is much stronger when the organization is not expecting to downsize its workforce. A strongly positively reciprocal employee who works in an organization with training opportunities which is not expecting any downsize expects to work almost 1.4 years longer than a strongly positively reciprocal employee who works in an organization with

**Table 4**  
Three-way interaction between training opportunities, positive reciprocity, and financial condition.

Dependent variable: Expected retirement age	Unstandardized probit coefficients (B)	
Training, reciprocity and expected to downsize		
Training opportunities	-0.025	(0.098)
Positive reciprocity Q1	-0.024	(0.292)
Positive reciprocity Q3	-0.334	(0.240)
Positive reciprocity Q4	-0.050	(0.344)
Training opportunities * Positive reciprocity Q1	0.159	(0.147)
Training opportunities * Positive reciprocity Q3	0.109	(0.157)
Training opportunities * Positive reciprocity Q4	1.159***	(0.234)
Financial bad health	0.087	(0.235)
Training opportunities * Financial bad health	0.131	(0.176)
Positive reciprocity Q1 * Financial bad health	-0.140	(0.503)
Positive reciprocity Q3 * Financial bad health	0.387	(0.520)
Positive reciprocity Q4 * Financial bad health	0.085	(0.654)
Training opportunities * Positive reciprocity Q1 * Financial bad health	-0.376	(0.288)
Training opportunities * Positive reciprocity Q3 * Financial bad health	-0.305	(0.387)
Training opportunities * Positive reciprocity Q4 * Financial bad health	-1.462***	(0.445)
Training participation	0.158	(0.141)
Employee characteristics		
Age	-0.030***	(0.007)
Gender	0.086	(0.086)
Married	-0.323***	(0.096)
Wage (in log)	0.041	(0.151)
Low education level	0.059	(0.152)
High education level	0.048	(0.113)
Firm tenure	-0.008***	(0.004)
Other Employer characteristics		
Sector: Government	0.101	(0.145)
Sector: Education	0.242	(0.160)
Pseudo R-square	0.0348	
Observations	869	

Note. Marginal effects of an ordered probit analyses. Clustered standard errors in parentheses. For educational level, intermediate vocational education serves as reference category; for sector, private sector serves as reference category; for positive reciprocity, quartile 2 (Q2) is the reference category (Q1 is the lowest quartile of reciprocity; Q4 is the highest quartile). Training opportunities, financial bad health, and all other employer characteristics are measured in the employer survey. Training participation, positive reciprocity and the employee characteristics are measured in the employee survey.

\*\*\* p < 0.01.



**Fig. 2.** Marginal effects of training opportunities on expected retirement age, by level of positive reciprocity for workers in financially healthy and unhealthy firms (95% confidence intervals).

similar training opportunities but needs to downsize its employment.

In a robustness check we also estimated models in which we replaced our financial health measure with the two separate items of financial health. Reassuringly, our results are robust to using the financial health scale or to using the two separate items separately (results available upon request).

## 5. Discussion

Sustainability of workers' career is a pressing societal issue in terms of the aging workforce (De Vos & Van der Heijden, 2017). It is important for older workers to extend their working lives, but to do so, they need to stay flexible through continuous learning and increasing knowledge (Newman, 2011). The present study contends that organizations, by offering training opportunities to older workers, play a key role in the development of older workers' sustainable employment. Using social exchange theory (Blau, 1964; Cropanzano & Mitchell, 2005) as a theoretical foundation, we examined for whom and when training opportunities serve as an instigator to prolong working life. As hypothesized, our findings show that training opportunities influence the expected retirement age over and beyond training participation, but that this effect only holds for workers with strong positive reciprocity beliefs. Moreover, a supplementary analysis showed that positive reciprocity beliefs strengthened the relation between training opportunities and expected retirement age only when the organization was perceived to be financially healthy. The findings of our study generate some interesting implications for theory and practice.

### 5.1. Theoretical implications

Our findings contribute to the literatures on sustainable careers, career management, and older workers in several important ways. First, this study shows that organizations can sustain aging workers into a prolonged working life, while safeguarding their employability, by offering training. The mere availability of training opportunities provides sufficient motivation for older workers with positive reciprocity beliefs to extend their working life. Previous studies highlighted the importance of older workers' participation in training programs for sustaining their employability (Bishop, 1997; Fouarge & Schils, 2009; Groot & Maassen van den Brink, 2000; Sanders & De Grip, 2004). These studies are built on the premise that training increases older workers' human capital and can keep them longer in the labor market. However, motivational issues tend to cloud the interpretation of the studies since workers who expect to continue working are more likely to participate in training than workers who expect to retire early. Therefore, as called for by Fouarge and Schils (2009), it is important to distinguish between training opportunities and actual training participation. Furthermore, consistent with studies on strategic HRM and career management (Baruch & Peiperl, 2000; De Vos & Cambré, 2017; Messersmith, Patel, Lepak, & Gould-Williams, 2011), we focused on the availability of HR/career management practices, i.e., training, as reported by employers rather than based on employees' perceptions of such practices (Kooij, Jansen, Dijkers, & de Lange, 2014). The advantage of this matched employer–employee design we used is that it avoids common method bias concerns.

Striking is that training participation had no impact on the expected retirement age, although we argued that training participation would be positively associated to the expected retirement age through the maintenance and improvement of ability. We reasoned that up-to-date skill levels instill a sense of mastery that contributes to the perceived meaningfulness of one's work, and therefore would result in delaying retirement. A tentative explanation for this null finding is that the training participation observed in our sample is highly endogenous and not only depends on motivation, but also on current skills deficiencies of individual employees. Employees who have fully up-to-date skill levels and who are highly productive may have less need to actually participate in a training and may be less willing to retire early. Employees who experience problems to remain productive, however, may be more inclined to retire early due to these problems. This might compensate the positive effect of training participation on the expected retirement age for this latter group.

Our study extends prior research relying on social exchange theory (Armstrong-Stassen & Ursel, 2009; Herrbach et al., 2009; Polat et al., 2017) by examining positive reciprocity as a dispositional moderator in the relation between training opportunities and expected retirement age. Reciprocity is key to sustainable careers, we argued, because sustainability requires stable employer–employee relationships, which is exactly what reciprocity provides. In this context, stability does not refer to lifetime employment or risk-averse behavior, but rather to the predictability of relationships: employer and employees can trust each other that human capital investments are reciprocated with effort and commitment, and vice versa (Florea et al., 2013). The results show that training access affects older workers' willingness to avoid early retirement over and beyond training participation, and that this effect only holds for those who scored high on positive reciprocity. Consistent with predictions from social exchange theory (Perugini et al., 2003), workers with strong positive reciprocity beliefs were more inclined to return the favor offered to them. Positive reciprocators are known to be especially sensitive to kind behavior and are expected to be more attentive to positive interpersonal behavior. Hence, our findings suggest that this group of older workers was more inclined to interpret the availability of training opportunities as an act of kindness on behalf of the organization and was more willing to perform positive behavior.

Our findings are theoretically relevant for those studying the role of employees' perceptions of HR and career management practices (Bowen & Ostroff, 2004). The finding that idiosyncratic factors, such as personality and belief system, influence the strength of “organizational support signals” indicates that not all career management practices are equally relevant to all employees, and speaks to the importance of adopting an individualized view on careers (De Vos & Cambré, 2017). An individual approach to managing careers may be particularly relevant for older workers as they have more heterogeneous needs in their work than younger workers (Bal & Jansen, 2016; Dannefer, 2003). Accordingly, older workers may be more receptive and willing to respond to career management practices that are tailored to fit their needs, for instance through individual arrangements regarding their career development (i.e., development I-deals, De Vos & Cambré, 2017).

The supplementary analysis revealed that positive reciprocators are willing to avoid early retirement, but only when their organization is in a healthy financial position. There is no such willingness from the workers' part when the organization is going through financial turmoil. Previous studies have shown that employees make varying attributions for why HR practices exist: some perceive HR practices to be motivated by employers' concern for enhancing employee well-being, but others perceive the same

practices to be motivated by efficiency concerns (Chen & Wang, 2014; Nishii, Lepak, & Schneider, 2008; van de Voorde & Beijer, 2015). Based on our findings, we believe that the organization's financial health may be an important precursor of how employees make sense of training opportunities. Specifically, in times of financial distress, employees may be more likely to attribute the availability of training as a tool to identify skill gaps within the existing workforce and to redeploy staff, ultimately serving management's profit-motive. Conversely, in times of prosperity, employees may be more likely to attribute training opportunities to the company's concern for enhancing their well-being. We hope that our study spurs additional scholarly efforts to detect environmental and institutional factors influencing how older workers make sense of and react to career management practices.

### 5.2. Practical implications

The implications for organizations are threefold. First, our findings indicate that offering training opportunities to older workers increases the expected retirement age of positive reciprocators, regardless of whether they participate in the training. Whereas positive reciprocators, in particular those who score high in the highest quartile on this scale, may naturally see training opportunities as a positive form of interpersonal behavior, this may be less the case for the other employees (Perugini et al., 2003). Accordingly, one way to strengthen the impact of training opportunities is to communicate more strongly that training serves to help older workers in coping with changing job demands, so that this becomes the majority view among older workers. The more employees are convinced about the company's good intentions, the more likely they will avoid early retirement. Obviously, if organizations are primarily interested in preventing that older workers face skill obsolescence, training participation and on-the-job learning may be a prerequisite (Allen & De Grip, 2012).

Relatedly, the findings suggest that organizations should not assume that giving older workers access to training is interpreted as a deed of charity by all employees and in all circumstances. After all, training is just one of many career management practices that organizations have in place. Ideally, all these practices work in concert with one another: they complement one another and fit together as a whole in achieving the organization's goals (Bowen & Ostroff, 2004; Delery & Doty, 1996). Giving older workers access to training will only be interpreted as concern for enhancing employee well-being if other HR practices convey a similar message. For example, organizations could use older workers as mentors and coaches, and assist them when implementing new technology. In conclusion, organizations should send consistent HRM messages by designing an HRM system that is internally aligned.

Third, financial distress usually goes hand in hand with organizational restructuring. Organizations tend to respond to financial distress by increasing formalization and standardization, and focus on efficiency instead of on employee well-being (Staw, Sandelands, & Dutton, 1981). During financial downturn, even employees with the strongest positive reciprocity beliefs will not perceive the organization's offer to participate in training as a gesture to facilitate employees' future employability. Not surprisingly then, one of the grand challenges of today's HR professionals is to "balance the tensions inherent in being a strategic partner on the one hand and an employee champion on the other" (Ulrich, 1997, p. 45). To this end, HR professionals need to embrace plurality and become "both/and" thinkers (i.e., "paradox navigators", Ulrich, Kryscynski, Ulrich, & Brockbank, 2017). More difficult but equally necessary is to train other organizational actors to approach tensions as "both/and" paradoxes as for them to accept and accommodate the absurdity of paradoxes in the form of mixed messages conveyed by seemingly contradictory HR practices (e.g., training and salary cuts), particularly in times of financial distress (Aust, Brandl, Keegan, & Lensges, 2017).

### 5.3. Strengths, limitations and future research

Several features of this study bolster confidence in our results. First, we used a unique, matched employer–employee data set that allows us to investigate whether HR policies providing training targeted at older workers (as reported by employers) is related to the expected retirement age of their employees (as reported by employees). The use of matched employer–employee data has the advantage over previous studies that we avoid common source bias because we can rule out that our measure of training opportunities is biased by an employee's own experience with training in their organization. Second, we found support for our hypotheses about the relation between having training opportunities and expected retirement age after first controlling for an extensive set of meaningful variables that in the literature have been found to be related to the age of retirement. Third, our results are robust to multiple additional analyses, showing that the sample selection after the matching process leads to a sample which is largely representative for employees and employer in the government, education and privatized sectors in the Netherlands. Moreover, our results are robust to using alternative estimation techniques such as multilevel analyses.

Despite these strengths, some limitations of our study should be addressed in future research. First, formal training is just one of many career management practices that organizations can employ to sustain older workers' employment. Other practices include, among others, task adaptation, flexible work conditions, work-family programs, mentoring programs, and I-deals (De Vos & Cambré, 2017; Kooij et al., 2014; Kooij & van de Voorde, 2015). Further research could examine whether and why these practices are differentially related to early retirement expectations. For example, flexible work conditions and work-family programs may unintentionally accelerate older workers' exit from the workplace, not because these practices would indicate lack of organizational support, but rather because they may strengthen employees' awareness about the delights of family life. Training, mentoring programs and I-deals, on the other hand, may contribute to employees' feelings of competence and prolong employment.

Second, we see great value in distinguishing bundles of career management practices to examine how different combinations of practices yield different outcomes depending on myriad person and context-related factors. For example, Kooij et al. (2014) distinguished four bundles of HR practices for older workers, which they refer to as development (e.g., training), maintenance (e.g., job security), utilization (e.g., task enrichment), and accommodative HR practices (e.g., reduced workload). A relevant question for

future research is whether older workers perceive these practices accordingly, and whether perceptions change when the financial health of the organization changes. In this context it is also important to stress that the study relies on a cross-sectional design. With respect to future research, it would be beneficial to use longitudinal datasets to replicate these findings, and to study changes over time.

Third, the primary outcome of the study was the expected retirement age. Expected age provides information only on “when” a worker expects to retire and not on his/her “desire” to stay longer or not. We deliberately focused on studying expected rather than preferred or desired retirement age because expectations are theoretically more proximal to behavior than preferences (Olson, Roese, & Zanna, 1996), and because expected retirement age has been shown to be a good predictor for actual retirement behavior in previous research (Das et al., 1999; Dominitz, 2001; Hurd, 2009; Keane & Runkle, 1990; Stephens Jr., 2004). Moreover, in the Netherlands the expected and preferred retirement age should in theory be equivalent since employees are free to choose when to retire. The only real binding constraint is the eligibility age for the state pension which for most employees entails mandatory retirement. In practice, however, most employees in the Netherlands retire well before the official state retirement age due to the existence of generous occupational pension benefits which can be used to finance early retirement.

## 6. Conclusion

This study reveals hitherto undocumented moderators in the relation between training opportunities and employees' expected retirement age, extending previous research on how to improve older workers' sustained employability. Our findings suggest that older workers are willing to avoid early retirement when they are offered training opportunities, but that this effect depends on the interplay between workers' positive reciprocity beliefs and the financial health of the organization: positive reciprocators are inclined to avoid early retirement in return for training access but only when the organization is financially healthy. Future studies that evaluate how and why contextual factors influence employees' reactions to career development practices, such as training, would further contribute to a better understanding of sustainable careers. We hope this study spurs interest in these issues.

## Appendix A

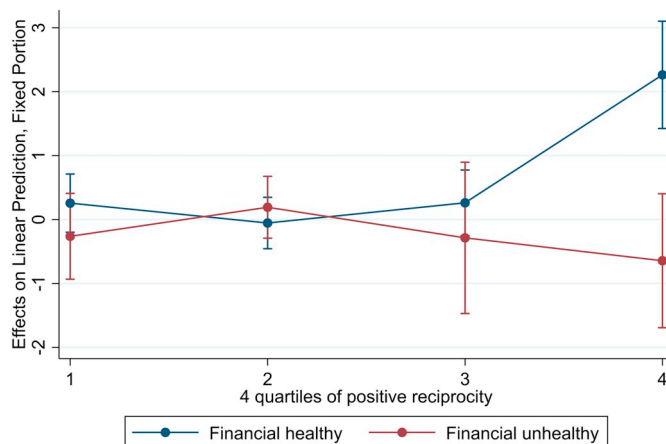
Table A1  
Multilevel expected retirement age, training opportunities, and reciprocity.

Dependent variable: Expected retirement age	Unstandardized multilevel probit coefficients (B) without interaction terms in the equation		Unstandardized probit coefficients (B) with interaction terms in the equation	
<b>Training</b>				
Training opportunities	0.085**	(0.043)	0.018	(0.060)
Training participation	0.056	(0.075)	0.048	(0.075)
Positive reciprocity Q1			-0.064	(0.092)
Positive reciprocity Q3			-0.101	(0.116)
Positive reciprocity Q4			-0.117	(0.117)
Training opportunities * Positive reciprocity Q1			0.007	(0.089)
Training opportunities * Positive reciprocity Q3			-0.001	(0.116)
Training opportunities * Positive reciprocity Q4			0.510***	(0.117)
<b>Employee characteristics</b>				
Age	-0.032***	(0.006)	-0.032***	(0.006)
Gender	0.088	(0.082)	0.092	(0.082)
Married	-0.335***	(0.097)	-0.355***	(0.097)
Wage (in log)	0.041	(0.162)	0.059	(0.163)
Low education level	0.013	(0.168)	0.031	(0.169)
High education level	0.086	(0.106)	0.070	(0.106)
<b>Other Employer characteristics</b>				
Sector: Government	0.079	(0.121)	0.072	(0.073)
Sector: Education	0.221	(0.132)	0.211	(0.121)
Var slope	0.00		0.00	
Var residual	4.723		4.608	
Log pseudolikelihood	-1907.636		-1896.874	
Observations	869		869	

Note. For educational level, intermediate vocational education serves as reference category; for sector, private sector serves as reference category. For positive reciprocity, quartile 2 (Q2) is the reference category (Q1 is the lowest quartile of reciprocity; Q4 is the highest quartile). Clustered standard errors in parentheses. Training opportunities and all other employer characteristics are measured in the employer survey. Training participation, positive reciprocity and the employee characteristics are measured in the employee survey.

\*\*\*  $p < 0.01$ .

\*\*  $p < 0.05$ .



**Fig. A1.** Marginal effects from multilevel model of training opportunities on expected retirement age, by level of positive reciprocity for workers in financially healthy and unhealthy firms (95% confidence intervals).

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