

*Alessandra Lazazzara, Kasia Karpinska and Kène Henkens*

## **What Factors Influence Training Opportunities for Older Workers?**

Three Factorial Surveys Exploring the Attitudes of HR Professionals

# What factors influence training opportunities for older workers? Three factorial surveys exploring the attitudes of HR professionals.

Alessandra Lazazzara<sup>a\*1</sup>, Kasia Karpinska<sup>b,c</sup> and Kène Henkens<sup>c,d</sup>

<sup>a</sup>*Department of Human Sciences, University of Milan-Bicocca, Milan, Italy;* <sup>b</sup>*Faculty of*

*Law, Economics and Governance, Utrecht University, Utrecht, The Netherlands;*

<sup>c</sup>*Netherlands Interdisciplinary Demographic Institute (NIDI), The Hague, The*

*Netherlands;* <sup>d</sup>*Faculty of Social and Behavioural Sciences, Tilburg University, Tilburg,*

*The Netherlands.*

The core research questions addressed in this paper are: What factors influence HR professionals in deciding whether to approve training proposals for older workers? What kind of training are they more likely to recommend for older employees and in which organizational contexts? We administered three factorial surveys to 66 HR professionals in Italy. Participants made specific training decisions based on profiles of hypothetical older workers. Multilevel analyses indicated that access to training decreases strongly with age, while highly-skilled older employees with low absenteeism rates are more likely to enjoy training opportunities. In addition, older workers displaying positive performance are more likely to receive training than older workers who perform poorly, suggesting that training late in working life may serve as a reward for good performance rather than as a means of enhancing productivity. The older the HR professional evaluating training proposals, the higher the probability that older workers will be recommended for training.

**Keywords:** training; older workers; HR professionals; factorial survey; multilevel models

---

\* Corresponding author. Email: [alessandra.lazazzara@unimib.it](mailto:alessandra.lazazzara@unimib.it)

## **Introduction**

Providing training to all employees is deemed to be a key solution for countries and companies facing an ageing workforce. Lifelong learning enhances the productivity of workers over their careers and helps to implement policies aimed at extending working lives (Armstrong-Stassen and Templer 2005; Warwick Report 2006).

Training and development are key human resource management practices, primarily targeted at enabling employees to acquire job-related knowledge, skills and behaviours that improve their ability to meet organizational goals. Supplying training to employees not only increases their productivity, motivation and job satisfaction, but also boosts self-confidence and self-perception, with corresponding decreases in anxiety and sense of inadequacy (Becker 1964; Maurer 2001).

Many companies have already launched training and development programmes specifically aimed at promoting and sustaining the extension of working lives, in line with planned increases in retirement age (Walker 1997; Eurolink Age 2000; ILO 2000; Warwick Report 2006; Taylor 2006). In this context, training is provided both to adapt workers' skills and to prepare them to change functions, within the same company – internal mobility – or outside of the company – external mobility (Warwick Report 2006). However, there is evidence that older workers are often excluded from lifelong learning and training programs (Armstrong-Stassen and Templer 2005; Taylor 2006; Warwick Report 2006; OECD 2006; Rymkevitch and Villosio 2007). The issue in this regard is that older workers are generally viewed as resistant to change, inflexible in attitude and given to past-oriented thinking; they are also expected to display cognitive and physical deficiencies in relation to job requirements, inferior performance and an excessive focus on retirement (Nelson 2002). These stereotypes, coupled with the general view that the time available to enjoy a return on investment in learning for older

workers is too short, lead to lower investment in training for these employees (Warwick Report 2006). A vicious circle is established whereby companies do not want to invest in training for older workers and at the same time older workers are discriminated against on the labour market because they are untrained.

Although it is well established in the literature that older workers are less likely to participate in training (Rosen and Jerdee 1976; Chiu, Chan, Snape and Redman 2001; Maurer 2001; Posthuma and Campion 2009), much is unclear about the factors underlying this phenomenon. Employers and HR professionals often cite lack of motivation to learn on the part of older workers as a reason for not investing in training for them; on account of this supposed deficiency, these workers risk being excluded *a priori* from all types of training. In this study, we focused on the evaluations of HR professionals with regard to the training of older workers. HR professionals play an important role due to their responsibility for managing people and their influence on training and development practices. We aimed to address the current lack of empirical data regarding the views of HR professionals and the key variables influencing their decisions to allow/deny access to training. The core research questions posed by this paper are: What factors influence HR professionals in deciding whether to approve training proposals for older workers? What kind of training are they more likely to recommend for older employees and in which organizational contexts? To explore these issues, our study used three factorial surveys – or vignette studies – administered to HR professionals. The factorial survey technique allows researchers to present hypothetical descriptions of situations or persons, while randomly manipulating selected key characteristics (Ganong and Coleman 2006). In our case, each respondent was asked to assess the desirability of providing three different types of training to older workers with different profiles in different organizational contexts. The first factorial survey was

about the provision of training activities to update job skills, the second concerned training to enhance internal mobility and the third regarded training to facilitate external mobility. In this way, it was possible to verify whether the perceived desirability of training for older workers varied as a function of the type of learning proposed.

The study focuses on the Italian context. The Italian population is currently ageing rapidly, but – partly on account of the high unemployment rate – the workforce participation rate of older workers is low compared to other European countries. With regard to the training participation rate, it is difficult to determine how Italy ranks in terms of investment in lifelong learning: different surveys have used different measures and adopted different conceptualizations of participation in learning, with some sources reporting that the training participation rate of older workers is relatively high and others claiming exactly the opposite (Warwick Report 2006). Moreover, a recent study based on the ASPA (Activating Senior Potential in Ageing Europe) project, reports that Italian employers consider the promotion of lifelong learning to be the most effective measure available for enhancing the productivity of older workers, yet do not apply this policy in their companies (Conen, Henkens and Schipper 2011).

### **Theoretical background: factors affecting access to training**

Several factors impact on the perceived desirability of training for older workers. In the first place, the characteristics of the older workers themselves influence the desirability of training. However, external factors such as the organizational context or the personal and professional characteristics of the person in charge of the training approval process can also be decisive.

In line with human capital theory which examines the determinants of investment in human capital and rates of return of education and training, older workers are commonly excluded from training for economic reasons (Becker 1964). A capital is an asset that generates income and benefits over the long-term period. Education and training are also valuable assets for companies and investing in them increases earnings, knowledge and skills. In this perspective, investments in training are chiefly justified by the expectation of future benefits and a rise in worker productivity over the period up to retirement, but also by increases in motivation and job satisfaction on the part of workers.

There can also be a psychological aspect underlying low investment in the training of older workers: the phenomenon known as “ageism” (Butler 1969). This is a set of discriminatory attitudes and behaviours based on age, and on attribution of a number of negative characteristics and stereotypes to older people. Low investment in training is particularly related to the stereotype that older workers are resistant to change, with lower learning abilities and development potential than their younger colleagues (Finkelstein, Burke and Raju 1995; Posthuma and Campion 2009). When supervisors adopt this stereotypical view of the learning attitudes of older workers, companies are less likely to invest in training or development opportunities for older employees. Consequently, older workers become less self-confident in their training abilities, their skills rapidly become outdated and their productivity is adversely affected (Maurer 2001; Van Vianen, Dalhoeven and De Pater 2011).

Becker (1964) distinguished between general and specific training. General training is not only useful within the firm providing it, but is potentially equally valuable to many other companies. On the contrary, specific training only enhances the productivity of trainees in the context of the company providing the learning. In this paper, we present

three factorial surveys regarding different kinds of training. The first survey concerns training aimed at updating job skills used in current daily work activities; the second survey regards training activities designed to promote career change within the same company; finally, the third survey concerns training activities targeted at enhancing workers' opportunities to find new positions in other organizations. In the following paragraphs, we outline how access to training on the part of older workers may be influenced by their own specific profiles, as well as by the characteristics of the HR professionals controlling access and by the organizational context.

### *Characteristics of older workers affecting their training opportunities*

The specific characteristics of older workers may have a substantial impact on the perceived desirability of providing training for them. In particular age, performance, job qualification and absenteeism rate can all affect the training recommendation. Age itself plays an important role in determining practices regarding older workers, but there is little agreement across studies with regard to the age at which workers are considered too old to be invested in and in general regarding the age boundaries for the older worker category. Age becomes an issue when employers believe the period over which future benefits from training will accrue to be too short, subscribing to the common view that productivity and return on training investments decline with age. Consequently, training for older workers is considered too expensive and the trade-off too small to justify making the investment. Thus employers tend not to invest in training and skill upgrading for workers nearing retirement age on account of the limited time period available to enjoy a return on their investment (Warwick Report 2006; OECD 2006; UN 2007; Rymkevitch and Villosio 2007). Negative perceptions of older workers

are not purely based on biological age, but also depend on cultural dimensions, organizational characteristics and other aspects such as the specific country or the role and the company in which the worker is employed (Lazazzara and Bombelli 2011). However, it is also true that companies begin to invest less – including in terms of training and development opportunities – when workers reach the age of 45 years, frequently viewed as the beginning of the final stage of the worker’s career (Schein 1978; Maurer 2001; Van Vianen, De Pater and Preenen 2009). Based on the latter assumption, we predicted that *the higher the age of older workers, the less HR professionals would be in favour of training them.*

The ageing of staff is often associated with a decline in the balance between labour costs and productivity, with the wages of older workers exceeding their productivity (Conen et al. 2011). Human capital theory suggests that investing in human capital by means of training improves work productivity over time and closes the gap between labour costs and the productivity of older workers. Therefore, the fact that older workers are routinely excluded from training leads us to ask whether older workers are potentially less productive because of an expected physical and mental decline or due to under investment in continuing training (Warwick Report 2006). The link between training and productivity is particularly strong, because normally if workers score poorly on the performance assessment scale, they are expected to participate in training programs to bring their productivity in line with expected levels. If the company does not react to a drop in productivity by investing in the worker, it becomes increasingly difficult to restore an acceptable level of performance. Lifelong learning is perceived as critical to increasing the productivity of older workers by developing new skills and perfecting old ones (Becker 1964; OECD 2006). Therefore we predicted that *HR*



*professionals would be more in favour of providing training for older employees with poor job performance in order to improve their productivity.*

Occupational status in terms of job qualifications is another factor impacting on workers' opportunities to take part in training programmes. In all European countries, low-skilled workers, and in particular older low-skilled workers, participate less in training (Paulli and Tagliabue 2002; Warwick Report 2006; Rymkevitch and Villosio 2007). This is due to the lesser benefits that employers expect from this investment and by low motivation on the part of low-skilled workers to participate in training courses (Fourage, Schils and de Grip 2010). Consequently, the likelihood of participation in training increases in line with the level of job qualifications. Therefore we predicted that *HR professionals would be more in favour of providing training for highly skilled older workers than for low-skilled older workers.*

Another frequently reported disincentive for training older workers is that returns on investments are additionally reduced by high absenteeism rates (Warwick Report 2006). Although a number of studies show that age is inversely related to frequency of absence, older workers are commonly perceived as costing more than younger workers due to a perceived higher rate of absenteeism and sick leave (Martocchio 1989; Gellatly 1995; Posthuma and Campion 2009). Therefore we predicted that *HR professionals would be more in favour of providing training for older workers with a lower absenteeism rate than for older workers with a higher absenteeism rate.*

### ***Characteristics of HR professionals affecting training opportunities for older workers***

The personal and organizational characteristics of HR staff deciding on training for older workers may also have an impact on the training opportunities offered. In general,

age and individual differences influence the choices people make (Bruine de Bruin, Parker and Fischhoff 2007) and this is also true for decisions regarding training for older workers. Hassell and Perrewe (1995) and Henkens (2005) found evidence of a positive correlation between age and positive beliefs about older workers. This may be explained by an “in-group” bias that leads individuals to positively evaluate members of their own group, overestimating within-group similarities and underestimating differences (Finkelstein et al. 1995; Van Dalen, Henkens and Schippers 2010). Therefore, we predicted that *older HR professionals would be more in favour of training for older workers.*

Other factors to be taken into account when analyzing training opportunities for older workers are the role within the organization of the decision makers and the characteristics of the organization itself. Numerous studies show that supervisors – that is, those who have the direct responsibility for managing people - are usually more negative towards older employees (Finkelstein et al. 95; Chiu et al. 2001). This has important implications for managerial decisions regarding older workers and is also confirmed by the fact that there are persistent negative biases in assessments of the performance of older workers when they are evaluated by supervisors (Rosen and Jerdee 1976; Waldman and Avolio 1986; Hassell and Perrewe 1995; Chiu et al. 2001).

Other important factors that can influence the attitudes of HR professionals with regard to training older workers are company sector and size. Sectors with higher levels of age discrimination and in which older workers are under-represented include the services industry and emerging sectors such as finance, insurance, retail, information technology/computing and high technology. Classical sectors such as manufacturing, production and traditional services are conversely more favourable towards older workers (Arrowsmith and McGoldrick 1996; Perry and Finkelstein 1999; Chiu et al.

2001; Posthuma and Campion 2009; Lazazzara and Bombelli 2011). Organization size is another significant factor in the choices made by companies in terms of HR practices in general, and with regard to training and development practices in particular (Garavan, Walton, Cross and Carbery 2008). The higher the number of employees, the more the organization is likely to implement formalized practices. For this reason, size may be considered a proxy measure for the degree of sophistication characterizing company management practices, with larger size increasing the likelihood that companies will adopt equal opportunities and diversity statements promoting, amongst other practices, the inclusion of older workers in training programs (Chiu et al. 2001).

Last but not least, a further important factor to be included in our analysis is the workforce supply available to companies. It has been demonstrated that in contexts of labour force shortages, employers and managers are more positive about retaining and recruiting older workers than in situations where downsizing is required (Conen et al. 2011; Karpinska, Henkens and Schippers 2011). We assumed that a tight labour market would make HR professionals more in favour of training for older workers, in recognition of the increasing importance of continuously updating skills and knowledge (Goldstein and Gilliam 1990; Offermann and Gowing 1990; Maurer 2001).

## **Method**

The study presented in this paper is based on three factorial surveys administered to HR professionals. A factorial survey (also known as a vignette study) consists of short descriptions of hypothetical situations or persons displaying a series of characteristics that are randomly manipulated by researchers (Ganong and Coleman 2006). The factorial survey approach is particularly useful for analyzing human actions and

judgments and in general is very suitable for investigating issues that are difficult to access by traditional methods (Rossi and Anderson 1982). Pioneered within the field of sociology, this technique has been applied across a range of disciplines and has previously been used to analyze ageing-related topics in organizational studies (Henkens, Van Solinge and Cozijnsen 2009; Wallander 2009; Karpinska et al. 2011).

In our study, participants were required to assess the desirability of three different types of training for described older workers in specific organizational contexts. Each participant received a unique set of vignettes randomly extracted from the vignette universe. Each vignette contained a description of a hypothetical older worker based on a limited number of individual-level characteristics. For each profile presented, the HR professionals were asked to make a specific training decision.

### ***Participants***

The three factorial surveys were administered during the annual conference of the Italian Association for Personnel Management (AIDP) which took place in May 2011 in Pescara (Italy). This conference brought together HR professionals holding managerial or consultancy positions at both public and private institutions, as well as scholars, researchers and academics. For our target sample, we chose to include only HR professionals because their attitudes influence real-life training and development practices and they can provide an overview of the HR policies currently implemented in organizations (Chiu et al. 2001).

In total we distributed 155 questionnaires containing the three factorial surveys to HR professionals and collected 69 completed questionnaires. Three of the returned questionnaires did not satisfy our criteria, therefore the final response rate was 43%

yielding a sample of 66 HR professionals. Each participant was sequentially presented with eight randomly extracted vignettes for each of the three studies, making a total of 24 vignettes per respondent. Of the 66 respondents, 41 were male and 25 were female. Participants' mean age was 42 years ( $SD=9.5$ ; minimum=26; maximum=63) and they had an average of 17 years' work experience ( $SD=9.6$ ; minimum=2, maximum=40). Fifty-eight percent of respondents had managerial responsibilities and most of them worked for large organizations (with over 250 employees) and in the services sector (62%). Over 80% of respondents held a university degree, mainly in the social and behavioural sciences (41%).

### ***Study design and variables***

The hypothetical situation presented in the three factorial surveys was that the company in which the HR professional currently worked was planning to provide some of its employees with the opportunity to attend training courses. The respondent had to indicate the extent to which he/she agreed that each of the described older workers should participate in training. In the first factorial survey, we investigated the factors influencing older workers' access to training courses targeted at updating job skills used in current daily work activities. The instructions were: *Below are a number of descriptions of older workers that currently work for your organization. It is possible to send each of these employees on a two-day external training course (at the cost of a month's salary, entirely paid for by your company) in order to update the job skills that they currently use in the course of their daily activities. Please indicate for each vignette: how desirable would it be, in your opinion, that each of the older workers described should have access to this training aimed at updating their job skills?*

In the second factorial survey, the hypothetical training activity was designed to enhance career development through internal mobility. The instructions were: *Below are descriptions of a number of older workers that currently work for your organization. It is possible to send each of these employees on a two-day external training course (at the cost of a month's salary, entirely paid for by your company) aimed at enhancing employability with a view to internal mobility. Please indicate for each vignette: how desirable would it be, in your opinion, that each of the older workers described should have access to this training aimed at enhancing their employability with a view to internal mobility?*

Finally, in the third survey the purpose of the hypothetical training activity was to enhance the workers' chances of finding a new position outside of the company. The instructions were: *Below are descriptions of a number of older workers that currently work for your organization. It is possible to send each of these employees on a two-day external training course (at the cost of a month's salary, entirely paid for by your company) in order to improve their chances of finding a new position with another organization. Please indicate for each vignette: how desirable would it be, in your opinion, that each of the older workers described should have access to this training aimed at improving their chances of finding a position outside of your company?*

The independent variables used in the vignettes were: age of older workers (five categories: 40, 45, 50, 55 and 60 years); work performance (three categories: poor, moderate and good); job qualifications (two categories: highly-skilled and low-skilled workers) and rate of absenteeism (two categories: low and high). We also controlled for contextual influences by introducing the variable "organisational context" (three categories: labour force shortage, no labour force shortage and need for downsizing).

For an overview see Table 1.

[Table 1 near here]

Given this set of variables with the associated categories, the total number of possible combinations for the vignettes was 180 ( $3 \times 5 \times 3 \times 2 \times 2$ ) for each survey. Each respondent received a sample of 8 vignettes for each survey, randomly selected from the vignette universe. For each vignette, they had to rate the desirability of training for the described older worker on an 11-point scale ranging from 1 (low desirability) to 11 (high desirability). Appendices 1, 2 and 3 present a sample vignette for each of the factorial surveys.

We also asked our respondents to answer some basic questions about their personal and professional characteristics. Given that these factors can influence the decision to recommend/exclude training for older workers, we added age of respondent as an independent variable, as well as the following control variables: gender (two categories: male and female); possession of a university degree (two categories: yes and no); type of university degree (four categories: social and behavioural sciences, law and political sciences, natural and applied sciences and literature and philosophy); role (three categories: top manager, middle manager and non-managerial); company size (three categories: small, medium and big) and sector (two categories: industry and services).

### ***Analysis***

A factorial survey yields a clustered-data structure; the unit of analysis is the vignette and each respondent rates multiple vignettes (Ganong and Coleman 2006). Given that the 66 participants rated 8 vignettes per survey, the total number of observations for each factorial survey was 528. Consequently, the data was designed to have a hierarchical structure at the respondent level (Wallander 2009). To avoid under-

estimation of the error terms, multilevel models were calculated using STATA. Due to the fact that observations between levels are independent, but observations within each level are dependent (given that they are assessed by the same respondent) it was necessary to take into account two sources of variance: between levels and within levels (Demidenko 2004). All the independent variables included in the analysis were dummies, or numerical. Even variables that originally contained more than two categories (e.g. kind of university degree, role, company size, organisational characteristics, age of older workers' and work performance) were converted into dummy variables with one category serving as a reference category for the purposes of analysis.

We estimated four models for each survey. The first model, the so called empty model, does not include explanatory variables and is used to break down the variance between the two levels of analysis: the respondent (HR professional) level (Level 2) and the vignette level (Level 1). In the second model we entered the characteristics of the respondents' in terms of personal, professional and organizational information. In the third model we introduced the organizational scenarios featuring in the vignettes and lastly, in the fourth model, we included all the remaining independent variables concerning the older workers as presented in the vignettes.

## **Results**

Table 2 presents the twelve models estimated in the study, four for each factorial survey.

[Table 2 near here]



### ***Results of Factorial Survey 1***

Models 1 to 4 in Table 2 illustrate the results for the first factorial survey on factors influencing HR professionals' propensity to train older workers when training is aimed at updating job skills. Model 1 presents the fixed and random effects of the intercept, indicating whether desirability-of-training ratings for older workers differ between HR professionals or not. Variance in the desirability-of-training score at the level of the HR professionals responding to the survey was 1.72, while the intra-class correlation, which provides an indication of the extent of between-subject variance (Demidenko 2004), showed the HR professional/respondent level to account for 22% of total variance. Finally, the intercept showed that, on a rating scale of 1 to 11, mean desirability of training targeted at updating older workers' skills was 5.9.

Model 2 in Table 2 shows the fixed effects of HR professionals' personal and organizational characteristics on the decision to train older workers. In line with our hypothesis, the age of the HR professional involved in the hypothetical decision process had a significant positive effect on the desirability-of-training score for older workers. We also controlled for the role of the HR professionals, finding that HR professionals holding lower managerial positions had a higher propensity to train older workers. Comparison of middle managers and non-managerial HR professionals with the reference category, top managers, confirmed that training for older workers was most likely to be recommended when the decision was taken by a non-managerial HR professional and, although to a lesser extent, still more likely to be recommended by a middle manager than by a top manager. With regard to organizational characteristics, we observed that HR professionals employed in medium (50-250 employees), and in particular in big companies (>250 employees), had a lower propensity to train older workers.

Model 3 in Table 2 adds the workforce supply scenario into the previous model. Compared to the reference category - an organization facing the need to downsize - HR professionals were found to be more inclined to train older workers in a company facing a labour force shortage.

Finally, Model 4 in Table 2 shows the full model. In line with our hypothesis, worker age had a very strong impact on the HR professionals' judgments regarding training. After workers turned 50 years old, and to even greater extent after they reached the age of 60, HR professionals were significantly less likely to recommend training to update their daily job skills. In contrast with our hypothesis however were the results regarding the relationship between desirability of training and performance. Contrary to our prediction, it was found that older workers displaying moderate and good work performance were more likely to be recommended for training than older workers with poor performance. However, our hypothesis about highly-skilled older workers and low absenteeism rates were confirmed, with HR professionals more likely to train highly-skilled older workers and those who were absent less frequently.

### ***Results of Factorial Survey 2***

Models 5 to 8 in Table 2 show the results for the second factorial survey on factors influencing HR professionals' propensity to train older workers when training is aimed at promoting internal mobility. The empty model (Model 5) showed variance of 2.50 at the respondent (HR professional) level, while the intra-class correlation showed respondents to account for 32% of total variance. Finally, the intercept showed that the mean desirability rating for training promoting the internal mobility of older workers was 5.6.

Model 6 shows the fixed effects of personal and organizational characteristics of HR professionals on the decision to train older workers. In line with our hypothesis, the age of the HR professionals involved in the hypothetical decision process once more had a significant positive effect on the perceived desirability of training for older workers. Therefore, the higher the age of the HR professionals involved in the decision to provide training, the more likely older workers were to receive training designed to facilitate internal mobility. Again, it was found that training for older workers was most likely to be recommended when the decision was taken by a non-managerial HR professional and, although to a lesser extent, still more likely to be recommended by a middle manager than by a top manager.

Model 7 shows that, as compared to the reference category (i.e., an organization facing the need to downsize), HR professionals that had to evaluate whether to hypothetically train older workers in companies facing no labour force shortage and, to a lesser extent, in a labour force shortage scenario, were more likely to provide training for older workers with a view to enhancing internal mobility.

In the final model of the second factorial survey (Model 8), after including the characteristics of older workers in the analyses, it emerged that – in line with our hypothesis - the impact of worker age on the decisions of HR professionals regarding training was once again very strong. HR professionals were significantly less likely to train older workers after they reached the age of 50, and even less so after they reached the age of 60. Older workers with moderate and good work performance were more likely to be recommended for training than older workers displaying poor performance, while HR professionals were more likely to train highly-skilled older workers and older workers with a low absenteeism rate.

### ***Results of Factorial Survey 3***

The third and final factorial survey (see Models 9 to 12 in Table 2), was about factors influencing HR professionals' propensity to train older workers when training is aimed at facilitating external mobility. In the empty model (Model 9) the variance at the respondent/HR professional level was 2.14, while the intra-class correlation showed respondents to account for 28% of total variance. The intercept showed that the mean score for desirability of training promoting external mobility in older workers was 6.2, the highest value for the three factorial surveys.

Model 10 in Table 2 shows the fixed effects of HR professionals' personal and organizational characteristics on the decision to train older workers to facilitate external mobility. As in the previous models and in line with our hypothesis, the age of the HR professionals had a significant positive effect on perceived desirability of training for older workers. Furthermore, it was found once again that HR staff with lower levels of managerial responsibility displayed a greater propensity to train older workers.

Model 11 shows that there were no significant differences as a function of contextual factors; HR professionals – whether facing downsizing, no labour force shortage or a labour force shortage – did not differ in their judgments regarding provision of this kind of training for older workers.

Finally, Model 12 in Table 2 confirms the impact of worker age on perceived desirability of training, but only after the age of 55. Contrary to the findings of Models 4 and 8, and to our predictions, work performance, job qualifications and absenteeism did not significantly affect HR professionals' recommendations with regard to training.

### **Discussion and Conclusion**

In this study, we set out to explore factors influencing HR professionals in assessing the training requirements of older workers. The key research questions addressed were: What factors influence HR professionals in deciding whether to approve training proposals for older workers? What kind of training are they more likely to recommend for older employees and in which organizational contexts? Three factorial surveys were conducted with HR professionals to assess perceived desirability of training older workers to update skills, promote internal mobility and facilitate external mobility, respectively. The study shows that overall perceived desirability of training for older workers is quite low, reaching its peak when training is aimed at facilitating external mobility. External mobility implies a change of employer, therefore such training programs are designed to better prepare workers facing redundancy to find new positions. Since senior workers are usually the first target for redundancy measures, our results suggest that HR professionals are more likely to train older workers with a view to expelling them from the company than with the aim of promoting their professional growth. However, a factor which may have influenced the HR professionals in our sample to prefer training for external mobility purposes is that although outplacement is not compulsory by law in Italy, it can be required under the National Collective Labour Agreement for some occupational categories or be part of agreements between companies and trade unions in situations involving restructuring or downsizing.

With regard to the factors determining the perceived desirability of training older workers, based on the literature we had hypothesized a number of relationships between the characteristics of older workers as presented in the vignettes and propensity to provide training for them. Our most surprising finding is that HR professionals do not consider training as a tool for improving performance or productivity for less productive workers, but as a means of retaining workers who already perform well. In addition, HR

professionals are more likely to train highly-skilled older workers and older workers with low absenteeism rates. The probability that an older worker will receive training is further increased if companies are facing a labour force shortage rather than the need to downsize. As confirmed by other studies, in a labour force shortage scenario companies tend to invest more in their older employees (Karpinska et al. 2011), and this is also true for training. Many studies consider 45 years to be the landmark age at which workers become too old and companies stop investing in them (Schein 1978; Maurer 2001; Van Vianen et al. 2009). In our study the age that marks the beginning of the decline in training investment is 50 years old, with a sharp drop after 60. This upward shift in the age limit is probably caused by the ongoing ageing process in the workforce that is leading to gradual modification of the work life cycle.

If we were to sketch the profile of an older worker who is likely to receive training, the preconditions are that they perform well in their job, are highly skilled, have a low absenteeism rate and are preferably under 50 years old. Furthermore, given that HR professionals are more in favour of training older workers if the company faces a labour force shortage, the forecast contraction of the labour market should lead to improved access to training for older workers in the near future.

As expected, the respondents' own age strongly influenced the dependent variables in all three surveys, thus confirming the in-group bias hypothesis. The influence of two other factors should also be underlined, namely the role within the company of the HR professionals and the size of the company employing them. In all three surveys, HR professionals with no managerial responsibilities rated the training proposals for older workers more positively. This finding is also borne out by reports in the literature that, due to an "out-group" bias, supervisors are usually more negative towards older workers (Finkelstein et al. 1995; Chiu et al. 2001). We expected large organizations to be more

likely to implement formalized practices and promoting older workers' participation in training programs. In the results, we do not find support for this and, in particular in the factorial survey 1, findings suggest that large organizations do not include older workers' training in their formalized practices. Furthermore, with respect to training, large organizations might be subject to what Jackson, Schuler and Rivero (1989) define "youth-centric" policies and practices.

A limitation of our study is that HR professionals reacted to the hypothetical situations in the surveys. Indeed the laboratory setting may have lead respondents to be more rational and less context-influenced than in real-life situations. It is true however that this technique, by depicting as detailed a scenario as possible, is more accurate than traditional surveys and allows us to draw reliable conclusions about HR professionals' attitudes towards training for older workers. Furthermore, it should be taken into account that the study was conducted in Italy, where lifelong learning is considered the most effective measure to enhance the productivity of older workers yet is not systematically implemented (Conen et al. 2011). It would be interesting to extend the research to other countries, particularly those with high rates of worker participation in ongoing training such as the Scandinavian countries (Sweden, Denmark and Finland) and the United Kingdom (Warwick Report 2006), to verify if similar patterns apply.

In conclusion, the picture that emerges from this study is that HR professionals are generally not very likely to train older workers, especially those most in need of training: workers that perform poorly and are frequently absent. Although lifelong learning and training are believed to enhance older workers' productivity and motivation, this study shows that HR professionals are not inclined to implement them in situations of declining productivity or high absenteeism. Our findings appear to suggest that they consider training more as a retention practice – a kind of reward for

those who already perform well and have a low absenteeism rate – than as a means of enhancing the productivity and ongoing employability of those very workers who may need additional training most.

## Notes

1. The present research has been conducted during a period as visiting scholar at the Netherlands Interdisciplinary Demographic Institute (NIDI). The author would like to thank the other authors, NIDI, AIDP, Raoul C.D. Nacamulli and Francesco Paoletti for the support and contribution.

## References

Armstrong-Stassen, M., and Templer, A. (2005), 'Adapting Training for Older Employees: the Canadian Response to an Aging Workforce', *The Journal of Management Development*, 24, 57-67.

Arrowsmith, J., and McGoldrick, A.E. (1996), 'HRM Service Practices: Flexibility, Quality and Employee Strategy', *International Journal of Service Industry Management*, 7, 46-62.

Backes-Gellner, U., and Tuor, S.N. (2010), 'Avoiding Labor Shortages by Employer Signaling: on the Importance of Good Work Climate and Labor Relations', *Industrial and Labor Relations Review*, 63, 271-286.

Becker, G. (1964), *Human Capital: A Theoretical and Empirical Analysis With Special Reference to Education*, New York: Columbia University Press.



- Börsch-Supan, A. (2002), 'Labor Market Effects of Population Aging', Mannheim Research Institute for the Economics of Aging (MEA), University of Mannheim.
- Bruine de Bruin, W., Parker, A., and Fischhoff, B. (2007), 'Individual Differences in Adult Decision-Making Competence (A-DMC)', *Journal of Personality and Social Psychology*, 92, 938-956.
- Butler, R.N. (1969), 'Age-ism: Another Form of Bigotry', *Gerontologist*, 9, 243-246.
- Chiu, W.C.K., Chan, A.W., Snape, E., and Redman, T. (2001), 'Age Stereotypes and Discriminatory Attitudes Towards Older Workers: An East-West Comparison', *Human Relations*, 54, 629-661.
- Conen, W., Henkens, K., and Shippers, J.J. (2011), 'Employers' Attitudes and Actions Towards the Extension of Working Lives in Europe', *Journal of Aging and Social Policy*, 23, 141-158.
- Conway, E. (2004), 'Relating Career Stage to Attitudes Towards HR Practices and Commitment: Evidence of Interaction Effects?', *European Journal of Work and Organizational Psychology*, 13, 417-446.
- Demidenko, E. (2004), *Mixed models. Theory and Applications*, New Jersey: John Wiley and Sons.
- Eurolink Age (2000), *Ageing in Employment: a Proposal for a European Code of Good Practice*, London.
- Finkelstein, L.M., Burke, M.J., and Raju, N.S. (1995), 'Age Discrimination in Simulated Employment Contexts: an Integrative Analysis', *Journal of Applied Psychology*, 80, 652-663.

Fouarge, D., Schils, T., and de Grip, A. (2010), 'Why do Low-educated Workers Invest Less in Further Training?', Research Memoranda 010, ROA, Research Centre for Education and the Labour Market, Maastricht.

Ganong, L. H., and Coleman, M. (2006), 'Multiple Segment Factorial Vignette Designs', *Journal of Marriage and the Family*, 60, 455–468.

Garavan, T. N., Walton, J., Cross, C., and Carbery, R. (2008), 'Mapping the Context and Practice of Training, Development and HRD in European Call Centres', *Journal of European Industrial Training*, 32, 612-728.

Gellatly, I.R. (1995), 'Individual and Group Determinants of Employee Absenteeism: Test of a Causal Model', *Journal of Organizational Behavior*, 16, 469-485.

Goldstein, I.L., and Gilliam, P. (1990), 'Training System Issues in the Year 2000', *American Psychologist*, 45, 134-143.

Hassell, B.L., and Perrewe, P.L. (1995), 'An Examination of Beliefs About Older Workers: Do Stereotypes Still Exist?', *Journal of Organizational Behavior*, 16, 457-468.

Henkens, K. (2005), 'Stereotyping Older Workers and Retirement: the Managers' Point of View', *Canadian Journal on Aging*, 24, 353-366.

Henkens, K., Van Solinge, H., and Cozijnsen, R. (2009), 'Let Go or Retain? A Comparative Study of the Attitudes of Business Students and Managers About the Retirement of Older Workers', *Journal of Applied Social Psychology*, 39, 1562-1588.

ILO (2000), *Ageing of the Labour Force in OECD Countries: Economic and Social Consequences*, Geneva, Switzerland: International Labour Organization.

- Jackson, S., Schuler, R., and Rivero, J. C. (1989), 'Organizational Characteristics as Predictors of Personnel Practices', *Personnel Psychology*, 42, 727-786.
- Karpinska, K., Henkens, K., and Schippers, J. (2011), 'The Recruitment of Early Retirees: a Vignette Study of the Factors that Affect Managers' Decision', *Ageing & Society*, 31, 570-589.
- Koc-Menard, S. (2009), 'Training Strategies for an Aging Workforce', *Industrial and Commercial Training*, 41, 334-338.
- Lazazzara, A., and Bombelli, M.C. (2011), 'HRM Practices for an Ageing Italian Workforce: the Role of Training', *Journal of European Industrial Training*, 35, 808-825.
- Martocchio, J.J. (1989), 'Age-related Differences in Employee Absenteeism: a Meta-analysis', *Psychology and Aging*, 4, 409-414.
- Maurer, T.J. (2001), 'Career-relevant Learning and Development, Worker Age, and Beliefs about Self-efficacy for Development', *Journal of Management*, 27, 123-140.
- McDonald, P., and Kippen, R. (2001), 'Labour Supply Prospects in 16 Developed Countries, 2000-2050', *Population and Development Review*, 27, 1-32.
- Nelson, T.D. (2002), *Ageism: Stereotyping and Prejudice Against Older Persons*, Cambridge, Mass: Mitt Press.
- OECD (2004), *Ageing and Employment Policies, Italy*, Paris: Organisation for Economic Co-operation and Development.
- OECD (2006), *Live Longer Work Longer*, Paris: Organisation for Economic Co-operation and Development.

Offermann, L.R., and Gowing, M.K. (1990), 'Organizations of the Future. Changes and Challenges', *American Psychologist*, 45, 95-108.

Paulli, A., and Tagliabue, M. (2002), 'Active Strategies for Older Workers in Italy', in *Active Strategies for Older Workers*, eds. Jespen et al., Brussels: European Trade Union Institute (ETUI).

Perry, E.L., and Finkelstein, L.M. (1999), 'Toward a Broader View of Age Discrimination in Employment-related Decision: a Joint Consideration of Organizational Factors and Cognitive Processes', *Human Resource Management Review*, 9, 21-49.

Posthuma, R.A., and Campion, M.A. (2009), 'Age Stereotypes in the Workplace: Common Stereotypes, Moderators and Future Research Directions', *Journal of Management*, 35, 158-188.

Rosen, B., and Jerdee, T.H. (1976), 'The Influence of Age Stereotypes on Managerial Decisions', *Journal of Applied Psychology*, 61, 428-432.

Rossi, P.H., and Anderson, A.B. (1982), 'Measuring Social Judgments. The Factorial Survey Approach: An Introduction', in *Measuring Social Judgments: The Factorial Survey Approach*, eds. Rossi P.H. and Nock S.L., Beverly Hills, California: Sage, pp. 15-67.

Rymkevitch, O., and Villosio, C. (2007), 'Age Discrimination in Italy', in *The Law on Age Discrimination in the EU*, ed. Sargeant M., The Netherland: Kluwer Law International, pp. 111-133.

Schein, E.H. (1978), *Career Dynamics: Matching Individual and Organizational Needs*, Massachusetts: Addison-Wesley Publishing Company.

- Taylor, P. (2006), *Employment Initiatives for an Ageing Workforce in the EU15*, Dublin: European Foundation for the Improvement of Living and Working Conditions.
- United Nations (2007), *Development in an Ageing world. World Economic and Social Survey 2007*, New York: United Nations, Department of Economic and Social Affairs.
- Van Dalen, H. P., Henkens, K., and Shippers, J. (2010), 'Productivity of Older Workers: Perceptions of Employers and Employees', *Population and Development Review*, 36, 309- 330.
- Van Vianen, A.E.M., De Pater, I.E., and Preenen, P.T.Y. (2009), 'Adaptable Careers: Deciding Less and Exploring More', *Career Development Quarterly*, 57, 298-310.
- Van Vianen, A.E.M., Dalhoeven, B.A.G.W., and De Pater, I.E. (2011), 'Aging and Training and Development Willingness: Employee and Supervisor Mindset', *Journal of Organizational Behavior*, 32, 226-247.
- Waldman, D.A., and Avolio, B.J. (1986), 'A Meta-analysis of Age Differences in Job Performance', *Journal of Applied Psychology*, 71, 33-38.
- Wallander, L. (2009), '25 Years of Factorial Surveys in Sociology: A Review', *Social Science Research*, 38, 505-520.
- Walker, A. (1997), 'Combating Age Barriers in Employment - European Research Report', Dublin, European Foundation for the Improvement of Working and Living Conditions.
- Warwick Report (2006), 'Ageing and Employment: Identification of Good Practices to Increase Job Opportunities and Maintain Older Workers in Employment', Study for the

European Commission by the Warwick Institute for Employment Research, University of Warwick, and Economix Research & Consulting, Munich.

**Appendix 1**

**Sample vignette from Factorial Survey 1**

<p>Below are a number of descriptions of older workers that currently work for your organization. It is possible to send each of these employees on a two-day external training course (at the cost of a month's salary, entirely paid for by your company) in order to update the job skills that they currently use in the course of their daily activities.</p> <p>Please indicate for each vignette: How desirable would it be, in your opinion, that each older worker described should have access to this training aimed at updating job skills?</p>										
<i>Vignette</i>										
<p>Organisational context: Labour force shortage                  Age: 55 years                  Work performance: Moderate                  Job qualification: Highly-skilled worker                  Absenteeism rate: High</p>										
<p>How desirable would it be, in your opinion, that the described older worker should have access to this training aimed at updating job skills?</p>										
1	2	3	4	5	6	7	8	9	10	11
<i>Low desirability</i>				<i>Neutral</i>			<i>High desirability</i>			

## Appendix 2

### Sample vignette from Factorial Survey 2

<p>Below are a number of descriptions of older workers that currently work for your organization. It is possible to send each of these employees on a two-day external training course (at the cost of a month's salary, entirely paid for by your company) aimed at enhancing employability with a view to internal mobility.</p> <p>Please indicate for each vignette: how desirable would it be, in your opinion, that each of the older workers described should have access to this training aimed at enhancing employability with a view to internal mobility?</p>										
<i>Vignette</i>										
Organisational context:		No labour force shortage								
Age:		60 years								
Work performance:		Poor								
Job qualification:		Highly-skilled worker								
Absenteeism rate:		Low								
How desirable would it be, in your opinion, that the described older worker should have access to this training aimed at enhancing employability with a view to internal mobility?										
1	2	3	4	5	6	7	8	9	10	11
<i>Low desirability</i>			<i>Neutral</i>					<i>High desirability</i>		

## Appendix 3

### Sample vignette from Factorial Survey 3

<p>Below are a number of descriptions of older workers that currently work for your organization. It is possible to send each of these employees on a two-day external training course (at the cost of a month's salary, entirely paid for by your company) to enhance their chances of finding a new position in another organization.</p> <p>Please indicate for each vignette: how desirable would it be in your opinion that each of the older workers described should have access to this training aimed at increasing their chances of finding a new position outside of the company?</p>										
<i>Vignette</i>										
Organisational context:		Need for downsizing								
Age:		45 years								
Work performance:		Moderate								
Job qualification:		Low-skilled worker								
Absenteeism rate:		High								
How desirable would it be, in your opinion, that the described older worker should have access to this training aimed at improving chances of finding a new position outside of the company?										
1	2	3	4	5	6	7	8	9	10	11
<i>Low desirability</i>			<i>Neutral</i>					<i>High desirability</i>		

Table 1. Description of vignette characteristics

<b>VARIABLE</b>		<b>CATEGORY</b>
<i>Organisational characteristics</i>		
Organisational context	0	Labour force shortage
	1	No labour force shortage
	2	Need for downsizing
<i>Employee characteristics</i>		
Age	0	40 years
	1	45 years
	2	50 years
	3	55 years
	4	60 years
Work performance	0	Poor
	1	Moderate
	2	Good
Job qualifications	0	Low-skilled worker
	1	Highly skilled worker
Absenteeism rate	0	High
	1	Low



Table 2. Results of the multilevel analysis of the training opportunities for older workers reported in the three factorial surveys.

Fixed effects	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
<b>Respondent characteristics</b>												
Female <sup>a</sup>	-0.70 (-1.86)	-0.67 (-1.83)	-0.63 (-1.80)			-0.34 (-0.76)	-0.34 (-0.77)	-0.36 (-0.86)		-0.04 (-0.09)	-0.08 (-0.18)	-0.09 (-0.2)
Age of respondent	0.05** (2.78)	0.05** (3.05)	0.05** (2.85)			0.07*** (3.30)	0.08*** (3.51)	0.06** (3.19)		0.05* (2.48)	0.05* (2.48)	0.06* (2.51)
Graduate <sup>b</sup>	0.86 (1.72)	1.01* (2.08)	0.92* (2.00)			0.80 (1.34)	0.86 (1.45)	0.55 (1.00)		0.42 (0.71)	0.39 (0.65)	0.54 (0.89)
Kind of degree (Ref category: Social and behavioural sciences)												
Law and political sciences	-0.22 (-0.53)	-0.39 (-0.95)	-0.35 (-0.92)			-0.21 (-0.43)	-0.15 (-0.31)	0.02 (0.04)		-0.51 (-1.04)	-0.52 (-1.05)	-0.56 (-1.1)
Natural and applied sciences	-0.18 (-0.35)	-0.34 (-0.67)	-0.10 (-0.21)			-0.69 (-1.09)	-0.59 (-0.95)	-0.39 (-0.69)		-0.68 (-1.10)	-0.69 (-1.12)	-0.69 (-1.1)
Literature and philosophy	1.32* (2.06)	1.39* (2.21)	1.43* (2.40)			0.90 (1.15)	0.90 (1.18)	0.95 (1.33)		0.38 (0.50)	0.41 (0.54)	0.53 (0.67)
Role (Ref category: Top manager)												
Middle manager	0.89* (2.04)	0.85* (2.00)	0.90* (2.21)			1.77*** (3.3)	1.73*** (3.3)	1.58** (3.3)		1.24* (2.38)	1.25* (2.40)	1.36* (2.54)
Non-managerial	2.06*** (4.47)	1.96*** (4.35)	1.86*** (4.35)			2.02*** (3.6)	2.01*** (3.65)	.92*** (3.75)		1.82*** (3.32)	1.82*** (3.32)	2.00*** (3.54)
Company size (Ref category: Small (<50))												
Medium (50-250)	-1.02* (-2.24)	-0.95* (-2.13)	-0.94* (-2.22)			0.13 (0.24)	0.024 (0.04)	-0.21 (-0.42)		-0.20 (-0.37)	-0.21 (-0.39)	-0.23 (-0.4)
Big (>250)	-1.67*** (-3.6)	-1.64*** (-3.61)	-1.61*** (-3.7)			-0.39 (-0.68)	-0.48 (-0.87)	-0.44 (-0.84)		-0.49 (-0.89)	-0.51 (-0.91)	-0.63 (-1.1)
Industry Sector <sup>c</sup>	0.78 (1.95)	0.81* (2.08)	0.52 (1.39)			-0.47 (-0.97)	-0.40 (-0.84)	-0.46 (-1.03)		-0.34 (-0.72)	-0.33 (-0.70)	-0.24 (-0.5)
<b>Vignette characteristics</b>												
Organisational context (Ref category: Need for downsizing)												
Labour force shortage		1.41*** (5.30)	1.35*** (5.65)				1.10*** (4.5)	1.08*** (5.05)			-0.39 (-1.46)	-0.33 (-1.34)
No labour force shortage		0.95*** (3.53)	1.02*** (4.23)				1.22*** (4.9)	0.97*** (4.48)			-0.20 (-0.77)	-0.15 (-0.61)
Age (Ref category: 40 years old)												
45 years old			-0.52 (-1.64)					0.01 (0.03)				-0.20 (-0.65)
50 years old			-0.87** (-2.88)					-0.58* (-2.1)				-0.50 (-1.58)
55 years old			-0.96** (-3.02)					-0.84** (-2.9)				-0.74* (-2.29)
60 years old			-2.27*** (-7.7)					-1.99*** (-7.23)				-2.09*** (-6.69)
Work performance (Ref category: Poor)												
Moderate			0.18 (0.72)					0.64** (3.03)				-0.29 (-1.18)
Good			0.70** (2.94)					1.32*** (5.97)				-0.25 (-1.02)
Highly-skilled worker <sup>d</sup>			0.53** (2.67)					0.72*** (4.06)				-0.24 (-1.21)
Absenteeism <sup>e</sup>			-1.30*** (-6.6)					-1.12*** (-6.42)				-0.17 (-0.84)
Constant	5.93*** (30.54)	2.86** (2.85)	1.84 (1.83)	3.27*** (3.30)	5.62*** (25.72)	1.05 (0.86)	0.11 (0.09)	1.26 (1.10)	6.20*** (29.94)	3.07* (2.58)	3.30** (2.7)	4.07** (3.2)
in parentheses: Z scores for coefficients; * p<0.05, ** p<0.01, *** <0.001; Ref. categories : <sup>a</sup> male; <sup>b</sup> not a graduate; <sup>c</sup> services; <sup>d</sup> low-skilled worker; <sup>e</sup> low.												

Table 2. (continued) Results of the multilevel analysis of the training opportunities for older workers reported in the three factorial surveys

<b>Random effects</b>	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>	<b>Model 5</b>	<b>Model 6</b>	<b>Model 7</b>	<b>Model 8</b>	<b>Model 9</b>	<b>Model 10</b>	<b>Model 11</b>	<b>Model 12</b>
Variance level 2	1.72 (0.44)	0.75(0.27)	0.72 (0.26)	0.71 (0.22)	2.50 (0.55)	1.57 (0.39)	1.53 (0.38)	1.38 (0.32)	2.14 (0.49)	1.45 (0.37)	1.45 (0.37)	1.64 (0.39)
Variance level 1	6.11 (0.40)	6.11 (0.40)	5.79 (0.38)	4.62 (0.30)	5.25 (0.35)	5.25 (0.35)	4.96 (0.33)	3.69 (0.24)	5.45 (0.36)	5.45 (0.36)	5.43 (0.36)	4.75 (0.31)
Model fit (df)	2532.3 (3)	2499.4 (14)	2471.3 (16)	2359.8 (24)	2477.4 (3)	2454.4 (14)	2425.8 (16)	2279.1 (24)	2487.4 (3)	2468.8 (14)	2466.7 (16)	2408.6 (24)
in parentheses: Standard error for variance components												