# Gender Differences in On-The-Job Training and the Role of Management Decisions<sup>\*</sup>

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#### Abstract

While men's and women's labor market outcomes have converged in recent decades, significant gaps remain. On-the-job training is key in this context as it is a crucial determinant for promotion and employment possibilities. Hence, having (or being denied) access to on-thejob training can be an important factor for career development, especially at early career stages. Investment into training can be adressed from the demand side (participation) and the supply side (offers). While previous research mainly focussed on training participation, we focus on the supply side and provide first causal evidence on gender differences in training offers. Using a novel vignette experiment embedded in a nationally representative survey of German firm managers, we randomize age, gender, and other characteristics of training candidates and programs to examine gender gaps in training provision and differences in managerial behavior. First, we show that, on average, female candidates are offered training slightly more often than male candidates. However, for young workers at the start of their careers, managers prefer young male candidates over young female candidates, and this effect is driven entirely by female managers. Moreover, we find that male managers strongly prefer male training candidates for fully employer-financed training. These effects vary with the share of women in the industry, the level of competitiveness of the firm, and the tenure of the managers. Overall, our results contribute to the explanation of gender differences in career progression and add insight to the influence of gender on managerial decision-making.

Keywords: Gender Differences, Management Decisions, Human Capital Investment, Training

**JEL codes:** J24, J16

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### 1 Introduction

Gender differences in labor market outcomes have converged in recent decades, yet research indicates that some persistent differences remain (Blau and Kahn, 2017), largely driven by differential constraints – particularly those related to parenthood (Kleven *et al.*, 2019; Olivetti *et al.*, 2025). Bertrand *et al.* (2010) attributes a large part of the divergence in men's and women's labor market trajectories following the arrival of children to career interruptions and reduced working hours associated with motherhood. These findings highlight the significance of ensuring gender equality in career opportunities during the early stages of workers' professional paths.

One dimension of this is the allocation of on-the-job training, which is important for employers as it strengthens the firm's competitive position by increasing productivity (Barrett and O'Connell, 2001; De Grip and Sauermann, 2012; Martins, 2021) and ensuring continuous employee development (e.g. Tannenbaum, 1997; Garavan, 2007). At the same time, on-the-job training is important for employees, because it allows to acquire and increase job-specific skills, enables workers to stay updated, enhances productivity (Bartel, 1995), and job security, and therefore also impacts career paths in terms of wages and promotions (Lynch, 1992; Pergamit and Veum, 1999; Parent, 1999; Frazis and Loewenstein, 2005; Melero, 2010; Haelermans and Borghans, 2012). Additionally, it reflects an employer's commitment to employee development and fosters a sense of achievement, which in turn enhances employee motivation (Georgellis and Lange, 2007; Jones *et al.*, 2009; Burgard and Görlitz, 2014).

The choice to invest in training can be viewed from two distinct perspectives: that of the employee (training participation) and that of the employer (training offer). Existing research primarily focuses on the determinants of training participation: Older and less educated workers are less likely to participate in training, higher ability, higher occupational status, more experience and permanent contracts are positively associated with work-related training (Lynch, 1992; Oosterbeek, 1996; Bassanini *et al.*, 2007; Maximiano, 2016). Training rates also differ by labor market sector (Oosterbeek, 1996) and are generally higher in larger firms (Lynch and Black, 1998; Maximiano, 2016). Additionally, personality characteristics and preferences play a role for training participation (Caliendo *et al.*, 2022). Previous studies also highlight gender disparities in training participation: Women tend to participate less in employer-financed training, but engage more in self-sponsored training (Barron *et al.*, 1993; Keaveny and Inderrieden, 1999; Daemmrich *et al.*, 2015), and train shorter on average (O'Halloran, 2008). Fitzenberger and Muchler (2015) provide evidence that women receive less company-provided formal training at early stages of their career, using data from a large company in Germany between 2004 and

2007 and Caliendo *et al.* (2022) find – based on the German Socioeconomic Panel (SOEP) – a broader gender gap in training participation in the early 2000s. However, all studies so far focus on training participation and it is unclear, whether the existing gender differences originate from the supply side (employer decisions) or the demand side (employee choices). Using employer data and a unique vignette experiment, we are the first to look at the supply side and investigate gender differences in training offers. Caliendo *et al.* (2024), drawing on the same dataset, found that training offers vary, depending on the risk preferences of the managers responsible for these decision.

Connecting to previous literature, we begin this paper by demonstrating that the general gender gap in training participation appears to have diminished in recent years. Nevertheless, we provide evidence that gender differences in training participation persist among young workers and concerning employer-financed and specific (non-transferable) training. It remains unclear whether these differences stem from the demand side – i.e., whether women request less (or more) training – or from the supply side of training investment, where women are provided with fewer (or more) training opportunities. Analyzing training participation alone leaves this crucial question unanswered. Hence, we proceed with our empirical analysis by leveraging employer data to investigate on-the-job training offers.

For the employer, training decisions are, similar to other investment choices, risky due to the possibility of workers leaving the firm before the training can justify its cost (turnover risk). This risk is higher for general (transferable) training than for specific (non-transferable) training (Becker, 1962; Caliendo *et al.*, 2022). Costly and long-duration training also carries greater financial and opportunity costs. Managers play a pivotal role in the context of evaluating these costs and benefits and utlimately deciding which employees receive the opportunity to train. A growing body of literature documents that in general managers heavily impact firms' performances (Bertrand and Schoar, 2003; Bloom and Van Reenen, 2010; Lazear *et al.*, 2015; Frederiksen *et al.*, 2019; Bandiera *et al.*, 2020; Fenizia, 2022) and the career progression and opportunities of their subordinates (Haegele, 2022).

Previous literature has also shows that managerial decisions may still be male biased when it comes to hiring decisions for high-skilled jobs (Petit, 2007), jobs that imply a promotion (Baert *et al.*, 2016, 2017) or in evaluations concerning the CV (Kuebler *et al.*, 2018). A common argument for converging gender gaps, is the higher share of women in management positions. The underlying assumption is that female managers will increase career opportunities for female workers. Nevertheless, research on that hypothesis is inconclusive. There are a few studies about the consequences of a growing share of women in positions of power such as on corporate boards or evaluation committees. Some find a positive effect of an increase in female decision makers on the level of support of women (Ehrenberg *et al.*, 2012; Kurtulus and Tomaskovic-Devey, 2012; De Paola and Scoppa, 2015; Kunze and Miller, 2017; Bossler *et al.*, 2020). Other studies find no effect or even that women are evaluated by fwomen more harshly (Bagues and Esteve-Volart, 2010; Bagues *et al.*, 2017; Bertrand *et al.*, 2019; Arceo-Gomez and Campos-Vazquez, 2022; Brown, 2022). Fitzenberger and Muehler (2015) find no difference between male and female decision makers regarding training decisions, based on data from a large company in Germany. While most of these studies focus on the share of women in decision-making positions, we contribute to this literature by directly comparing the choice behavior of female and male managers in the on-the-job training investment, utilizing a representative sample of all firms in Germany.

Specifally, our study address two main research questions: Firstly, we inquire whether a gender disparity exists in the supply of on-the-job training. Secondly, we examine how the decisions regarding training offers vary based on the gender of the manager.

Using employer data, we are able to provide causal evidence of the impact of the employees gender on managers' decision-making behavior, by using a novel vignette study in which targeted vignettes were incorporated into a nationally representative survey of German firms. These vignettes involve fictitious training scenarios that were presented to 1,161 survey respondents – primarily firm owners and human resource managers typically making such decisions on a daily basis – who were then asked which of two workers they would choose to train. Randomization of gender, age and other characteristics of the candidates (occupational expertise and previous job mobility) and the training itself (costs, duration, transferability) provides us with exogenous variation that we can use to identify causal gender differences.

We estimate a mixed logit model that allows for random preference variation across managers. We find that generally, female training candidates are chosen slightly more often for on-the-job training than male training candidates. However, our results show that for young workers, managers prefer to train men over women. In addition, we find that managers tend to prefer male candidates for fully employer-funded training, but the effect is not significant. On the other hand, women with higher professional competence are preferred over men with the same level of competence, and women are selected significantly more often for longer training courses.

Further, we show that training decisions vary depending on the manager's gender: Female managers are 9.8 percentage points less likely to select young female employees for training than young male employees, a pattern not observed among male managers. However, when training is fully employer-funded, male managers favor male employees by 9.7 percentage points, an effect not seen among female managers. These results remain robust in a weighted mixed logit model accounting for observable differences between male and female managers.

To explain these findings, we examine a number of potential mechanisms based on the literature. To this end, we compare the training decisions of male and female managers in maleand female-dominated industries and consider differential effects by firm competitiveness, labor market tightness, manager tenure, and the presence of collective bargaining and a works council. In summary, we find that the strong preference of female managers for young male candidates is particularly pronounced in male-dominated industries, when female managers have shorter tenure, and in firms without collective bargaining. Male managers' preference toward men in fully employer-funded training is strong in highly competitive environments and firms with works councils. The heterogeneity analysis also reveals other interesting patterns: younger male managers with shorter tenure favor female candidates, but this preference fades with experience. Furthermore, women seem more likely selected in less competitive environments and when the labor market is less tight, but this advantage disappears in more challenging conditions. Finally, to proxy for the firm's culture of gender equality, we link our vignette study to individual- and firm-level administrative information from the Integrated Employment Biographies (IEB) and construct variables for the share of women in the firm, the firm-specific gender wage gap, and wage growth by gender. The analysis shows that a smaller firm-level gender wage gap and higher wage growth for women are indeed indicative of favorable conditions for female applicants in terms of training provision.

This study makes a significant contribution to the existing literature about on-the-job training and the influence of gender on managerial decision-making behavior in several ways. Firstly, it documents a gender training gap in participation in on-the-job training for young workers and for employer-financed and non-transferable training. Secondly, whereas previous literature has concentrated on the demand side of training, our analysis leverages employer data and focuses on the supply side, specifically training offers. Thirdly, we present causal evidence from a vignette study to demonstrate the existence of a gender gap for young workers in training offers. Fourthly, we show that the training offer decisions depend on the gender of the manager. Fifthly, we provide evidence for several potential mechanisms in a heterogeneity analysis. The findings presented here are of significant importance to those engaged in policy-making, particularly in the context of ongoing discussions surrounding the implementation of gender quotas and similar legislative measures. Furthermore, the results provide valuable insights into the identification of key groups of both workers and managers who require targeted support and incentives in the context of on-the-job training.

The rest of the paper is organized as follows. Section 2 provides descriptive evidence about the employee side of on-the-job training investment. Section 3 describes data, study design and provides first descriptive evidence on training offers. Section 4 presents the estimation strategy and the results, before Section 7 concludes our study.

## 2 On-the-job training in Germany – the employee side

We use data from the German Socio-Economic Panel (SOEP) to examine the status quo of the demand side of training investment (training participation). The SOEP is an annual representative household panel survey, which collects household- and individual-level information on topics such as demographic events, education, labor market behavior, earnings and economic preferences. It contains over 30,000 individuals and 14,000 households per year.

The SOEP data are perfectly suited for this purpose, as the survey includes detailed questions on training activities. We restrict our sample to the working age population between 25 and 65 years between 2000 and 2019. As we are interested in work-related training and not in training during periods of unemployment, we restrict our analysis to individuals who were employed at the time of training. We also exclude individuals who were self-employed at the time of the interview.

**Training information and estimation samples** With regard to on-the-job training, we can rely on several measures in the data. First, the training participation variable is a dummy, which indicates whether the individual participated in training in the last calendar year. The corresponding survey question was included in the SOEP in 2000, 2004, 2008, and annually after 2014. Second, we consider the direct costs of training and create two dummy variables indicating whether the training course was fully financed by the employer or fully financed by the employee. Additionally, we consider information in the type of training. Following Caliendo *et al.* (2022), we distinguish between general (transferable) and specific (not transferable training). <sup>1</sup>

**Descriptive evidence** We begin by investigating the training participation rates of men and women. Figure 1a presents on-the-job training trends by gender from 2000 to 2019, revealing a trend change over time. Between 2000 and 2008, male workers had higher training participation rates than female workers. However, from 2016 to 2019, this trend reversed, with female workers participating in training at higher rates than their male counterparts.

 $<sup>^{1}</sup>$ The estimation sample consists of 56,170 individuals for training participation, 6,228 individuals for training financing (available for 2015, 2017, and 2018), and 17,545 observations for training type (available for 2000, 2004, and 2008).

Next, we analyze the relationship between gender and training participation while controlling for a broad set of factors, including socio-demographics, firm and occupation characteristics, labor market history, personality traits, as well as regional characteristics and year-fixed effects. Panel (A) in Table 1 presents the results. We first replicate Caliendo *et al.* (2022), who found a gender gap in training participation between 2000 and 2008 (column 1). However, this gap reverses in later years, as the average marginal effect is positive for 2014 to 2019, with women being 1.7 percentage points more likely to participate in training, and insignificant in the pooled specification (columns 2 and 3).

#### [Insert Table 1 and Figure 1 here]

Age heterogeneity To assess whether this result holds across different groups, we examine heterogeneity by age, direct training costs, and training type.<sup>2</sup> Figure 1b shows the distribution of on-the-job training participation by age and gender, as well as the breakdown of employer-financed training and training type by gender. As the graph illustrates, 27% of all men under 35 participated in training, compared to 24% of women in the same age group. In the older age categories, the training participation rates for men and women are nearly identical. This general trend is further confirmed by a regression analysis, where we again control for an extensive set of control variables. The results are presented in Panel (B) of Table 1. The coefficient for the interaction between the female dummy and the youngest age group dummy is negative and significant, both for the period 2000 and 2008 (column 1) and in the pooled specification (column 3).

**Training type heterogeneity** Considering the distribution of fully employer-financed training across gender, illustrated in Figure 1c, we find that 89% of the training courses of male participants were fully employer-financed, while only 84% of courses from female participants. Additionally, women tend to engage in general training more often than men, while men participate more often in specific training. We conduct a regression analysis, using these training types as outcomes, controlling for individual and firm-specific information. The results, presented in Panel (C) of Table 1, confirm that women are 3.7 percentage points less likely to participate in employer-financed training and 4.2 percentage points more likely to participate in self-financed training courses than men (columns 1 and 2). While no significant effect is found for general training, women are 1.1 percentage points less likely to participate in specific training compared to men (columns 3 and 4).

<sup>&</sup>lt;sup>2</sup>We categorize employees into age groups of <35 year, 35-44 years, 45-54 years and  $\geq 55$  years, as this distribution balances the number of observations in each group. These categories also align closely with those used in our vignette experiment.

In summary, the data suggest that the general gender gap in training participation has disappeared or reversed in recent years. However, differences persist for young workers, for fully employer-financed training and with respect to the type of training. It is still unclear whether these differences are driven by the demand side of training investment (participation) or the supply side (training provision). Since we cannot answer this question using individual employee data only, in a next step we turn to employer data to examine the employer perspective on training investment. In doing so, we aim to shed light on how managerial decisions influence the allocation of on-the-job training.

## 3 On-the-job training in Germany – the employer side

For our empirical analysis, we us the Cost-Benefit Survey 2018 of the Federal Institute for Vocational Education and Training (BIBB). The survey is repeated every five years and aims to elicit the costs and benefits of vocational training and recruitment within German firms (see Schönfeld *et al.*, 2020). Responding firms are randomly drawn from an administrative register, housed at the Federal Employment Agency (*Bundesagentur für Arbeit*), of all firms with at least one employee subject to mandatory social insurance contributions. Therefore, our sample is representative of the universe of all firms in Germany. In total, around 4,000 firms participated in the 2018 BIBB Cost-Benefit Survey.

Survey respondents are firm owners, human resource managers and decision makers who are regularly involved in actual training decisions.<sup>3</sup> The interviews take place in the firm using the computer-assisted personal interviewing (CAPI) method and last between 50 and 80 minutes. To reduce the risk of a social desirability bias in the face-to-face interviews, the interviewer hands over the laptop to the respondent when answering the vignette and when revealing personal information. The data was gathered by *infas (Institut für angewandte Sozialwissenschaft)* between June 2018 and July 2019.

The survey gathers a wide range of information from respondents, including their gender, tenure, and position within the firm. Additionally, firm-level data is collected, such as firm size, industry sector, occupation, and legal status. It also includes information on institutional factors, like the presence of a works council, collective bargaining agreements, and involvement in apprenticeships, which can provide insights into how these factors influence training decisions. Finally, we are able to focus our sample on managers with significant decision-making authority within the firm.

 $<sup>^{3}</sup>$ Regarding the selection of the interview partners, the interviewers first contact the firm (via postal letter) and ask for a contact person most knowledgeable regarding firms' decision making on training and recruitment. The interviewer then arranges a date for the personal interview with that contact person in the firm.

#### 3.1 Vignette experiment

We incorporate a vignette experiment into the 2018 wave of the Cost Benefit Survey. Of the 4,045 firms surveyed, about one-third (1,358) were randomly selected to participate in the vignette experiment.<sup>4</sup> After excluding non-participants and firms with multiple representatives in the survey, our final sample consists of 1,161 firm representatives (approximately 85%).

The average firm size is around 160 employees, though some large outliers have up to 29,000 employees. To account for the distinct management structures in very large firms, we exclude those above the 99th percentile in size, resulting in a final sample of 1,144 firm representatives with an average firm size of 88 employees (see Table 2). Approximately 77% of the firms selected for the vignette experiment offered training in 2018.

Respondents first answer a series of questions about the vocational training of their employees before being presented with the vignette experiment. The hypothetical scenarios in the vignette are closely aligned with the types of decisions they typically face.<sup>5</sup> Finally, in the last part of the survey the respondents provide detailed information about themselves, such as gender, personality traits, risk preferences, position in the firm and tenure.

#### 3.2 Vignette estimation sample

We restrict our sample to survey respondents who provide information about their gender and confirm their involvement in actual decision-making processes. This leaves us with an estimation of 1,144 managers, for whom we observe 6,747 training decisions involving 13,494 choice alternatives.<sup>6</sup>

#### [Insert Table 2 here]

The characteristics of the vignette participants in our sample are summarized in Table 2. A majority of 57 percent of the respondents are men. Most of them are highly educated, with 44 percent holding an academic degree, 35 percent an advanced vocational degree, 21 percent a vocational degree and only 1 percent with no vocational training. The range of firm positions of the responding managers include: firm owners (35 percent), CEOs (13 percent), department head (7 percent) and head of human resources (17 percent), commerce (8 percent), and training (7 percent). Together they exhibit an average firm tenure of 14.55 years and an average risk-affinity of 5.47 (with an underlying range between 1 to 10; 1 being completely risk-averse and

 $<sup>^{4}</sup>$ Caliendo *et al.* (2024) draw on the same experiment and show that the randomization was successful.

 $<sup>{}^{5}</sup>$ We align the sample and the target population by surveying and selecting those firm representatives that have decision-making power. This is an important step in ensuring the external validity of our discrete choice experiment (see Hainmueller *et al.*, 2015, for details).

 $<sup>^{6}</sup>$ For 96% of the sample, we observe six choices, while 4% have fewer. The results remain robust if we exclude those who did not make all of the training decisions presented to them.

10 being completely risk-seeking). Of all firms, 10 percent are assessed to be export oriented, while 67 percent are reported to be operating in highly competitive markets.

Since our data provides individual-specific information about each manager, we are able to investigate differences across gender (see columns (2)-(4) in Table 2 for the details). Male and female managers in our sample differ significantly in their firm positions: For example, 48 percent of all male managers and only 19 percent of all female managers are the owners of the firm. Another 16 percent of the men respondents report to be CEOs, while only 10 percent of the women do so. In contrast, 29 percent of all women, and only 9 percent of all men hold the head position in the human resources department. Additionally, the average firm tenure is significantly larger for male managers (15.92 years) than for female managers (12.71 years). It is interesting to note that the presence of female managers is significantly more prevalent in larger firms than in smaller ones. Furthermore, the average firm size is considerably larger (102.7) in female-led firms than in male-led ones (77.41).

#### 3.3 Vignette design

In the vignette experiment, respondents are presented with six fictitious choice scenarios involving employees requesting permission to participate in training. Making such decisions resembles an every-day task for the participanting managers.<sup>7</sup> Specifically, in each choice scenario, two hypothetical training candidates in different training scenarios are presented to the respondents.<sup>8</sup> Each of the two training candidates is characterized by four attributes: gender, age, professional competence and previous job mobility. Each training scenario is characterized by three attributes: transferability of the training, training duration and the cost sharing agreement between the employee and employer. An overview of all possible attributes and attribute levels can be found in Table A.1, while Figure 2 in the provides an example of a choice scenario as seen by the respondents during the experiment.

Each respondent is presented with six choice sets, each containing two alternatives. Each alternative represents a hypothetical training candidate and scenario, defined by seven attributes with values randomly selected from a predefined set. As a result, the total number of possible vignettes is 1,944 (2 x 4 x 3 x 3 x 3 x 3 x 3).

#### [Insert Figure 2 here]

<sup>&</sup>lt;sup>7</sup>To minimize the risk of social desirability bias during the face-to-face interviews, the interviewer hands the laptop to the respondent when answering the vignette and disclosing personal information.

<sup>&</sup>lt;sup>8</sup>Hainmueller *et al.* (2015) conducted an external validity test for vignette experiments and found that this study design– presenting two alternatives in each choice situation and forcing the respondents to choose one or the other – comes closest to the behavioral benchmark and maximizes external validity.

After having the attributes and attribute values for our vignette study defined, we move on to the actual implementation of the vignette experiment in the survey. We employ a fractional factorial design that meets the requirements for an efficient choice design proposed by Huber and Zwerina (1996), since the total number of possible choice sets in a full factorial design is by far too large to be included in the experiment.<sup>9</sup>

Our goal is to reduce the number of choice sets to a feasible set for respondents while estimating the respondents' preferences  $\beta$  as accurately as possible. The precision of the estimates is determined by the variance-covariance matrix of the estimated coefficients. An efficient vignette design minimizes this matrix size, thus reducing the D-error. Since the inverse of the D-error represents D-efficiency, we use the Stata command *dcreate* (Hole, 2007) to maximize the Defficiency of our design by optimizing the attributes and attribute values. This process occurs in two steps. First, *dcreate* reduces the number of alternatives, resulting in 216 alternatives (i.e., 108 choice sets). Second, it groups these 108 choice sets into 18 blocks, with six choice sets per block. Each respondent is assigned one block of six choice sets, and the distribution of the 18 blocks, as well as the order of choice sets within each block, is fully randomized.

Table 3 presents descriptive evidence that our vignette experiment meets two key properties of an efficient choice design: level balance and minimal overlap (Huber and Zwerina, 1996). Regarding the former, column (1) shows that the frequency of attribute values is balanced across the two choices, which aligns with the level balance property. As for the minimal overlap property, our design ensures that attribute values differ between the two choices in each set, forcing respondents to choose between distinct attribute options.

Column (2) of Table 3 summarizes the actual choices made by the managers. The results indicate that women, younger candidates, and those with above-average professional competency are more frequently selected for training. In terms of training type, setups that are only usable within the firm and shorter training durations are preferred.

#### [Insert Table 3 here]

We compare the decisions in the vignette experiment to examine gender differences in managers' choice behavior (see columns (3)-(5) in Table 3). Our descriptive analysis reveals several significant gender differences. Female managers are more likely than male managers to select candidates from the oldest age group (55 years). While male managers tend to prefer candidates with above-average work experience, female managers show a slight preference for shorter

<sup>&</sup>lt;sup>9</sup>Huber and Zwerina (1996) propose four properties for efficient choice designs: (1) orthogonality, (2) level balance, (3) minimal overlap, and (4) utility balance. In our case, the total number of possible vignettes is  $2 \times 4 \times 3 \times 3 \times 3 \times 3 \times 3 = 1,944$ , which can be combined into  $(1,944 \times 1,943)/2 = 1,888,596$  possible choice sets.

training courses. Additionally, male managers are more likely than female managers to choose training that is fully funded by the employer.

### 4 Empirical approach

We leverage the same vignette study as Caliendo *et al.* (2024) and build upon their empirical strategy. In the vignette study, managers decide which of two workers in a given choice set will receive training. A worker is offered training if the manager's (expected) utility is positive. The parameters influencing this (relative) utility can be estimated using either a sample where agents select one option from multiple alternatives – similar to our vignette study – or a framework where agents make a binary decision to either accept or reject a single option (Train, 2009).

We systematically vary the characteristics – and therefore the associated risks – of the training. First, we manipulate the duration of the training, representing the intensive margin of the investment. Second, we randomly adjust the proportion of direct training costs covered by the employer. Third, we vary the type of training, specifically the extent to which acquired skills are transferable to other firms. Additionally, we randomize key worker attributes (such as age, gender, qualifications, and prior job mobility) that may influence training decisions based on managers' preferences.

This design enables us to empirically examine whether managers are less likely to invest in training for female workers when the training: (i) is of longer duration, (ii) entails higher costs, or (iii) is more transferable to other firms. Furthermore, we assess whether male and female managers exhibit different decision-making patterns in this context.

#### 4.1 Estimation strategy

Each participant (i.e. manager) i in our vignette study makes repeated choices between two alternative candidates k and s. Each choice scenario consists of J = 2 alternatives. We assume the respondents to choose the utility maximizing alternative in each choice scenario. Therefore, given choice set t respondent i chooses alternative k if:

$$U_{ikt} > U_{ist}, \quad \forall s \neq k.$$

Each choice alternative j in choice set t can be completely characterized by the observed attribute characteristics  $x_{ijt}$  as described in the vignette. The manager's utility is specified as a linear function of the observed choice alternative characteristics  $x_{ijt}$ :

$$U_{ijt} = \beta'_{i} x_{ijt} + \epsilon_{ijt},$$

where  $\beta_i$  is an individual-specific coefficient vector capturing the preferences for various characteristics of the hypothetical training context and training candidate and  $\epsilon_{ijt}$  is an error term assumed to be independent and identically distributed. The coefficient vector can be decomposed to  $\beta_i = \bar{\beta} + \nu_i$ , where  $\bar{\beta}$  denotes the population mean and  $\nu_i$  the unobserved individual preference deviation from this average. The error term  $\epsilon_{ijt}$  can be interpreted as a mistake made by the respondents when computing and comparing the utilities of the different choice alternatives.

Our specification offers the advantage of allowing managers to have different (unobserved) preferences for the attributes of choice alternatives. We account for this heterogeneity through  $\nu_i$ , which we model as a random effect, assuming it is uncorrelated with the observed attributes of the choice alternatives,  $x_{ijt}$ . While this independence assumption is often quite strong in nonexperimental studies, our research design mitigates this concern by randomly assigning choice alternatives to managers' choice sets. As a result, there is no reason to expect a correlation between managers' unobserved preferences and the observed attributes of the choice alternatives.

We derive the choice probabilities for different training alternatives by assuming that the random terms  $\epsilon_{ijt}$  follow an extreme value distribution. This leads to a mixed logit model. The individual likelihood contribution  $L_i$ , conditional on unobserved heterogeneity  $\nu_i$ , is given by:

$$L_i | \nu_i = \prod_{t=1}^T \frac{\exp(\beta'_i x_{i1t})^{d_{i1t}} \exp(\beta'_i x_{i2t})^{1-d_{i1t}}}{\sum_{j=1}^2 \exp(\beta'_i x_{ijt})}.$$

Here,  $d_{i1t}$  is a dummy variable which is equal to one if individual *i* selects alternative j = 1 in choice set *t*. The coefficients  $\beta_i$  follow a distribution with density function  $f(\beta|\theta)$ , where  $\theta$  is a vector of parameters characterizing this distribution. The unconditional likelihood is obtained by intergrating over this distribution:

$$L_{i} = \int \prod_{t=1}^{T} \frac{\exp(\beta_{i}' x_{i1t})^{d_{i1t}} \exp(\beta_{i}' x_{i2t})^{1-d_{i1t}}}{\sum_{j=1}^{2} \exp(\beta_{i}' x_{ijt})} f(\beta) d\beta.$$

The log likelihood for a sample with n observations is given by:

$$\ln L = \sum_{i=1}^{n} \ln \left( \int \prod_{t=1}^{T} \frac{\exp(\beta'_{i} x_{i1t})^{d_{i1t}} \exp(\beta'_{i} x_{i2t})^{1-d_{i1t}}}{\sum_{j=1}^{2} \exp(\beta'_{i} x_{ijt})} f(\beta) d\beta \right).$$
(1)

Since the integral in equation (1) cannot be solved analytically, the model cannot be estimated using exact maximum likelihood. Instead, we employ maximum simulated likelihood (MSL) to estimate the parameters of the continuous mixing distribution, approximating the integrals through simulation (Revelt and Train, 1998; Train, 2009). The simulations rely on Rdraws from the distribution  $f(\beta)$ . The MSL estimator introduces bias due to the logarithmic transformation of probabilities. This bias decreases as the variance of the simulated probabilities declines, which occurs as the number of draws R increases (Bhat, 2001). Consequently, achieving a small bias typically requires a large number of draws, often leading to long computation times for MSL estimation.

Various methods exist to improve integral approximations by using systematic rather than purely random draws. In our study, we use Halton draws to reduce simulation variance, as they have been shown to perform well in mixed logit models (Train, 1999; Bhat, 2001; Haan and Uhlendorff, 2006). However, standard Halton sequences tend to exhibit high correlation in higher-dimensional integrals. Bhat (2003) finds that scrambled Halton sequences outperform standard ones in such cases. Kolenikov (2012) discusses several scrambling techniques, including the square-root scrambler, random multiplier scrambler, and Atanassov's modified Halton sequence. We apply the square-root scrambling method to refine the Halton sequence.<sup>10</sup>

To address our research questions, we proceed in three steps. First, we estimate a baseline model to examine how the probability of receiving a training offer varies with the vignette attributes. Second, we estimate a model in which we allow each of the vignette attributes to interact with the gender of the potential training candidate, in order to understand if and how gender influences managers' choices. In a third step, we split our sample by manager's gender and re-estimate the interacted model for each subsample, allowing us to explore differences in decision-making between male and female managers regarding female training candidates. We report the average marginal effects to investigate effect sizes and economic importance.

#### 4.2 Model selection

We approach model selection by estimating a series of models that incorporate different methods to account for unobserved preference heterogeneity. Results are presented in Table 4. We start by comparing standard (conditional) logit estimates that do not account for unobserved heterogeneity (column 1) with mixed logit estimates that do. Specifically, we estimate two variations of the mixed logit model. The first is a restricted specification with uncorrelated random coefficients (column 3), while the second allows for a fully flexible variance-covariance matrix for the random parameters (column 5). In both mixed logit models, we assume that unobserved heterogeneity follows a multivariate normal distribution. The estimated mean coefficients indicate the direction and significance of the effects. To evaluate their magnitude, we report the corresponding marginal effects for columns (1) and (3) in Table 5. The size of the mean coefficients varies across models, being larger in the mixed logit models than in the standard logit model (column 1). Moreover, they tend to increase when allowing for correlation in the random

 $<sup>^{10}</sup>$ We estimate the mixed logit models in Stata using the routines by Hole (2007).

effects (column 3) compared to the restricted mixed logit model (column 2).

This occurs because the mixed logit model decomposes the unobserved utility component into  $\nu'_{i}x_{ijt} + \epsilon_{ijt}$  with mean coefficients normalized based on the variance of  $\epsilon_{ijt}$ . In a standard logit model,  $\epsilon_{ijt}$  captures all parameter variance, but as the distribution of random effects becomes more flexible, less of this variance is absorbed by the error term. Consequently, correlated random effects explain a greater share of variance in choice patterns, increasing the mean coefficient magnitudes from column (1) to column (3) in Table 5 (see also Revelt and Train, 1998; Eriksson and Kristensen, 2014).

#### [Insert Tables 4 and 5 here]

Comparing the models, we observe a significant drop in log-likelihood when moving from the standard logit to the mixed logit model. In the mixed logit model, which accounts for random taste variation, half of the estimated standard deviations are significant, indicating substantial preference heterogeneity among managers. This supports the mixed logit model as the more appropriate choice for our analysis. Between the two mixed logit specifications, the sign and significance of the mean coefficients remain consistent (see also Caliendo *et al.*, 2024). Given this stability, we select the mixed logit model with uncorrelated random effects as our baseline for the remainder of the paper.

#### 5 Main results

#### 5.1 Training offers

Our baseline results reveal how managers' training offers differ with respect to the vignette attributes. The mixed logit results are presented in column (3) in Table 4, with the corresponding marginal effects shown in column (3) in Table 5. Overall, managers slightly prefer female training candidates over male candidates, with a 1.2 percentage point advantage for women. Thus, we do not observe a general gender gap that discriminates against women in training provision.<sup>11</sup> We also find that younger employees are more likely to be offered training. A 25 or 35 year-old employee is 13 to 14 percentage points more likely to receive training than a 55 year-old employee. Comparing a 55 year-old worker to a 45 year-old worker, the latter has a 10.7 percentage point higher chance of being selected for training. This is consistent with existing literature, which shows that older workers receive less training (Oosterbeek, 1996; Bassanini *et al.*, 2005). Training opportunities are more often allocated to skilled workers. Employees with

<sup>&</sup>lt;sup>11</sup>This is in line with a general trend of the on-the-job training allocation in recent years in Germany. Considering the Socioeconomic Panel (SOEP v36), we find that 54% out of all workers that participated in training in 2018 were women and only 46% men.

above-average job experience are significantly more likely to be selected for training, with an 8.6 percentage point increase for those with average experience and 13.9 percentage points for those with above-average experience.

Moreover, managers are cautious when considering characteristics directly related to the risk of recouping their training investment and the cost of training. For example, training candidates with a high level of mobility in their previous job history are significantly less likely to receive a training offer. Each additional job change in the last five years reduces the probability of receiving a training offer by 6.3 percentage points.

In addition, managers prefer training options that are company-specific and shorter in duration. A one-day increase in the duration of the training corresponds to a 2.8 percentage point decrease in the probability of receiving the training offer. These findings align with those of Poulissen *et al.* (2021), who found similar results regarding investment in training for temporary workers in Dutch firms.

Finally, fully employer-financed training is less likely to be chosen than training fully covered by the candidate. If the training is completely funded by the employer, the choice probability declines by 3.1 percentage points.

#### 5.2 Gender of the training candidate

We expand our analysis by investigating how the gender of the training candidate is connected to training offers. We do this by implementing a specification that allows the observed attributes of choice alternatives to be fully interacted with the gender of the training candidate. Results of the parameter estimates are shown in columns (2), (4) and (6) of Table 4.

Again, we compute marginal effects to interpret effect sizes. In order to directly compare training candidates by gender, we estimate the gender difference in marginal effects. We do this by taking the difference of marginal effects, between a female training candidate and a male training candidate of the respective vignette attribute. A value of zero indicates that managers are indifferent between males and females in regards to the corresponding attribute. A negative (positive) value implies that managers prefer male (female) candidates with respect to the corresponding attribute. The estimated effects are illustrated in Figure 3a and reported in column (1) of Table 6.<sup>12</sup>

#### [Insert Figure 3 and Table 6 here]

The results show no evidence that a candidate's gender influences managers' decisions regarding job mobility or cost coverage by the employer. However, gender does play a role for

 $<sup>^{12}</sup>$  Parmeter estimates are presented in Table A.6.

younger candidates: 25 year-old female employees are offered training less frequently compared to male candidates of the same age. Specifically, a 25 year-old woman has a 5.8 percentage points lower chance of receiving a training offer than a 25 year-old male employee. We observe no significant difference for older three age groups, suggesting a persistent gender gap in training opportunities at the early stages of women's careers. Several papers reach a similar conclusion: Fitzenberger and Muehler (2015) in the context of training participation; Gallen (2024) finds that young women (who look most like future mothers) are discriminated against in terms of uncompensated productivity in anticipation of potential motherhood. Blau and Lynch (2024) highlight that young women face significant career disadvantages due to societal and employer biases against (potential) mothers. A similar tendency emerges for fully employer-financed training, with female candidates being 4 percentage points less likely to receive an offer.<sup>13</sup> The effect is however not significant at conventional levels.

Additionally, we find that women with average or above-average professional competency are selected for training more frequently than their male counterparts. Specifically, female candidates with comparable competency levels are 6.3 to 7.5 percentage points more likely to receive a training offer than men.

Lastly, we observe that female training candidates are preferred for longer training. A oneday increase in training duration results in a 6.1 percentage point higher chance for female candiates. <sup>14</sup>

Taken together, our findings suggest that while gender does not systematically disadvantage women in training allocations, managers' decisions reflect nuanced preferences that vary across different attributes. On the one hand, young women face barriers to training access, likely due to implicit expectations regarding future career interruptions. On the other hand, once they demonstrate competency and perceived stability, they may be offered more extensive training opportunities than men. This reinforces the notion that women's career progression is often shaped by managers' expectations.

#### 5.3 Gender of the manager

The descriptive results, presented in Table 3, suggest that male and female managers make similar decisions in the vignette experiment for most characteristics. However, female managers choose training candidates of the oldest age group more often than male managers while male

<sup>&</sup>lt;sup>13</sup>This is in accordance with the finding by Daemmrich *et al.* (2015), who argue that females participate less often in employer-financed training.

<sup>&</sup>lt;sup>14</sup>The last two results are consistent with the findings of Benson *et al.* (2022) in the context of promotions. They show that women's potential is generally underestimated and that female workers are less likely to leave the firm. This may explain why riskier (fully transferable) and more expensive (longer) training is more often offered to female candidates.

managers have a higher preference for highly experienced workers and fully employer-financed training. To understand the connection between training offers, the gender of the manager and how it interacts with the gender of the training candidate, we expand our analysis as outlined below.

We divide our data into two subsamples – one consisting of female managers and the other of male managers and estimate mixed logit models for each, using specifications that allow again all observable attributes of the choice alternatives to fully interact with the training candidate's gender. The gender gaps in marginal effects for female and male managers are illustrated in Figure 3b. The corresponding estimated effects are reported in columns (3) and (5) of Table  $6.^{15}$ 

#### [Insert Table 6]

The results reveal distinct differences in how female and male managers evaluate training candidates, particularly when it comes to women. Notably, female managers exhibit a strong preference for younger male candidates over their female counterparts, while no such pattern is observed among male managers. Essentially, when assessing women for training, the selections made by female managers are influenced by the candidate's age, while the age of a female candidate does not significantly impact the decisions of male managers.

Considering the marginal effects for female managers (column 3), we find that the training offer probability for a 25 year-old male training candidate is 9.8 percentage points higher than for a 25 year-old female training candidate. This effect is significant on a 5% level. However, this preference shifts for older candidates: female managers are more inclined to offer training to women in later career stages. Specifically, a 45-year-old female candidate is 7.4 percentage points more likely to be selected for training than a male candidate of the same age, with the effect being significant at the 10% level. For male managers (column 5), however, the age of the training candidate is not associated with different gender preferences.

Furthermore, our findings indicate that the overall preference for highly qualified female candidates is entirely driven by female managers. Female managers exhibit a strong and significant preference for women with (above) average professional competency over equally qualified male candidates. While male managers also show a tendency to favor highly qualified women over highly qualified men, they exhibit a preference for male candidates at lower competency levels. However, these differences are not statistically significant for male managers. Female managers are also the primary drivers of the overall positive effect observed for female candidates in relation to training duration. They are also significantly more likely to offer partially

<sup>&</sup>lt;sup>15</sup>The parameter estimates are reported in Table A.6

employer-financed training to female candidates, with a 10.3 percentage point higher probability compared to male candidates.

Male managers are less likely to offer training to female candidates if the training is fully or partly financed by the firm. The likelihood to be selected for training is 9.7 percentage points higher for male candidates, if the training is fully financed by the employer, the effect is significant at the 1% level. We do not find this for female managers.

In summary, our findings reveal notable gender differences in managerial decision-making regarding training allocation. Female managers are significantly less likely to select young female workers for on-the-job training compared to young male workers, yet they are more likely to offer training to highly qualified female employees over equally qualified male employees. In contrast, we do not observe these patterns among male managers. Instead, male managers are less inclined to provide training to female candidates when the training is fully employer-funded – a pattern not found among female managers.

There is little literature explaining these differences in the decision-making of male and female managers. Maida and Weber (2020) show in the context of Norwegian gender quotas that while such quotas can increase the share of women in top positions, this effect does not necessarily trickle down to lower levels in the company. This could explain why female managers prefer older (and arguably more experienced) and highly qualified female workers over male workers with the same characteristics, but not younger women at the bottom of the career ladder. Bagues and Esteve-Volart (2010) demonstrate that majority female committees overestimate the quality of male candidates, which may be particularly relevant when judging younger candidates for whom managers cannot yet rely on previous experience or qualifications. Chakraborty and Serra (2023) find that women in leadership roles are more averse to receiving negative feedback, which may explain their reliance on supporting less risky (e.g. more experienced) candidates for training. Furthermore, Ronchi and Smith (2024) find that the salience of gender issues has a significant effect on male managers' decisions, with male managers hiring more women after the birth of their first daughter. One might expect the reverse to be true for female managers, who may be more aware of the difficulties young mothers face in combining work and family life.

#### 5.4 Robustness analysis

To check the robustness of our main results, we make use of our set of observable background information about the survey respondents and calculate the propensity score with respect to the gender of the managers. We then apply an inverse probability weighting approach in our mixed logit regressions, to equalize the distributions between male and female respondents in all observables. Although there may still be unobserved heterogeneity between these two groups, this allows us to rule out the possibility that our results are driven by differences in the observable characteristics.

We assess the robustness of our results and test for several potential weaknesses. One concern is, that the managers do not only vary in their gender, but also in several other observed and unobserved characteristics (see Table 2). Although we cannot account for unobserved heterogeneity, we are able to investigate how sensitive our results are to variation in the observed characteristics. Using our extensive background information about the managers, we are able to control for standard demographics, such as gender, education, and firm tenure, but also for non-cognitive skills and personality traits, such as the Big-5, risk affinity and locus of control and firm attributes including the size, the sector, and the coverage by collective agreements. We re-estimate our mixed logit models for the samples with only male and only female managers using propensity score weights to balance all observed characteristics between male and female managers. The propensity score estimation and matching quality is summarized in Table A.7. We find that the groups are fairly equal across all observables after matching. Results of the weighted mixed logit estimation are reported in Table A.8 in the Appendix, the corresponding marginal effects are displayed in Table A.9.

#### [Insert Tables A.9 and A.11 here]

Overall, our results do not change significantly.

Looking at the gender gap in the marginal effects in table A.9, the gender gap in the provision of training by female managers for young workers has actually increased compared to the previous specification. Young women are 13.4 percentage points less likely to receive training than their male counterparts if their manager is female. This effect is not visible for male managers. Also, the fact that female managers prefer average-experienced women to average-experienced men is still significant. As the standard deviations have increased compared to our main specification, some gender differences in the marginal effects are no longer significant (e.g. that male managers prefer males for fully employer-funded training). However, the size of the effects remains the same.

In addition, we replicate our main analysis and our analysis with divided samples MC, leaving out the owners of firms in the pool of managers. Since the owners have potentially different incentives to maximize returns and profits compared to other employees, such as the head of HR or the head of training, we rule out that our main results are driven by this particular group in the sample. The results are overall in correspondence with our original findings (see Table A.10 for the parameter estimates and Table A.11 for the gender gap in marginal effects). Despite the shrinking sample size, we still find a very similar pattern: Female managers prefer young male candidates to young female candidates. However, they are more likely to offer training to women if they have at least average experience, if the training is longer and if the training is partly financed by the employee and partly by the company. Male managers do not discriminate against women in terms of age, if at all, only when it comes to training that is fully funded by the employer (although this is not significant).

## 6 What are potential mechanisms of the gendered decisionmaking?

Understanding the potential mechanisms driving the differences in decision-making between female and male managers is crucial for identifying ways to promote gender equality in training opportunities. While our findings highlight clear differences in how male and female managers select training candidates, we cannot provide a definitive explanation for these patterns. Instead, we explore possible factors that might contribute to these differences, offering suggestive evidence rather than conclusive answers.

Our analysis reveals that while there is an overall preference for female candidates in training offers, gender disparities persist when considering other attributes in combination with gender. Specifically, women face disadvantages in training opportunities at younger ages and when the training is fully employer-funded, leaving them with fewer opportunities compared to men. However, for candidates with more professional experience, women – particularly those evaluated by female managers – are more likely to receive training offers. Similar patterns of age-dependent gender disparities have been documented in other contexts, including hiring decisions (Petit, 2007), participation in employer-financed training (Fitzenberger and Muehler, 2015), and the remuneration of productivity (Gallen, 2024).

Our paper extends existing research by showing that training offer decisions also depend on the gender of the manager. We observe that female managers prefer young male workers over young female workers for training, but the gender does not affect male managers' training offers for young employees. While we can not directly uncover specific mechanisms, other research has also found such counter-intuitive effects in similar context (Bertrand *et al.*, 2019; Bagues and Esteve-Volart, 2010). With this in mind, we will now discuss our results against existing theoretical and empirical evidence related to gender differences in management behavior and provide some additional evidence for potentially moderating factors.

#### 6.1 Sector and competition

Male versus female dominated industries One explanation, proposed by psychologists and economists, as to why female leaders might not enhance opportunities for female subordinates suggests that female managers could assimilate into male-dominated organizations by creating a distance from junior women in the firm, aiming to diminish the association between themselves and the (yet) less successful group of women (Ellemers et al., 2004; Derks et al., 2016; Faniko et al., 2016; Faniko, 2017). As a result, those women at the managerial level may offer fewer opportunities to junior women. Derks et al. (2016) argue that this is in fact not exclusive to women but rather represents a broader pattern of self-group distancing, which has been observed in other marginalized groups. In a similar argument, the divergence in choice behavior between female and male managers could be attributed to differences in leadership style. The normative masculine stereotype has been documented to prevail in the context of political leadership (Carozzi and Gago, 2023; Jones, 2017; Fridkin and Kenney, 2014) and related to the traditional stereotype of a "good manager" (Stoker et al., 2012; Powell et al., 2002). Gmür (2006) finds that female managers are expected to behave more closely to the masculine stereotypes than male managers. Both lines of reasoning would provide some explanation to the cross-gender pattern that we observe with regards to young training candidates. To determine whether these channels might be influencing our outcomes, we divide our sample into female and male dominated industries. The resulting marginal effects are presented in Panel (A) of Table 7.

#### [Insert Table 7 here]

Notably, in female-dominated sectors, female managers do not significantly prefer male candidates over female candidates on any of the relevant attributes. When looking at maledominated industries, our analysis confirms our earlier findings: female managers show a strong preference for training young men over young women, with a substantial gap of 18.9 percentage points. Female managers appear to adjust their behavior depending on the gender composition of their industry, while the impact of a training candidate's gender appears to have a greater impact on training opportunities is more pronounced in male-dominated fields, particularly for younger workers. Additionally, male managers consistently prefer male candidates for partly and fully employer-funded training in both male- and female-dominated sectors.

Labor market tightness and competition Furthermore, differences in labor market and firm-specific prerequisites help explain our findings. In the survey respondents were asked

whether they work at a highly competitive firm (High competition: "Are you exposed to high competitive pressure in your segment of the market" (yes or no)) and whether their firm faces labor market constraints (Tightness of Labour Market: "How would you consider the availability (quantity) and fit (quality) of workers on the labour market?" (1-5)). A high degree of competitiveness or a constrained labor market may compel managers to adjust their leadership strategy in response to external pressures. This adaptation might aim to reduce the risk of misplacing a training investment while, at the same time increaseing the need to invest in the skills of the employees. Caliendo et al. (2024) find heterogeneity in the correlation between managers' risk preferences and training investment, with respect to both labor market tightness and firm's competitive situation. In our context, we expect a manager in a competitive firm or a firm that faces tight labor market conditions to to offer training only to the most promising candidates and be less selective when it comes to the training option. With respect to our sample of managers, we do not observe a significant gender difference in the share of competitive employers, but female managers operate in tighter labor markets than male managers (see column 3 of Table 2). We explore, whether these factors moderate our results, by re-estimating our split-sample analysis. Resulting marginal effects are presented in Panels (B) and (C) of Table 7.

Considering the training offers of males and females in competitive and non-competitive firms, we find that there are several significant differences with regards to the gender of the training candidate. Looking at age, we see that female managers in highly competitive firms prefer young men over young women. We do not find this effect for female managers in noncompetitive firms or for male managers. Overall, female managers are much more responsive to competition than male managers. While we find no difference for male managers in firms with low or high competition, except for a strong preference for male candidates for fully employerfunded training when competition is high, female managers prefer female candidates for all attributes when the firm faces low competition. These effects disappear completely when a female manager's firm faces high competition, and the coefficient for 25-year-olds becomes significantly negative. This means that when competition is high, female managers are 13.8 times less likely to offer training to young women than to young men.

Training provision differs significantly between male and female managers in relation to labour market tightness. Female managers working in a firm with tight labour market conditions tend to prefer female trainees for all attributes except young age (see column (3) of Table ??). However, most of the effects are not significant. For male managers, it is striking that female candidates tend to be offered more training in almost all attributes when managers face a low labour market tightness (column 5). In this case, young female candidates at the age of 25 are significantly preferred over men by 20.7 percentage points. However, when the labour market is tight, most of the marginal effects change sign (although most of them are not significant), indicating that male managers tend to rely on male candidates when the labour market is tight. In the case of fully employer-financed training, male applicants are offered training 11.1 percentage points more often than female applicants.

Taken together, the additional evidence supports the idea that firms' competition status and labor market conditions influence managers training allocation. Higher pressure in form of labor market tightness or competition leaves female training candidates with less training opportunities, a pattern observed among both male and female managers.

#### 6.2 Manager

**Tenure of the manager** Manager tenure (as a proxy for age) may be an important factor in decision-making. Previous research suggests that managers adjust their managerial behavior in response to their own life experiences, such as the birth of a first daughter (Ronchi and Smith, 2024). There is also work highlighting that bad past experiences are punished (i.e. via firing decisions) differently for men and women, sometimes depending on the gender of the decision maker Sarsons (2017); Egan *et al.* (2022). When we split our sample by managers with tenure above and below the median, we find an interesting pattern. Results can be found in Panel (A) of Table 8. Female managers with less experience prefer young male candidates, offering training to them 12.7 percentage points more often than to young female candidates. Apart from that, tenure does not seem to matter too much for female managers. In contrast, if we look at male managers, we see that those with less than the median tenure prefer female candidates for training on many attributes, and many of the effects are significant. However, as tenure increases, the signs of all the marginal effects change to negative (though mostly insignificant), indicating that more experienced older male managers prefer male employees for training.

#### [Insert Table 8 here]

This finding is related to the finding of Bertrand and Schoar (2003), who show that older managers are in general more conservative.

**Statistical discrimination** Finally, gender differences in statistical discrimination may also help explain our results. Given that managers do not have full information about individual workers, they rely on part of their own perception of group differences in behavior when making decisions, such as offering training. If female and male managers have different information or perceptions about how likely young female workers will leave the job, e.g. due to motherhood, they may allocate fewer training option to them to avoid unprofitable training investments. A similar pattern has been found by Gallen (2024), who observes that women who look most like future mothers on the basis of their observable characteristics, experience the largest gaps between pay and productivity. This gap can be partially attributed to statistical discrimination by employers. Our findings suggests that female managers may expect young female workers to have higher risk of turn over than young male managers, while male managers seem less sensitive to the potential costs of parenthood of young employees.

In summary, our analysis suggests that one should not expect that an increase in the share of female managers generates only positive spillover effects on women's career opportunities, at least in a short to medium term. Rather, it is important to be sensitive to managers' motivations for offering training when designing policies aimed at increasing training opportunities for targeted groups.

#### 6.3 Firm culture

**Collective bargaining** Collective bargaining agreements (CBAs) often set standardized rules for human resource practices, including training programs. These standardized rules might reduce the discretion that managers have when making decisions regarding training offers, potentially leading to more uniform decisions across genders. CBAs also typically emphasize fairness and equity in the treatment of workers. Corradini et al. (2022) show that in Brazil, unions that focus on women's workplace needs lead to the focus of female-oriented amenities in collective agreements, which in turn foster the creation of jobs that are more attractive to women. Bruns (2019) shows that CBAs help narrow the gender wage gap in German firms. This focus on equity could influence female and male managers' decision-making differently. For instance, female managers might be more sensitive to the principles of equal opportunities under a CBA. Conversely, male managers may feel pressured to ensure that training offers align with the standards set by the CBA. In addition, such agreements often provide employees with job security, clear career paths, and defined benefits, which could lead to different considerations when managers decide on training. In firms with CBAs, managers might focus on the broader long-term development of employees rather than more immediate needs. This could change how both female and male managers approach the trade-offs between offering training to younger or more experienced workers, potentially affecting gender-based preferences in training allocation.

Our results, presented in Panel (B) of Table 8, show that the negative effect on training provision for young women relative to men is driven by female managers working in firms without collective bargaining. The gender training gap in these firms is 17.2 percentage points when the manager is female. In firms with collective bargaining, female managers tend to prefer female candidates in general, and this preference is significant for most attributes.

Wage gap & Wage growth Building on the literature showing that the firm environment is important for training outcomes, we supplement our analysis with an additional dataset containing administrative information on German firms and their employees, namely the Integrated Employment Biographies (IEB) of the Institute for Employment Research in Nuremberg. The IEB cover all individuals in Germany who are either in employment, subject to social security contributions or in marginal part-time employment, receive benefits according to SGB III or II, are officially registered as jobseekers with the Federal Employment Agency (Bundesagentur für Arbeit), or are (planned to be) participants in active labour market policy programmes. We merge the 2017 and 2018 waves of this dataset with a subset of the firms from our vignette study to construct additional variables that provide more detailed information on the firms and their employee composition. For these two waves, we have information on the full workerforce composition of each firm. However, not all of our vignette firms agreed to be linked to the administrative records or matching quality was insufficient. As a result, the sample size considerably reduced and we must investigate possible sample selection. In the following section, we provide more details on the matching procedure and the data before describing the additional variables and the results.

In total, around 2,400 firms from the 2018 Cost-Benefit Survey of the Federal Institute for Vocational Education and Training (BIBB) have consented to the linking of their social security data, 824 of which were part of our vignette experiment. For those firms that agreed, the merging procedure includes a quality check based on a comparison of firm size, which is available in both datasets. We lose about 100 firm observations due to missing information or insufficient match quality. Since the IEB data is stored in spell format, we chose the corresponding spell that overlaps with the CBS interview date for each remaining firm in the vignette sample. This ensures that we have a snapshot of the firm and the composition of the workforce at the time when the manager answers the vignette questions and decides on the provision of training. We then apply the same restrictions as for our main analysis, i.e. we drop firms where more than one person participated in the interview, firms with important missing information (gender or choice variable), very large firms and firms where managers indicate that they are not involved in the decision-making process. Tables A.18 and A.17 compare vignette firms that could be linked to the IEB data to those that could not. We observe some significant differences between linked and unlinked firms, particularly in terms of firm type, training probability and number of employees. The latter is by design, as larger firms are less likely to have sufficient matching

quality. In addition, the share of male managers is significantly higher in linked firms, as is the share of owners.

Although most of these differences are not large in magnitude, we have to interpret our subsequent results against the background that the linked firms may not be entirely comparable to the unlinked ones. Note, however, that this does not affect our randomisation induced by the vignette.

**Gender wage gap in the firm** Second, we construct a variable that proxies for gender equality in the firm in order to capture the general culture of the firm with respect to gender. To do this, we compute the relative gender pay gap of full-time employees in each firm, i.e. the difference between the mean wages of men and women relative to the mean wages of men. We then construct a dummy variable that equals one if the gender pay gap is above the median gender pay gap of all linked firms.<sup>16</sup>

The results are presented in Table 9 and show an interesting pattern: In companies with a high pay gap, female managers tend to prefer male candidates, while male managers tend to prefer female candidates. While the coefficient on the training gender gap for young employees is not significant in any of the specifications, it is still large and negative for female managers in both high and low wage gap firms, suggesting that the negative effect on young women is driven by female managers, irrespective of the overall gender pay equality in the firm. In firms with a low pay gap, female managers strongly prefer female candidates on most attributes (except young age), and male managers also tend to prefer women, suggesting that these firms are generally more open to supporting female workers.

#### [Insert Table 9 here]

Wage growth of females in firm Third, to capture female career opportunities at the firm level, which can also be seen as a proxy for firm culture, we look at the average wage growth of men and women employed full-time in the firm. This is calculated as the average annual wage growth over the observation period of the firm. Again, we construct a dummy variable equal to one if the wage growth for women is greater than for men within the same firm.<sup>17</sup>

The results are shown in Table 10. In companies with higher wage growth for women, female candidates are clearly preferred and these differences are significant for almost all attributes. This is driven by female managers, but also observable for male managers. In firms with higher

<sup>&</sup>lt;sup>16</sup>The median relative gender pay gap is 14.8%. Interestingly, there are also a significant number of firms where women earn more than men on average.

 $<sup>^{17}{\</sup>rm The}$  median wage growth is 5.4% for women and 6.1% for men. At the median, men have a higher wage growth than women.

wage growth for men, women seem to be selected less often for training, especially by female managers.<sup>18</sup>

#### [Insert Table 10 here]

## 7 Conclusion

On-the-job training is important for both firms and workers, as it increases productivity and ensures continuous skill development. We focus on the supply side of training by studying managers' training offers, using a novel vignette study embedded in a nationally representative survey. We document that gender plays an important role for the allocation of training in two different dimensions.

First, we analyze how training offers are influenced by the gender of the worker. While we find that women are overall slightly preferred for training, managers favor young male candidates over young female candidates for training. In addition, employer-financed training is allocated more often to men than to women, indicating that managers are more sensitive about getting their training investment back when training women.

Secondly, we document that training offer decisions differ between male and female managers. Against what one would intuitively expect, we find that female managers offer young women less often the opportunity for training than young men. We do not observe this tendency for male managers. When it comes to fully employer-financed training, our findings indicate that male managers prefer male training candidates over female training candidates.

While our vignette study offers valuable insights into the managers' decision-making behavior and the role of gender for the allocation of on-the-job training, we are not able to directly test for underlying mechanisms and rather provide suggestive evidence. For example, female managers in male-dominated industries and under competitive or tight labor market conditions tend to favor young male candidates over young female candidates, suggesting that industry context and external pressures shape their selectivity. In contrast, in female-dominated sectors or firms with less competitive pressure, female managers are more likely to support female candidates on most attributes, indicating that the broader organizational environment can mitigate or amplify gender biases.

Institutional factors also appear to play a moderating role. In firms lacking collective bargaining agreements, female managers show a pronounced bias against young female workers, whereas in firms with such agreements, they tend to favor female candidates. Manager tenure

<sup>&</sup>lt;sup>18</sup>Note that the specification for firms with higher wage growth for men and male managers did not converge due to too few observations.

further influences decision-making: less experienced female managers are significantly more likely to favor young male candidates, while male managers with shorter tenure initially prefer female candidates, a tendency that reverses as tenure increases. Additionally, our findings hint at statistical discrimination, where incomplete information about candidates may lead managers to rely on group stereotypes. Although these results are suggestive rather than conclusive, they underscore the complex interplay of individual, institutional, and contextual factors in shaping gender disparities in training opportunities.

Our results also provide some positive takeaways, as we show that the overall gender gap in training participation has diminished and even reversed in recent years and find no evidence for a general gender difference in training offers. There are two key insights for policies targeting employment-related training. First, the results we report in this paper suggest that existing gaps in training participation, are likely not only the result of some employees being reluctant to engage in training and rather also depend on managers' training offer decisions. Therefore, policy makers should not put too much faith in strategies that exclusively aim to increase the share females at the managerial level. Policies targeting increased training among underrepresented groups need to be sensitive to managers' motivations for offering training. Secondly, although the conceptual links between workers' job mobility and firms' training investments have long been understood, there has been little empirical evidence on how firms' training decisions play out at an operational level. Our research demonstrates that human resource managers and CEOs are indeed focused on the potential for worker turnover to undermine the training investments they make. Designing contracts that impose penalties for premature quitting and reduce the incentives for poaching by other firms may be effective strategies for increasing firms' training investments.

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## **Figures and Tables**



Figure 1: On-the-job training incidence by gender based on the SOEP



*Notes*: The figure shows the share of women (yellow) and the share of men (blue) that participated in any type of training by year.

*Notes*: The figure shows the share of female training participants (yellow) and the share of male training participants (blue) by age groups.



(c) Training incidence over financing and training type by gender

*Notes*: The figure shows the share of women (yellow) and the share of men (blue) that took part in (1) employer-financed training, (2) specific training, or (3) general training.

Source: Socio-Economic Panel (SOEP), version 36, years 2000-2019. Own calculations.

#### Figure 2: Example of the Discrete-Choice Experiment on Training Decisions

Irrespective of the actual situation in your company, please imagine the following scenario: Two of your skilled workers would like to continue their professional development. For operational reasons, however, only one of the two skilled workers can participate in further education. Which one would you choose? The two skilled worker differ according to gender, age, occupational experience and occupational mobility. The further training differs with regard to the applicability of acquired competences in your or other companies as well as the training's duration and costs. The skilled worker is released for the duration of the training. The daily rate for course fees and travel costs is €250. With regard to all features not listed, skilled workers and trainings are identical. All information about the two skilled workers and the trainings can be found below. Please indicate if you would like to train skilled worker 1 or 2. Profil Skilled worker 1 Profil Skilled worker 2 The skilled worker ... The skilled worker ... .. is female. ... is male. ... is 45 years old. ... is 55 years old. ... has average occupational experience. ... has above average occupational experience. ... 1 time changed employer within the last 5 years. ... never changed employer within the last 5 years The training ... The training ... ... is completely useable also in other firms. ... is partly useable also in other firms. ... takes 2 working days. ... takes 5 working days. ... is not covered by the employer. 100% of costs are taken over by the participant. ... is covered by 100% of the employer. The participant has no costs. Г

*Notes*: The figure displays an example of the choice set-up that is presented to each respondent, who has to decide between two different hypothetical training candidates in different training scenarios. Each of the two candidates is characterized by four attributes (gender, age, occupational expertise and previous job mobility). The training scenario is characterized by three attributes (transferability, duration and cost sharing agreement). Each respondent is confronted with six of such decisions between two alternative worker/training combinations, each characterized by seven attributes in total.

#### Figure 3: Gender gap in marginal effects



#### (a) Gender gap in marginal effects

(b) Gender gap in marginal effects for female and male managers



Source: Data source: BIBB-CBS 2017/18. Own calculations.

*Note*: The displayed values represent the differences in average marginal effects between male and female training candidates. A negative value indicates that male training candidates are preferred over female candidates regarding the corresponding vignette characteristic. The estimates are based on the mixed logit models, interacted with the gender of the training candidate (see column (4) in Table 4 for Figure (a), and Table A.6 for Figure (b)). The error bars around the marginal effects show the 95% (thin line) and 90% (thick line) confidence intervals.
	Logit -	Marginal Effects	3
	(1)	(2)	(3)
A. Training participation -	- conditional gen	der difference	
	2000-2008	2014-2019	2000-2019
Female	-0.014	0.017**	0.009
	(0.009)	(0.008)	(0.007)
Controls	yes	yes	
Number of Observations	$16{,}538$	36,131	$52,\!669$
B. Training participation -	age heterogenei	ty	
	2000-2008	2014-2019	2000-2019
Age			
<35 Years	$-0.327^{***}$	$-0.439^{***}$	-0.393***
	(0.057)	(0.052)	(0.039)
35-44 Years	-0.347***	-0.420***	-0.388***
	(0.059)	(0.053)	(0.040)
45-54 Years	-0.385***	$-0.422^{***}$	-0.403***
	(0.061)	(0.055)	(0.041)
$\geq 55$ Years Years	-0.432***	-0.455***	-0.438***
	(0.064)	(0.057)	(0.043)
Interaction with Female by: Age			
<35 Years	-0.036**	-0.006	-0.016
Coo roars	(0.015)	(0.016)	(0.011)
35-44 Years	-0.013	0.005	-0.001
00 11 10015	(0.013)	(0.013)	(0.010)
45-54 Years	0.008	0.022*	0.019**
10 01 10010	(0.014)	(0.012)	(0.010)
> 55 Years	-0.030	0.050***	0.035***
	(0.022)	(0.017)	(0.014)
Controls	yes	yes	yes
Number of Observations	16,538	36,131	$52,\!669$

Table 1: On-the-job training participation – conditional gender differences based on the SOEP

Number of Observations	10,558	50,151	52,003
C. Training participation	- financing heterog	geneity	
	Employer-financed	Self-financed	
Female	-0.037***	0.042***	
	(0.012)	(0.014)	
Controls	yes	yes	
Number of Observations	6,109	6,109	
D. Training participation	- training type het	erogeneity	
	General	Specific	
Female	-0.002	-0.011*	
	(0.008)	(0.006)	

 Number of Observations
 16,538
 16,538

 Source: Socio-Economic Panel (SOEP), version 36. Own calculations.

yes

Controls

Note: The table displays average marginal effects of logit estimations. The independent variables are training participation (yes/no) in Panels A and B, employer-financed and self-financed training participation (yes/no) in Panel C, and general and specific training participation (yes/no) in Panel D. Control variables include socio-demographics, labor market history, firm and occupation characteristics and personality traits, as well as regional characteristics and yearly dummy variables. See Table A.3 for the full list of controls. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level.

yes

		Manager		
	All	Female	Male	ttest
	(1)	(2)	(3)	(4)
Gender				
Male	0.57	0.00	1.00	
Female	0.43	1.00	0.00	
Firm Position				
Owner	0.35	0.19	0.48	0.00
CEO	0.13	0.10	0.16	0.00
Department Head	0.07	0.06	0.08	0.39
Head HR	0.17	0.29	0.09	0.00
Head Commerce	0.08	0.09	0.08	0.46
Head of Training	0.07	0.09	0.05	0.01
Other Position	0.11	0.18	0.07	0.00
Qualification				
No Vocational Training	0.01	0.00	0.01	0.31
Vocational Training	0.21	0.28	0.15	0.00
Advanced Voc Degree	0.35	0.28	0.40	0.00
Academic Degree	0.44	0.44	0.44	1.00
Firm Tenure in Years <sup>a</sup>	14.55	12.71	15.92	0.00
Risk-Affinity <sup>a</sup>	5.47	5.25	5.63	0.00
Number of Employees	88.25	102.70	77.41	0.07
Small Firm (1-49)	0.70	0.63	0.75	0.00
Large Firm $(50+)$	0.30	0.37	0.25	0.00
Export Oriented <sup>a</sup>	0.10	0.09	0.12	0.08
High Competition <sup>a</sup>	0.67	0.67	0.67	0.97
Labor Market Tightness <sup>a b</sup>	3.89	3.71	4.02	0.00
Number of Observations	1,144	490	654	1,144

Table 2: Selected summary statistics of the managers

Source: BIBB-CBS 2017/2018. Own calculations.

Note: This table shows descriptive statistics about the participants of the vignette experiment. Column (1) shows the number of observed characteristics. Column (2) reports the overall mean of each characteristic. Columns (3) and (4) provide the averages in all characteristics of all female and male respondents, respectively. In column (4) the *p*-values of the t-test on differences in means between female and male choices are reported. <sup>a</sup> For these variables the number of observations is slightly lower

due to item non-response.

due to item non-response. <sup>b</sup> Labor market tightness is measured on a 5-point scale: "How would you consider the availability (quantity) and fit (quality) of workers on the labour market?"

			Manager		
	Alternatives	All	Female	Male	ttest
	(1)	(2)	(3)	(4)	(5)
Gender					
Male	0.50	0.48	0.48	0.48	1.00
Female	0.50	0.52	0.52	0.52	1.00
Age					
25 Years Old	0.25	0.28	0.28	0.29	0.39
35 Years Old	0.25	0.28	0.28	0.28	0.46
45Years Old	0.25	0.25	0.25	0.25	0.83
55 Years Old	0.25	0.19	0.20	0.18	0.07
Professional Competency					
Below Average	0.33	0.26	0.26	0.26	0.70
Average Prof Competencies	0.33	0.34	0.35	0.33	0.08
Above Average	0.34	0.40	0.39	0.41	0.06
Job Mobility					
Never Changed Employer	0.33	0.41	0.41	0.41	1.00
1 Time Changed Employer	0.33	0.33	0.33	0.33	0.84
2 Times Changed Employer	0.34	0.26	0.26	0.26	0.84
Usability in other Firms					
Only Usable in Firm	0.32	0.37	0.37	0.37	0.65
Partly	0.34	0.32	0.32	0.32	0.66
Completely	0.34	0.31	0.31	0.31	0.97
Training Duration					
Takes 2 Working Days	0.34	0.37	0.38	0.36	0.04
Takes 5 Working Days	0.33	0.34	0.33	0.34	0.56
Takes 10 Working Days	0.33	0.29	0.28	0.30	0.14
Cost Coverage by the Employer					
0 Percent	0.34	0.35	0.36	0.34	0.12
50 Percent	0.33	0.34	0.34	0.33	0.35
100 Percent	0.33	0.32	0.30	0.33	0.01
Number of Observations	1,144	1,144	490	654	1,144

Table 3: Proportional frequencies and choices made

Source: BIBB-CBS 2017/2018. Own calculations.

*Note:* This table shows descriptive statistics about the vignette attributes and choices. The proportional frequencies of the vignette attributes in the vignette experiment in column (1) and the frequency each attribute was chosen by the participants in column (2). Columns (3) and (4) show how often each vignette attribute was chosen by female and male respondents, respectively. In column (4) the *p*-values of the t-test on differences in means between female and male choices are reported.

	L	ogit	Mixe	d Logit	Corr. Mi	ixed Logit
	Basic	Interacted	Basic	Interacted	Basic	Interacted
Mean	(1)	(2)	(3)	(4)	(5)	(6)
Female (ref. Male)	0.070**	0.189	0.078**	0.220	0.080	0.019
	(0.028)	(0.193)	(0.037)	(0.256)	(0.049)	(0.354)
Age (ref. 55 Years Old)						
25 Years Old	0.660***	0.769***	0.885***	$1.062^{***}$	1.349***	1.616***
35 Voors Old	(0.050) 0.612***	(0.091) 0.628***	(0.071) 0.842***	(0.132) 0.876***	(0.136) 1.258***	(0.207) 1.277***
55 Teals Old	(0.012)	(0.028)	(0.042)	(0.126)	(0.130)	(0.196)
45 Years Old	0.490***	0.406***	0.663***	0.615***	0.977***	0.997***
	(0.048)	(0.087)	(0.067)	(0.121)	(0.112)	(0.179)
Occupational Competency (ref. Below Average	e)					
Average	0 388***	0 325***	0 508***	0 419***	0 798***	0.701***
Average	(0.041)	(0.081)	(0.051)	(0.108)	(0.097)	(0.158)
Above Average	$0.640^{***}$	$0.540^{***}$	0.908***	$0.769^{***}$	$1.335^{***}$	$1.187^{***}$
T 1 37 1 110	(0.050)	(0.087)	(0.069)	(0.122)	(0.136)	(0.187)
Job Mobility	$-0.344^{***}$ (0.021)	-0.300	$-0.486^{+++}$	$-0.433^{+++}$ (0.057)	$-0.702^{****}$ (0.061)	$-0.676^{++++}$
	(0.021)	(0.010)	(0.000)	(0.001)	(0.001)	(0.000)
Usability in other Firms (ref. Only Usable in F	Firm)					
Partly	-0.327***	-0.303***	-0.470***	$-0.485^{***}$	-0.707***	-0.821***
Completely	(0.037)	(0.079)	(0.052)	(0.109)	(0.088)	(0.161)
Completely	-0.398	-0.449	-0.543	-0.635 (0.107)	-0.757	$-0.886^{+++}$
Training Duration	-0.038***	-0.044***	-0.054***	-0.066***	-0.071***	-0.092***
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	(0.005)	(0.011)	(0.007)	(0.014)	(0.011)	(0.021)
Cost Coverage by the Employer (ref. 0 Percent	;)					
50 Percent	0.006	0.062	0.024	0.091	-0.017	0.017
	(0.039)	(0.081)	(0.051)	(0.111)	(0.077)	(0.154)
100 Percent	-0.138***	-0.035	-0.200***	-0.043	-0.340***	-0.140
	(0.037)	(0.081)	(0.049)	(0.112)	(0.075)	(0.155)
Interaction with Female Candidate by:						
Age (ref. 55 Years Old)						
25 Years Old		$-0.301^{**}$		$-0.450^{**}$		$-0.648^{**}$
35 Years Old		(0.147)		(0.200)		(0.276)
		(0.142)		(0.195)		(0.268)
45 Years Old		0.081		-0.025		-0.211
		(0.153)		(0.199)		(0.278)
Occupational Competency (ref. Below Average	e)	0.100				0.001
Average		(0.122)		(0.202)		(0.281)
Above Average		(0.138) 0.189		(0.190) 0.294		(0.254) 0.343
110010 11101480		(0.147)		(0.206)		(0.276)
Job Mobility		-0.109		-0.149		-0.072
		(0.070)		(0.095)		(0.123)
Usability in other Firms (ref. Only Usable in F	Firm)	-0.045		0.003		0.201
1 at try		(0.134)		(0.184)		(0.245)
Completely		0.049		0.100		0.229
		(0.134)		(0.183)		(0.246)
Training Duration		(0.013)		(0.023)		(0.043)
Cost Coverage by the Employer (rof 0 Deveort	-)	(0.020)		(0.020)		(0.001)
50 Percent	·/	-0.110		-0.116		-0.054
		(0.134)		(0.190)		(0.254)
100 Percent		-0.219		-0.348*		-0.430
SD:		(0.146)		(0.198)		(0.264)
Female (ref. Male)			$0.429^{***}$	0.436***	0.021	0.082
			(0.086)	(0.087)	(0.097)	(0.129)
Age (ref. 55 Years Old)					1.000	
25 Years Old			$0.504^{***}$	$0.509^{***}$	$1.309^{***}$	$1.147^{***}$

Table 4: Parameter estimates for logit and mixed logit model

			(0.153)	(0.156)	(0.203)	(0.210)
35 Years Old			$-0.426^{**}$	$-0.441^{**}$	$1.141^{***}$	$1.317^{***}$
			(0.176)	(0.177)	(0.195)	(0.208)
45 Years Old			$0.344^{*}$	$0.372^{**}$	$1.115^{***}$	0.924***
			(0.186)	(0.182)	(0.198)	(0.207)
Occupational Competency (ref. Below Aver-	age)					
Average	0 /		-0.180	-0.195	$1.402^{***}$	$1.404^{***}$
			(0.165)	(0.167)	(0.162)	(0.162)
Above Average			1.191***	1.206***	2.476***	2.460***
8-			(0.088)	(0.090)	(0.209)	(0.207)
Job Mobility			0.412***	0.419***	0.632***	0.619***
000 11001110			(0.053)	(0.053)	(0.084)	(0.080)
			(0.000)	(01000)	(0.00-)	(0.000)
Usability in other Firms (ref. Only Usable i	n Firm)					
Partly			0.024	0.030	$0.961^{***}$	$0.929^{***}$
			(0.192)	(0.218)	(0.145)	(0.143)
Completely			0.230	0.238	$1.042^{***}$	$1.020^{***}$
			(0.197)	(0.196)	(0.162)	(0.157)
Training Duration			$0.104^{***}$	$0.107^{***}$	$0.148^{***}$	$0.147^{***}$
			(0.013)	(0.013)	(0.020)	(0.020)
Cost Coverage by the Employer (ref. 0 Perc	ent)					
50 Percent	,		-0.333**	-0.343**	$0.885^{***}$	$0.896^{***}$
			(0.157)	(0.155)	(0.158)	(0.155)
100 Percent			-0.069	-0.067	0.873***	0.942***
			(0.216)	(0.211)	(0.162)	(0.157)
Number of Observations	13,494	13,494	13,494	13,494	13,494	13494
Log Likelihood	-4,154	-4,144	-4,052	-4,040	-3,933	-3,923
-	-					

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows the parameter estimates of the basic conditional logit estimation (column 1), of the basic mixed logit estimation (column 3) and the basic correlated mixed logit estimation (column 5). Further, the table reports the parameter estimates of the conditional logit and (correlated) mixed logit estimations, interacted with the gender (female = 1) of the potential training candidate in columns (2), (4) and (6). \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

## Table 5: Marginal Effects - Mixed Logit

		Margina	l Effects	
	Condition	al Logit	Mixed	Logit
	ME	SE	ME	SE
	(1)	(2)	(3)	(4)
Female (ref. Male)	$0.0164^{**}$	(0.0066)	0.0121**	(0.0059)
Age (ref. 55 Years Old)				
25 Years Old	$0.1555^{***}$	(0.0115)	$0.1409^{***}$	(0.0105)
35 Years Old	$0.1442^{***}$	(0.0115)	$0.1350^{***}$	(0.0102)
45 Years Old	$0.1154^{***}$	(0.0112)	$0.1072^{***}$	(0.0102)
Occupational Competency (ref. Below Average)				
Average	$0.0914^{***}$	(0.0113)	$0.0856^{***}$	(0.0079)
Above Average	$0.1507^{***}$	(0.0095)	$0.1389^{***}$	(0.0096)
Job Mobility	$-0.0811^{***}$	(0.0047)	-0.0630***	(0.0039)
Usability in other Firms (ref. Only Usable in Firm)		. ,		. ,
Partly	$-0.0770^{***}$	(0.0091)	-0.0730***	(0.0081)
Completely	$-0.0937^{***}$	(0.0086)	$-0.0846^{***}$	(0.0078)
Training Duration	-0.0089	(0.0112)	$-0.0276^{***}$	(0.0037)
Cost Coverage by the Employer (ref. 0 Percent)				· /
50 Percent	0.0014	(0.0087)	0.0035	(0.0077)
100 Percent	$-0.0325^{***}$	(0.0092)	$-0.0314^{***}$	(0.0075)
Number of Observations		13,494		13,494

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows the marginal effects corresponding to Table 4 columns (1) and (3). \*\*\*/\*\*/\*indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

#### Table 6: Gender gap in marginal effects

	A	11	Only F	emale	Only 1	Male
	Mana	agers	Mana	igers	Mana	gers
	ME	SE	ME SE		ME	SE
	(1)	(2)	(3)	(4)	(5)	(6)
Age						
25 Years Old	$-0.0580^{*}$	(0.0341)	-0.0983**	(0.0493)	-0.0175	(0.0476)
35 Years Old	0.0085	(0.0307)	0.0056	(0.0527)	-0.0075	(0.0427)
45 Years Old	0.0312	(0.0308)	$0.0742^{*}$	(0.0464)	-0.0195	(0.0445)
55 Years Old	0.0357	(0.0392)	0.0696	(0.0459)	-0.0069	(0.0443)
Occupational Competency						
Below Average	0.0377	(0.0305)	0.0716	(0.0454)	-0.0065	(0.0462)
Average	$0.0631^{**}$	(0.0301)	$0.1373^{***}$	(0.0491)	-0.0028	(0.0429)
Above Average	$0.0753^{**}$	(0.0350)	$0.0853^{*}$	(0.0415)	0.0542	(0.0505)
Job Mobility	0.0016	(0.0382)	0.0085	(0.0493)	-0.0161	(0.0408)
Usability in other Firms						
Only Usable in Firm	0.0332	(0.0363)	0.0649	(0.0485)	-0.0057	(0.0397)
Partly	0.0354	(0.0383)	0.0055	(0.0501)	0.0470	(0.0432)
Completely	0.0507	(0.0340)	0.0443	(0.0430)	0.0430	(0.0474)
Training Duration	$0.0612^{**}$	(0.0251)	$0.0916^{**}$	(0.0440)	0.0333	(0.0365)
Cost Coverage by the Employer		. ,		. ,		
0 Percent	0.0340	(0.0274)	0.0662	(0.0492)	-0.0069	(0.0411)
50 Percent	0.0161	(0.0314)	$0.1031^{**}$	(0.0506)	$-0.0717^{*}$	(0.0408)
100 Percent	-0.0400	(0.0329)	0.0706	(0.0470)	-0.0970***	(0.0453)
Number of Observations	13,494		5,812		$7,\!682$	

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows the gender gap in marginal effects corresponding to Table 4, column (4) and Table A.6. A positive value corresponds to a preference of male over female training candidates in the corresponding attribute. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

		Only Femal	e Managers			Only Male	e Managers	
	ME	SE	ME	SE	ME	SE	ME	SE
	(1)	(2)	(5)	(6)	(3)	(4)	(7)	(8)
Panel A. Industry	Female-de	ominated	Male-do	minated	Female-d	lominated	Male-dor	ninated
Age								
25 Years Old	-0.0054	(0.1113)	-0.1887**	(0.0821)	-0.0031	(0.1045)	-0.0185	(0.0654)
35 Years Old	0.0771	(0.0983)	-0.0466	(0.0752)	0.1106	(0.0941)	-0.0208	(0.0596)
45 Years Old	0.1493	(0.0959)	0.0145	(0.0826)	0.0656	(0.0986)	-0.0397	(0.0595)
55 Years Old	$0.1628^{*}$	(0.0938)	0.0143	(0.0735)	0.0085	(0.1001)	-0.0356	(0.0627)
Occupational Competency						. ,		. ,
Below Average	$0.1586^{*}$	(0.0889)	0.0151	(0.0759)	0.0087	(0.1007)	-0.0372	(0.0655)
Average	$0.3081^{***}$	(0.0774)	$0.1756^{**}$	(0.0682)	-0.0140	(0.0973)	-0.0781	(0.0590)
Above Average	$0.1884^{*}$	(0.1039)	0.0770	(0.0842)	0.1430	(0.1157)	0.0281	(0.0695)
Job Mobility	0.0907	(0.0894)	-0.0648	(0.0719)	0.0073	(0.0938)	-0.0320	(0.0563)
Usability in other Firms	0.1479*	(0,0000)	0.0125	(0,0000)	0.0079	(0,000,4)	0.0914	(0,05cg)
Only Usable in Firm	$0.1473^{\circ}$ 0.1459*	(0.0862)	0.0135	(0.0690)	0.0078	(0.0924)	-0.0314	(0.0503)
Completely	0.1452	(0.0808)	-0.0228	(0.0713)	0.1309	(0.0948) (0.0820)	0.0340	(0.0509)
Training Duration	0.0040	(0.0800)	0.0132	(0.0050)	0.0727	(0.0829) (0.0871)	0.0002	(0.0514)
Cost Coverage by the Empl	over	(0.0044)	0.0303	(0.0034)	0.0205	(0.0011)	0.0000	(0.0528)
0 Percent	0.1541*	(0.0886)	0.0139	(0.0706)	0.0072	(0.0944)	-0.0343	(0.0575)
50 Percent	0.1146	(0.1032)	0.0625	(0.0796)	$-0.1822^{*}$	(0.0942)	-0.1441**	(0.0602)
100 Percent	0.1497	(0.1000)	-0.0357	(0.0805)	-0.1673*	(0.0983)	-0.1845***	(0.0593)
Number of Observations	1,676	( /	2,816	( /	1,628	( )	4,402	( )
Panel B. Competition	No High	Comp	High (	Comp	No Hig	h Comp	High (	omp
i anei D. Competition	NO IIIgli	Comp.		Joinp.		li Comp.		omp.
Age	0.001.0		0.100000	(0.0=00)				(0, 0, -0, 1)
25 Years	0.0316	(0.1185)	-0.1383**	(0.0790)	0.0559	(0.10120)	-0.0305	(0.0704)
35 Years	0.1133	(0.1034)	-0.0379	(0.0750)	0.0239	(0.0902)	-0.01560	(0.0632)
45 Years 55 Vears	0.2180	(0.1010)	0.0088	(0.0751) (0.0712)	0.0319	(0.0957)	-0.0352	(0.0645)
Occupational Competency	0.2210	(0.0991)	0.0001	(0.0713)	-0.0013	(0.1010)	0.0079	(0.0034)
Below Average	$0.2184^{**}$	(0.0950)	0.0002	(0.0738)	-0.0031	(0.0997)	0.0096	(0.0663)
Average	$0.2868^{***}$	(0.0968)	0.0906	(0.0678)	-0.0988	(0.0989)	0.0561	(0.0634)
Above Average	0.1817	(0.1162)	0.0570	(0.0774)	-0.0308	(0.1055)	0.0001 0.1165	(0.0715)
Job Mobility	0.1468	(0.0916)	-0.0652	(0.0698)	-0.0661	(0.0923)	0.0185	(0.0607)
Usability in other Firms				· /		· · · ·		· · · ·
Only Usable in Firms	$0.2051^{**}$	(0.0941)	0.0001	(0.0666)	-0.0011	(0.09012)	0.0080	(0.0587)
Partly	0.0739	(0.0960)	-0.0476	(0.0694)	0.0456	(0.0934)	0.0646	(0.0639)
Completely	$0.1608^{*}$	(0.0826)	-0.0097	(0.0617)	0.0457	(0.0816)	0.0662	(0.0604)
Training Duration	$0.1574^{*}$	(0.0874)	0.0609	(0.0627)	0.0604	(0.0829)	0.0228	(0.0555)
Cost Coverage by the Empl	oyer	( ()		( )		( )		( )
0 Percent	0.2092**	(0.0924)	0.0002	(0.0682)	-0.0017	(0.0946)	0.0072	(0.0597)
50 Percent	0.2360**	(0.1023)	0.0480	(0.0726)	-0.0237	(0.0992)	-0.0727	(0.0648)
100 Percent	0.2520**	(0.1039)	-0.0166	(0.0722)	-0.0001	(0.0926)	-0.1304***	(0.0646)
Number of Observations	1,908		3,892		2,522		5,160	
Panel C. LM Tightness	Below 1	median	Above a	median	Below	median	Above r	nedian
Age								
25 Years	-0.0937	(0.1053)	-0.0926	(0.0853)	$0.2071^{**}$	(0.1026)	-0.0976	(0.0682)
35 Years	-0.0986	(0.0920)	0.0624	(0.0758)	0.0712	(0.0916)	-0.0281	(0.0635)
45 Years	0.0217	(0.0951)	0.0834	(0.0771)	0.1134	(0.0932)	-0.0695	(0.0636)
55 Years	0.0128	(0.0923)	0.0914	(0.0734)	0.1067	(0.0947)	-0.0403	(0.0631)
Occupational Competency								
Below Average	0.0132	(0.0927)	0.0952	(0.0743)	0.1114	(0.0971)	-0.0408	(0.0646)
Average	0.1228	(0.0933)	$0.1354^{*}$	(0.0704)	$0.1962^{**}$	(0.0972)	-0.0650	(0.0571)
Above Average	0.0444	(0.1097)	0.0983	(0.0816)	0.1304	(0.1112)	0.0327	(0.0669)
Job Mobility	-0.0620	(0.0857)	0.0355	(0.0700)	0.1073	(0.0898)	-0.0534	(0.0595)
Usability in other Firms	0.0100	(0,0000)	0.0040		0.0000	(0.0010)	0.0959	(0,0571)
Unly Usable in Firms	0.0120	(0.0866)	0.0846	(0.0685)	0.0996	(0.0910)	-0.0353	(0.0571)
Partiy	$-0.1420^{*}$	(0.0860)	0.0853	(0.0699)	0.1377	(0.0915)	0.0206	(0.0588)
Training Duration	-0.0031 0.1449*	(0.0802)	0.0071	(0.0030) (0.0703)	0.1270	(0.0854) (0.0854)	0.01191	(0.0030) (0.0541)
Cost Coverage by the Empl	0.1442 over	(0.0002)	0.0000	(0.0703)	0.0404	(0.0634)	0.0000	(0.0341)
0 Percent	0.0124	(0.0891)	0.0865	(0.0696)	0.0981	(0.0927)	-0.0374	(0.0591)
50 Percent	0.0583	(0.0982)	$0.1326^{*}$	(0.0756)	-0.0122	(0.0985)	-0.0825	(0.0648)
100 Percent	0.0391	(0.0993)	0.0837	(0.0787)	-0.0687	(0.1014)	-0.1113*	(0.0634)
Number of Observations	2,146	. /	3,666	. /	2,030	. /	$5,\!652$	、 /

<b>m</b> 11	-	<b>A</b> 1	•	• 1	cr ,	C	1
Table	11.	(÷ender	oan in	marginal	effects -	firm	heterogeneity
Table	•••	Genuer	Sap m	marginar	CHICCUS	111 111	neucrogeneruy

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows the marginal effects corresponding to Table A.12 for Panel A, Table A.14 for Panel B and Table A.13 for Panel C. A positive value corresponds to a preference of men over women in the corresponding attribute. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

		Only Femal	e Managers			Only Male	e Managers	
	ME (1)	$\begin{array}{c} \mathrm{SE} \\ \mathrm{(2)} \end{array}$	ME (3)	SE (4)	ME (5)	SE (6)	ME (7)	SE (8)
Panel A. Tenure	Below 1 Ten	median ure	Above Ten	median ure	Below Ten	median ure	Above 1 Ten	median ure
Age	0.1000*	(0.0005)	0.0117	(0.0058)	0 11 40	(0, 0.057)	0 1100	(0, 0720)
25 Years	-0.1200	(0.0823)	-0.0117	(0.0958)	0.1140	(0.0657)	-0.1109	(0.0739)
35 Years	0.0319	(0.0851)	-0.0228	(0.0838)	0.0968	(0.0797)	-0.0727	(0.0689)
45 fears 55 Voorg	-0.0440	(0.0801)	0.1671	(0.0823)	0.1000	(0.0780)	-0.0964	(0.0090)
Occupational Competency	0.0654	(0.0621)	0.0551	(0.0842)	0.1555	(0.0783)	-0.1003	(0.0709)
Below Average	0.0874	(0.0821)	0.0568	(0.0858)	0 1417*	(0, 0787)	0 1010	(0.0710)
Average	0.0674	(0.0621) (0.0776)	0.0508	(0.0800)	0.1417	(0.0787)	-0.1019	(0.0719)
Above Average	0.1520 0.1187	(0.0110)	0.1120	(0.0800)	0.1777	(0.0700)	-0.1300	(0.0007)
Ioh Mobility	0.1187	(0.0929) (0.0767)	0.0034	(0.0982)	0.1004	(0.0840) (0.0731)	-0.0295	(0.0784)
Usability in other Firms	0.0089	(0.0707)	0.0084	(0.0850)	0.1205	(0.0751)	-0.1057	(0.0000)
Only Usable in Firms	0.0700	(0.0760)	0.0507	(0.0701)	0 1919*	(0.0706)	0.0010	(0.0661)
Dartly Usable III Films	0.0730	(0.0700)	0.0307	(0.0791)	0.1212	(0.0700)	-0.0910	(0.0001)
Completely	0.0118	(0.0791)	-0.0738	(0.0312) (0.0725)	0.1360**	(0.0741)	-0.0225	(0.0030)
Training Duration	0.0920	(0.0033) (0.0718)	0.0034 0.1045	(0.0723)	0.1500	(0.0049)	-0.0105	(0.0030)
Cost Coverage by the Emp	0.0940	(0.0718)	0.1040	(0.0709)	0.0740	(0.0004)	-0.0020	(0.0029)
0 Percent	0.0813	(0.0774)	0.0517	(0.0808)	0 1971*	(0.0746)	-0.0938	(0, 0664)
50 Porcent	0.0313	(0.0774)	0.0317	(0.0808)	0.1271	(0.0740)	-0.0958	(0.0004)
100 Percent	0.1284	(0.0130)	0.0449	(0.0010)	-0.0661	(0.0822)	-0.1005	(0.0700) (0.0733)
Number of Observations	3,210	(0.0000)	2,602	(0.0010)	3,242	(0.0020)	4,440	(0.0100)
Panel P. Collective	No Col	loativo	Collo	ativo	No Col	loctivo	Calla	ativo
Bargaining	Barga	ining	Barga	lining	Barga	ining	Barga	ining
A ma								
Age 25 Veens Old	0.1790**	(0, 0.780)	0.0296	(0, 1060)	0.0400	(0, 0714)	0.0155	(0, 0.007)
25 Years Old	-0.1720	(0.0789)	0.0380	(0.1000)	-0.0409	(0.0744)	0.0135	(0.0697)
45 Voorg Old	-0.1030	(0.0087) (0.0751)	0.1330	(0.0933)	0.0042	(0.0712)	-0.0146	(0.0798)
45 Years Old	0.0329	(0.0751)	0.1244	(0.0924)	-0.0146	(0.0089)	-0.0200	(0.0657)
Occupational Competence	-0.0180	(0.0714)	0.1950	(0.0920)	0.0301	(0.0094)	-0.0550	(0.0656)
Below Average	0.0179	(0.0792)	0 1060**	(0,0006)	0 0202	(0, 0710)	0.0555	(0.0886)
Average	-0.0175	(0.0123)	0.1505	(0.0900)	0.0392	(0.0710)	-0.0000	(0.0380)
Above Average	0.1389	(0.0079)	0.1029	(0.0300) (0.1132)	0.0305	(0.0091)	-0.0303	(0.0789)
Ioh Mobility	0.0422	(0.0784)	0.1300 0.1251	(0.1152)	0.1105	(0.0747)	0.0045	(0.0304)
Ueability in other Firms	-0.0001	(0.0001)	0.1201	(0.0030)	0.0010	(0.0053)	-0.1010	(0.0704)
Only Usable in Firms	-0.0164	(0.0664)	0.18/11**	(0.0878)	0.0342	(0, 0640)	-0.0483	(0.0790)
Partly	-0.0104	(0.0004) (0.0679)	0.1510*	(0.0870)	0.0342	(0.0040) (0.0674)	0.0405	(0.0730)
Completely	-0.0920	(0.0013)	0.1449*	(0.0019)	0.0560	(0.0014)	0.0249	(0.0010)
Training Duration	0.0118	(0.0012) (0.0634)	0.1443	(0.0704)	0.0300	(0.0552)	-0.0156	(0.0750)
Cost Coverage by the Emp	lover	(0.001)	0.1000	(0.0110)	0.0102	(0.000±)	-0.0100	(0.0100)
0 Percent	-0.0163	(0.0670)	0 1885**	(0.0884)	0.0341	(0.0659)	-0.0502	(0.0803)
50 Percent	0.0668	(0.0070)	0.1923**	(0.0004)	-0.0523	(0.0000)	-0.0894	(0.0000)
100 Percent	0.0226	(0.0755)	0.1540	(0.0962)	-0.0654	(0.0713)	-0.1425	(0.0871)
Number of Observations	3 525	(0.0100)	2 274	(0.0002)	4 514	(0.0110)	3 168	(0.0011)
rumber of Observations	0,020		4,414		4,014		0,100	

#### Table 8: Gender gap in marginal effects - manager heterogeneity

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows the marginal effects corresponding to Table A.15 for Panel A and Table A.16 for Panel B. A positive value corresponds to a preference of male over female training candidates in the corresponding attribute. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

		Mai	All nagers			Only F Mana	emale igers			Only Mani	Male agers	
	High W	'age Gap	Low Wag	ge Gap	High $W_{\delta}$	ige Gap	Low Wa	ge Gap	High W	age Gap	Low Wa	ge Gap
	ME (1)	SE (2)	ME (3)	SE (4)	ME (5)	SE (6)	ME (7)	SE (8)	ME (9)	SE (10)	ME (11)	SE (12)
Age	~			~		~	~	~	*	×.		
25 Years Old	-0.0687	(0.0881)	-0.0387	(0.1017)	-0.2183	(0.1494)	-0.1695	(0.1222)	0.0412	(0.1046)	0.0462	(0.1338)
35 Years Old	0.0505	(0.0837)	0.1245	(0.0881)	-0.0540	(0.1473)	0.1332	(0.1127)	0.1218	(0.0957)	0.1399	(0.1201)
45 Years Old	-0.0077	(0.0857)	0.1014	(0.0911)	-0.1084	(0.1427)	0.0207	(0.1156)	0.0467	(0.1034)	0.1479	(0.1171)
55 Years Old	0.0255	(0.0858)	$0.2293^{***}$	(0.0888)	-0.1909	(0.1342)	$0.2818^{**}$	(0.1122)	0.1420	(0.0990)	$0.1961^{*}$	(0.1195)
Occupational Competency												
Below Average	0.0276	(0.0902)	$0.2248^{***}$	(0.0838)	-0.2083	(0.1420)	$0.2550^{***}$	(0.0960)	0.1530	(0.1009)	$0.2090^{*}$	(0.1242)
Average	0.0208	(0.0851)	$0.1472^{*}$	(0.0861)	-0.0229	(0.1295)	$0.3035^{***}$	(0.0935)	0.0679	(0.1022)	-0.0253	(0.1197)
Above Average	0.1224	(0.0985)	$0.2415^{***}$	(0.0899)	-0.1026	(0.1547)	$0.3496^{***}$	(0.1029)	$0.2272^{**}$	(0.1100)	0.1280	(0.1258)
Job Mobility	-0.0093	(0.0852)	$0.1578^{*}$	(0.0821)	$-0.3780^{***}$	(0.1094)	$0.2322^{**}$	(0.1049)	$0.1720^{*}$	(0.0982)	0.1186	(0.1044)
Usability in other Firms												
Only Usable in Firm	0.0238	(0.0801)	$0.1977^{**}$	(0.0771)	-0.1761	(0.1258)	$0.2475^{**}$	(0.0980)	0.1311	(0.0917)	0.1606	(0.1031)
Partly	-0.0018	(0.0911)	$0.2594^{***}$	(0.0765)	$-0.2939^{**}$	(0.1273)	$0.2447^{**}$	(0.1013)	$0.1628^{*}$	(0.0980)	$0.2942^{***}$	(0.0961)
Completely	0.0060	(0.0775)	$0.2057^{***}$	(0.0690)	-0.1727	(0.1211)	$0.2088^{**}$	(0.0932)	0.1104	(0.0858)	$0.2692^{***}$	(0.0909)
Training Duration	0.1267	(0.0788)	$0.1446^{*}$	(0.0759)	0.1122	(0.1325)	$0.2581^{***}$	(0.0906)	0.1372	(0.0873)	0.0690	(0.0987)
Cost Coverage by the Employer												
0 Percent	0.0248	(0.0833)	$0.2068^{***}$	(0.0792)	-0.1814	(0.1279)	$0.2598^{**}$	(0.1013)	0.1392	(0.0979)	0.1729	(0.1082)
50 Percent	-0.0315	(0.0886)	$0.2620^{***}$	(0.0827)	-0.2137	(0.1375)	$0.2604^{**}$	(0.1071)	0.0613	(0.1004)	$0.2170^{*}$	(0.1128)
100 Percent	-0.0968	(0.0934)	$0.1553^{*}$	(0.0916)	-0.2166	(0.1507)	0.0802	(0.1252)	-0.0345	(0.1066)	0.1847	(0.1215)
Number of Observations		2,560		2,554		800		1,306		1,760		1,248
Source: BIBB-CBS 2017/2018. Note: This table shows the mare	Own calcu	lations.	ing to table A	ison A 10	noo onlor oni-	meenonde to	onroference	t male origin	famala traii	a pipu condido	to the co	n and in a

Table 9: Gender gap in marginal effects - wage gap

*Note:* This table shows the marginal effects corresponding to table A.21. A positive value corresponds to a preference of male over female training candidates in the corresponding attribute. To compute the mean gender pay gap in the enterprise, we calculate the mean (imputed) wage for full-time employed women in the enterprise and the corresponding information for full-time employees to obtain a relative measure. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

growth
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10:
Table

		A Mana	ll agers			Only Ma	Female nagers		Only Mana	Male gers
	Higher ] Wage G	Female trowth	Higher Wage G	Male	Higher Wage	Female Growth	Higher Wage G	Male	Higher Wage (	Female
	ME (1)	$^{\rm SE}_{ m (2)}$	ME (3)	SE (4)	ME (5)	SE (6)	ME (7)	SE (8)	(6)	${}^{\rm SE}_{ m (10)}$
Age						(-)				
25 Years Old	0.1082	(0.0920)	0.0859	(0.1384)	-0.1240	(0.0891)	$-0.4135^{***}$	(0.1367)	0.1042	(0.1207)
35 Years Old	$0.2146^{***}$	(0.0763)	$0.3452^{***}$	(0.1015)	-0.0019	(0.0861)	$-0.2374^{*}$	(0.1409)	0.0790	(0.1078)
45 Years Old	$0.1512^{*}$	(0.0844)	0.1435	(0.1273)	-0.0494	(0.0837)	-0.1758	(0.1270)	0.1396	(0.1116)
55 Years Old	$0.2197^{***}$	(0.0822)	$0.2643^{**}$	(0.1125)	0.0494	(0.0871)	-0.0654	(0.1233)	0.1781	(0.1093)
Occupational Competency										
Below Average	$0.2204^{***}$	(0.0805)	$0.2540^{**}$	(0.1065)	0.0531	(0.0904)	-0.0693	(0.1305)	$0.1835^{*}$	(0.1094)
Average	$0.1591^{*}$	(0.0823)	$0.2487^{**}$	(0.1072)	0.0123	(0.0835)	0.0646	(0.1299)	0.0942	(0.1076)
Above Average	$0.2156^{**}$	(0.0878)	$0.3039^{***}$	(0.1174)	0.1255	(0.0948)	-0.0101	(0.1570)	0.1652	(0.1218)
Job Mobility	$0.1342^{*}$	(0.0806)	0.1349	(0.1218)	0.1335	(0.0968)	0.0090	(0.0851)	-0.1860	(0.1221)
Usability in other Firms										
Only Usable in Firm	$0.1967^{***}$	(0.0746)	$0.2402^{**}$	(0.1058)	0.0465	(0.0812)	-0.0613	(0.1213)	0.1558	(0.0974)
$\operatorname{Partly}$	$0.2231^{***}$	(0.0827)	$0.2252^{**}$	(0.1123)	0.1188	(0.0826)	-0.0750	(0.1250)	$0.2062^{**}$	(0.1042)
Completely	$0.1829^{**}$	(0.0729)	$0.1719^{*}$	(0.0950)	0.1017	(0.0694)	0.0605	(0.1190)	$0.2036^{**}$	(0.0958)
Training Duration	$0.1588^{**}$	(0.0732)	$0.2801^{***}$	(0.0964)	0.0834	(0.0732)	0.0885	(0.1170)	0.0644	(0.0936)
Cost Coverage by the Employer										
0 Percent	$0.2116^{**}$	(0.0789)	$0.2650^{**}$	(0.1148)	0.0474	(0.0831)	-0.0627	(0.1229)	0.1663	(0.1020)
50 Percent	$0.1493^{*}$	(0.0856)	0.1185	(0.1176)	0.1101	(0.0890)	0.1479	(0.1608)	0.1345	(0.1106)
100 Percent	0.1420	(0.0905)	0.0126	(0.1268)	-0.0477	(0.0921)	0.0219	(0.1449)	$0.1971^{*}$	(0.1118)
Number of Observations		2,526		3,044		1,042		1,208		1,494
	-									

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows the gender gap in marginal effects corresponding to table A.22. A positive value corresponds to a preference of male over female training candidates in the corresponding attribute. To obtain gender-specific wage growth, we calculate the difference between the (imputed) wage in t and the (imputed) wage in t - 1 for each individual. We then compute the average wage growth by gender, establishment and year and collapse this information for all years in which we observe the establishment. We then construct an indicator equal to one if women experienced higher wage growth on average than men. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

# A Appendix

Attribute	Attribute Values
	The skilled worker
Gender	<ul> <li>(1) is male.</li> <li>(2) is female.</li> </ul>
Age	<ol> <li>(1) is 25 years old.</li> <li>(2) is 35 years old.</li> <li>(3) is 45 years old.</li> <li>(4) is 55 years old.</li> </ol>
Occupational Experience	<ol> <li>(1) has below average occupational experience.</li> <li>(2) has average occupational experience.</li> <li>(3) has above average occupational experience.</li> </ol>
Occupational Mobility	<ol> <li> never changed employer within the last 5 years.</li> <li> 1 time changed employer within the last 5 years.</li> <li> 2 times changed employer within the last 5 years.</li> </ol>
	The training
Content	<ol> <li>(1) is only useable in your firm and not in other firms.</li> <li>(2) is partly useable also in other firms.</li> <li>(3) is completely useable also in other firms.</li> </ol>
Duration	<ol> <li>(1) takes 2 working days.</li> <li>(2) takes 5 working days.</li> <li>(3) takes 10 working days.</li> </ol>
Cost Coverage	<ol> <li> is not covered by the employer. 100% of costs are taken over by the participant.</li> <li> is covered by 50% of the employer. The participant takes over the remaining 50% of the costs.</li> <li> is covered by 100% of the employer. The participant has no costs.</li> </ol>

 Table A.1: Possible values of vignette attributes

 $\it Note:$  Overview of possible vignette attributes as implemented in BIBB- CBS 2018.

Variable Names	Mean	SD	Min	Max
Minutes				
Intro	1.23	1.95	0	32
Vignette 1	1.17	1.49	0	37
Vignette 2	0.58	0.61	0	16
Vignette 3	0.46	0.40	0	8
Vignette 4	0.41	0.29	0	3
Vignette 5	0.37	0.33	0	5
Vignette 6	0.36	0.28	0	4
Total	4.57	2.91	0	39
Gender	0 55	0 50	0	-
Male	0.57	0.50	0	1
Female Eine Daritien	0.43	0.50	0	1
Firm Position	0.25	0.49	0	1
Owner	0.30	0.48	0	1
Department Head	0.15	0.54	0	1
Lood UD	0.07	0.20	0	1
Head fin	0.17	0.30	0	1
Head of Training	0.08	0.26	0	1
Other Position	0.07	0.20	0	1
Qualification	0.11	0.52	0	1
No Vocational Training	0.01	0.08	0	1
Vocational Training	0.01	0.00	0	1
Advanced Voc Degree	0.35	0.40	0	1
Academic Degree	0.44	0.50	0	1
Firm Tenure in Years	14 55	10.49	0	51
Risk-Affinity	5.47	2.15	Ő	10
Altruism	251.61	286.72	Ő	1000
Reciprocity	6.20	1.19	1	7
Locus of Control	5.78	1.27	1	7
B5 Openness	5.12	1.02	2	7
B5 Conscientiousness	6.09	0.81	3	7
B5 Extraversion	5.17	1.14	1	7
B5 Agreeableness	5.60	0.89	3	7
B5 Emotional Stability	4.81	1.16	1	7
Firm's Training Decision				
Alone	0.30	0.46	0	1
Together	0.45	0.50	0	1
Suport	0.16	0.37	0	1
Not Involved	0.09	0.28	0	1
Training yes/no	0.77	0.42	0	1
Number of Employees	88.25	235.30	1	2600
Firmsize				
Small	0.70	0.46	0	1
Large	0.30	0.46	0	1
Firmtype				
Autonomous Holding	0.64	0.48	0	1
Independent Operation	0.11	0.31	0	1
Coorperate Headquarter	0.07	0.26	0	1
Branch Office	0.09	0.29	0	1
Foundation	0.05	0.22	0	1
Something Different	0.05	0.21	0	1
Work Council	0.22	0.42	0	1
Collective Bargaining Coverage	0.40	0.49	0	1
Firm	0.10	0.01	0	-
Export-oriented	0.10	0.31	0	1
High Competition	0.67	0.47	0	ļ
Labor Market Tightness	3.89	1.07	1	5
Draft Charles	0.25	0.43	0	1
Front Snaring	0.54	0.47	0	1
Firm's Utilized Capacity	0.08	0.49	0	1 100
Branch	00.99	14.04	0	100
Agriculture	0.02	0.19	Ο	1
Mining	0.02	0.19	0	1
Manufacturing	0.00	0.03	0	1
Flectricity	0.00	0.27	0	1
Water Supply	0.01	0.09	0	1
Construction	0.01	0.07	0	1
Wholesale Retail Trade	0.00	0.27 0.37	0	1
Transportation	0.03	0.16	0	1
1.0000000000000000000000000000000000000	0.00	0.10	0	+

Table A.2: Summary statistics of managers and firms

Accommodation Activities	0.07	0.25	0	1	
Information Activities	0.04	0.19	0	1	
Finance and Insurance	0.02	0.14	0	1	
Real Estate Activities	0.02	0.13	0	1	
Professional Activities	0.10	0.29	0	1	
Administration	0.07	0.25	0	1	
Public Administration	0.03	0.17	0	1	
Education	0.02	0.12	0	1	
Human Health, Social Work	0.12	0.32	0	1	
Arts, Recreation	0.01	0.09	0	1	
Other service	0.06	0.23	0	1	
Other	0.08	0.28	0	1	

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows descriptive statistics about individual and firm-level characteristics of the respondents in the vignette exper-iment. Column (1) shows the average, column (2) reports the the standard deviation, columns (3) and (4) provide the minimum and maximum.

	Training Participation		
	2000-2008	2014-2019	2000-2019
Female (ref. Male)	-0.085 (0.054)	$0.092^{**}$ (0.044)	$0.048 \\ (0.036)$
Age (ref. $\geq$ 55 Years) <35 Years	$0.585^{***}$ (0.138)	-0.082 (0.100)	$0.086 \\ (0.083)$
35-44 Years	$0.534^{***}$ (0.106)	$\begin{array}{c} 0.051 \\ (0.076) \end{array}$	$0.158^{**}$ (0.063)
45-54 Years	$\begin{array}{c} 0.378^{***} \\ (0.078) \end{array}$	$0.094^{*}$ (0.054)	$0.142^{***}$ (0.045)
Married	$\begin{array}{c} 0.054 \\ (0.052) \end{array}$	-0.035 (0.041)	-0.019 (0.034)
Number of Children	-0.024 (0.027)	$\begin{array}{c} 0.016 \ (0.020) \end{array}$	$0.009 \\ (0.016)$
Disabled	-0.093 (0.094)	$-0.185^{**}$ (0.072)	$-0.159^{***}$ (0.058)
German Nationality	$0.529^{***}$ (0.113)	$\begin{array}{c} 0.347^{***} \\ (0.070) \end{array}$	$0.396^{***}$ (0.061)
Owner of House/Dwelling	$0.065 \\ (0.047)$	$0.088^{**}$ (0.039)	$\begin{array}{c} 0.083^{***} \\ (0.032) \end{array}$
Education (ref. Higher Technical College) No School Degree	-1.074 $(0.741)$	-0.317 (0.228)	$-0.396^{*}$ (0.212)
Lower/Intermediate School Degree	$0.100 \\ (0.062)$	$0.192^{***}$ (0.047)	$\begin{array}{c} 0.154^{***} \\ (0.039) \end{array}$
Apprenticeship	$-0.157^{***}$ (0.052)	$-0.198^{***}$ (0.045)	$-0.197^{***}$ (0.036)
Vocational School	$0.542^{***}$ (0.068)	$0.290^{***}$ (0.054)	$0.366^{***}$ (0.044)
University Degree	$0.287^{***}$ (0.066)	$0.295^{***}$ (0.054)	$0.290^{***}$ (0.044)
Work Experience $(FT + PT)$ (in years)	-0.005 (0.005)	-0.003 (0.004)	-0.004 (0.003)
Unemployment Experience (in years)	$-0.066^{***}$ (0.023)	$-0.075^{***}$ (0.012)	$-0.072^{***}$ (0.011)
Real Net HH income last month of 2 years ago (in 1000 $\in$ )	$-0.036^{***}$ (0.014)	$0.009 \\ (0.009)$	-0.001 (0.007)
Region (ref. West Germany) East Germany	$0.215^{**}$ (0.106)	$\begin{array}{c} 0.294^{***} \\ (0.058) \end{array}$	$0.262^{***}$ (0.052)
South Germany	$-0.131^{**}$ (0.066)	$0.072 \\ (0.061)$	-0.014 (0.043)
North Germany	-0.074 (0.076)	$0.040 \\ (0.061)$	-0.005 $(0.050)$
City States	$0.020 \\ (0.101)$	$-0.291^{***}$ (0.086)	$-0.189^{***}$ (0.067)
Unemployment Rate	-0.013 (0.012)	-0.005 (0.013)	$-0.013^{*}$ (0.007)
GDP	$0.002 \\ (0.004)$	0.001 (0.002)	0.001 (0.002)
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 $Table \ A.3: \ On-the-job\ training\ participation-conditional\ gender\ differences\ based\ on\ the\ SOEP$ 

White-collar Worker	$-0.404^{***}$ (0.086)	$-0.279^{***}$ (0.074)	$-0.318^{***}$ (0.058)
Blue-collar Worker	$-1.448^{***}$ (0.104)	$-0.889^{***}$ (0.088)	$-1.057^{***}$ (0.070)
Member Tradeunion	$0.249^{***}$ (0.055)	$\begin{array}{c} 0.251^{***} \\ (0.050) \end{array}$	$\begin{array}{c} 0.252^{***} \\ (0.039) \end{array}$
Member Tradeassiocation	$\begin{array}{c} 0.194^{***} \\ (0.071) \end{array}$	$\begin{array}{c} 0.513^{***} \\ (0.067) \end{array}$	$0.401^{***}$ (0.051)
Manager	$\begin{array}{c} 0.244^{***} \\ (0.063) \end{array}$	$0.291^{***}$ (0.046)	$\begin{array}{c} 0.282^{***} \\ (0.038) \end{array}$
Tenure (in years)	$0.005 \\ (0.003)$	$-0.006^{***}$ (0.002)	$-0.003^{*}$ (0.002)
Contract type (ref. Other) Permanent	$0.262^{**}$ (0.104)	$\begin{array}{c} 0.332^{***} \\ (0.109) \end{array}$	$0.307^{***}$ (0.078)
Temporary	-0.042 (0.133)	$0.069 \\ (0.121)$	$0.035 \\ (0.090)$
Full-time Employed	$\begin{array}{c} 0.187^{***} \\ (0.061) \end{array}$	$0.162^{***}$ (0.044)	$\begin{array}{c} 0.168^{***} \\ (0.037) \end{array}$
Number Employees in Firm (Firm Size)	$\begin{array}{c} 0.058^{***} \\ (0.009) \end{array}$	$\begin{array}{c} 0.054^{***} \\ (0.007) \end{array}$	$\begin{array}{c} 0.057^{***} \\ (0.005) \end{array}$
Sector (ref. Other) Manufacturing	$0.172^{*}$ (0.100)	-0.067 (0.105)	$0.025 \\ (0.075)$
Agriculture	$\begin{array}{c} 0.444^{**} \\ (0.225) \end{array}$	$0.098 \\ (0.207)$	$0.208 \\ (0.161)$
Mining, Quarrying, Energy, Water	$0.375^{**}$ (0.175)	-0.022 (0.208)	$\begin{array}{c} 0.183 \\ (0.134) \end{array}$
Chemicals/Pulp/Paper	-0.140 (0.128)	$-0.390^{***}$ (0.132)	$-0.284^{***}$ (0.097)
Construction	-0.183 (0.133)	-0.094 (0.132)	-0.128 (0.094)
Iron/Steel	-0.085 (0.136)	$-0.233^{*}$ (0.140)	$-0.169^{*}$ (0.099)
Textile/Apparel	$-1.297^{***}$ (0.418)	-0.584 (0.409)	$-0.907^{***}$ (0.296)
Wholesale/Retail	$-0.353^{***}$ (0.109)	$-0.202^{*}$ (0.113)	$-0.248^{***}$ (0.082)
Transportation/Communication	-0.091 (0.125)	$\begin{array}{c} 0.214^{*} \\ (0.122) \end{array}$	$0.114 \\ (0.090)$
Public Service	$\begin{array}{c} 0.327^{***} \\ (0.089) \end{array}$	$\begin{array}{c} 0.449^{***} \\ (0.093) \end{array}$	$0.406^{***}$ (0.066)
Financials/Private Services	$0.164^{*}$ (0.099)	$\begin{array}{c} 0.020 \\ (0.104) \end{array}$	$\begin{array}{c} 0.100 \\ (0.074) \end{array}$
Big 5 Openness	$0.065^{***}$ (0.022)	$0.105^{***}$ (0.016)	$0.093^{***}$ (0.013)
Conscientiousness	-0.043 (0.028)	$-0.041^{**}$ (0.020)	$-0.040^{**}$ (0.017)
Extraversion	$\begin{array}{c} 0.022\\ (0.022) \end{array}$	$0.035^{**}$ (0.017)	$0.031^{**}$ (0.014)
Agreeableness	$-0.043^{*}$ (0.024)	-0.027 (0.019)	$-0.031^{**}$ (0.015)

Neuroticism	0.027	$-0.040^{***}$	$-0.023^{*}$
Willingness to take risks	(0.020) $0.065^{**}$ (0.029)	(0.013) -0.003 (0.022)	(0.013) 0.016 (0.018)
Locus of control	(0.025) $0.196^{***}$ (0.027)	(0.022) $0.070^{***}$ (0.020)	(0.010) $0.103^{***}$ (0.017)
Years (ref. 2019) 2000	$-0.234^{***}$ (0.057)		-0.267*** (0.083)
2004	$-0.165^{***}$ (0.052)		$-0.244^{***}$ (0.083)
2008	0.000 (.)		-0.080 (0.076)
2014		$0.128 \\ (0.095)$	$0.124^{*}$ (0.073)
2015		-0.077 (0.095)	-0.082 (0.072)
2016		-0.016 (0.095)	-0.022 (0.072)
2017		-0.104 (0.092)	-0.111 (0.068)
2018		-0.009 (0.031)	-0.013 (0.031)
2019		0.000 (.)	0.000 (.)
Constant	$-2.578^{***}$ (0.375)	$-2.274^{***}$ (0.295)	$-2.264^{***}$ (0.229)
Number of Observations Log-Likelihood	16,538 -8,380	36,131 -20,274	52,669 -28,810

Source: SOEP version 36. Own calculations. Note: This table shows the parameter estimates of the logit estimation with training participation as independent and gender (female = 1) as the main dependent variable, in addition to controls. The results correspond to the marginal effects presented in Panel (A) of Table 1. \*\*\*/\*\* indicate statistical significance at the 1%/5%/10%-lowed level.

$2000-2008$ $2014-2019$ $2000-2019$ Age (ref. $\geq 55$ Years) $<35$ Years $-1.941^{+++}$ $-2.313^{+++}$ $-2.132^{+++}$ $35-44$ Years $-2.066^{+++}$ $-2.215^{+++}$ $-2.107^{++++}$ $45-54$ Years $-2.266^{++++}$ $-2.266^{+++}$ $-2.107^{++++}$ $45-54$ Years $-2.266^{++++}$ $-2.226^{++++}$ $-0.226^{+++}$ $\geq 55$ Years Years $-2.566^{++++}$ $-0.226^{+++}$ $-0.226^{+++}$ $= 55$ Years Years $-0.216^{+++}$ $-0.031$ $-0.086$ Female * $<35$ Years $-0.078$ $0.026$ $-0.007$ $(0.089)$ $(0.089)$ $(0.082)$ $(0.062)$ Female * $35-44$ Years $-0.078$ $0.026^{+++}$ $(0.052)$ Female * $35-44$ Years $-0.0181$ $0.226^{+++}$ $(0.052)$ Female * $45-54$ Years $-0.1811$ $0.262^{+++}$ $(0.074)^{+}$ $0.054$ $-0.032$ $-0.016$ $(0.074)^{++}$ Married $0.054$ $-0.032$ $-0.166^{+++}$ $0.054$ $-0.032$ $-0.166^{+++}$ $(0.072)^{++}$ $0.054$ $-0.020$ $(0.011)^{++}$ $(0.058)^{+++}$ $0.054$ $-0.020^{+++}$ $(0.073)^{+++}$ $(0.058)^{++++}$ $0.059^{++++}$ $0.065^{++++}$ $(0.061)^{+++++++++++++}$ $0.059^{++++++}$ $0.065^{++++++++++++++++++++++++++++++++++++$		Training Participation				
Age (ref. $\geq$ 55 Years) (35 Years-1.941*** (0.274)-2.132*** (0.216)35-44 Years-2.066*** (0.351)-2.215*** (0.281)-2.107*** (0.216)45-54 Years-2.287*** (0.380)-2.236*** (0.380)-2.186*** (0.222) $\geq$ 55 Years Years-2.56*** (0.380)-0.031 (0.030)-0.086 (0.062)Interaction with Female Candidate Female * 35-44 Years-0.078 (0.079)-0.031 (0.067)-0.086 (0.062)Female * 45-54 Years-0.078 (0.081)0.0126 (0.067)-0.007 (0.052)Female * 45-54 Years-0.181 (0.081)0.262*** (0.081)0.112* (0.067)Married-0.020 (0.097)0.018 (0.071)-0.012 (0.074)Number of Children-0.029 (0.094)-0.183*** (0.039)-0.158*** (0.052)German Nationality0.262**** (0.047)0.064*** (0.039)-0.158**** (0.052)Owner of House/Dwelling-0.052 (0.022)-0.189*** (0.039)-0.158**** (0.039)Apprenticeship-0.155**** (0.052)-0.198**** (0.031)-0.198**** (0.032)Apprenticeship-0.155**** (0.052)-0.198**** (0.033)-0.159**** (0.034)Work Experience (FT + PT) (in years) (0.023)-0.003 (0.004)-0.003 (0.003)-0.001 (0.003)University Degree-0.057*** (0.005)-0.001 (0.003)-0.001 (0.003)-0.001 (0.003)Martied School Degree-0.005 (0.005)-0.003 (0.003)-0.003 (0.003)Martied School		2000-2008	2014-2019	2000-2019		
$35-44$ Years $-2.066^{+++}$ $-2.215^{+++}$ $-2.107^{+++}$ $45-54$ Years $-2.257^{+++}$ $-2.226^{+++}$ $-2.186^{+++}$ $\geq 55$ Years Years $-2.566^{+++}$ $-2.309^{+++}$ $-2.376^{+++}$ $\geq 55$ Years Years $-2.566^{+++}$ $-2.309^{+++}$ $-2.376^{+++}$ Female * $<35$ Years $-0.078$ $0.026$ $-0.007$ Female * $35-44$ Years $-0.078$ $0.026$ $-0.007$ Female * $45-54$ Years $-0.050$ $0.118^{++}$ $0.052^{+++}$ Married $0.026$ $0.0071$ $0.0071$ Married $0.027$ $0.018$ $0.012^{+++}$ Mumber of Children $-0.020$ $0.018^{++++}$ $0.037^{+++}$ Mumber of Chuldren $0.025^{++++}$ $0.039^{+++++}$ $0.037^{++++++++++++++++++++++++++++++++++++$	Age (ref. $\geq 55$ Years) <35 Years	$-1.941^{***}$ (0.341)	$-2.313^{***}$ (0.274)	$-2.132^{***}$ (0.210)		
$45-54$ Years $-2.287^{***}$ $-2.226^{***}$ $-2.186^{***}$ $\geq 55$ Years Years $-2.566^{***}$ $-2.399^{***}$ $-2.376^{***}$ Interaction with Female Candidate $-0.031$ $-0.086$ $(0.089)$ $(0.082)$ $(0.062)$ Female * $35-44$ Years $-0.078$ $0.026$ $-0.007$ $(0.067)$ $(0.062)$ Female * $45-54$ Years $0.050$ $0.118^{*}$ $0.105^{**}$ $(0.074)$ Female * $45-54$ Years $0.050$ $0.118^{*}$ $0.1074$ Married $0.032$ $(0.067)$ $(0.074)$ Number of Children $-0.020$ $(0.016)$ $(0.067)$ Disabled $-0.022$ $(0.072)$ $(0.020)$ $(0.016)$ Owner of House/Dwelling $0.528^{***}$ $0.319^{***}$ $0.038^{***}$ No School Degree $-1.089$ $-0.319$ $-0.400^{*}$ No School Degree $0.105^{**}$ $0.098^{***}$ $0.038^{****}$ No School Degree $0.05^{*}$ $0.098^{***}$ $0.039^{****}$ No School Degree $0.105^{*}$ $0.998^{***}$ $0.039^{****}$ Vocati	35-44 Years	$-2.066^{***}$ (0.351)	$-2.215^{***}$ (0.281)	$-2.107^{***}$ (0.216)		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	45-54 Years	$-2.287^{***}$ (0.362)	$-2.226^{***}$ (0.288)	$-2.186^{***}$ (0.222)		
Interaction with Female Candidate Female * <35 Years $-0.216^{**}$ $-0.031$ $-0.086$ Female * 35-44 Years $-0.078$ $0.026$ $-0.007$ Female * 45-54 Years $0.050$ $0.118^*$ $0.105^{**}$ Female * 2 55 Years $-0.181$ $0.262^{***}$ $0.074$ Married $0.020^*$ $0.030^*$ $(0.074)$ Number of Children $0.027^*$ $0.018^*$ $0.016^*$ Disabled $-0.092$ $-0.183^*^*$ $0.0158^*^*$ German Nationality $0.528^{***}$ $0.0349^{****}$ $0.039^*^*^*$ Owner of House/Dwelling $0.065$ $0.047^*$ $0.032^*$ Icower/Intermediate School Degree $0.105^*$ $0.019^*^*$ $0.032^*$ Apprenticeship $0.158^{***}$ $0.019^*^*$ $0.039^*^*$ Vocational School $0.545^**^*$ $0.292^{***}$ $0.369^{***}$ $0.008^*$ $0.040^*$ $(0.043)$ $(0.044)^*$ Vocational School $0.545^***$ $0.292^***$ $0.369^{***}$ $0.005^*$ $0.040^*$ $(0.044)^*$ $(0.044)^*$ Vocational School	$\geq 55$ Years Years	$-2.566^{***}$ (0.380)	$-2.399^{***}$ (0.300)	$-2.376^{***}$ (0.232)		
Female * <35 Years	Interaction with Female Candidate					
Female * 35-44 Years $-0.078$ $(0.079)$ $0.026$ $(0.067)$ $-0.007$ $(0.052)$ Female * 45-54 Years $0.050$ $(0.081)$ $0.118^*$ $(0.067)$ $0.105^{**}$ $(0.067)$ Female * $\geq 55$ Years $-0.181$ $(0.067)$ $0.0687$ $(0.074)$ $0.074)$ $0.054$ $-0.032$ $(0.041)$ $0.074$ $(0.034)$ Married $-0.020$ $(0.020)$ $0.018$ $(0.020)$ $0.016$ $(0.020)$ Number of Children $-0.092$ $(0.027)$ $0.018$ $(0.020)$ $0.016$ $(0.072)$ Disabled $-0.092$ $(0.074)$ $-0.183^{***}$ $(0.070)$ $0.058^{****}$ $(0.071)$ German Nationality $0.528^{****}$ $(0.041)$ $0.349^{****}$ $(0.070)$ $0.084^{****}$ $(0.061)$ Owner of House/Dwelling $0.065$ $(0.047)$ $0.084^{****}$ $(0.039)$ $0.044^{****}$ $(0.039)$ Educatio (ref. Higher Technical College) No School Degree $-1.089$ $(0.062)$ $0.198^{****}$ $(0.039)$ $0.198^{****}$ $(0.039)$ Apprenticeship $0.158^{****}$ $(0.062)$ $0.044^{*}$ $(0.034)$ $0.036^{****}$ $(0.064)$ $0.044^{***}$ $(0.036)$ Vocational School $0.245^{***}$ $(0.066)0.292^{****}(0.054)0.290^{****}(0.044)University Degree0.285^{***}(0.066)0.003(0.044)0.003(0.044)University Degree-0.005(0.067)^{**}-0.003(0.004)-0.003(0.004)Unemployment Experience (in years)-0.005^{****}(0.023)^{**}-0.001^{****}(0.0011)^{**}Real $	Female * <35 Years	$-0.216^{**}$ (0.089)	-0.031 (0.082)	-0.086 (0.062)		
Female * 45-54 Years $0.050$ $(0.081)$ $0.118^*$ $(0.063)$ $0.105^{**}$ $(0.074)$ $0.074)$ $0.054$ Married $0.054$ $(0.052)$ $0.018$ $(0.041)$ $0.012$ $(0.074)$ $0.052)$ Murber of Children $-0.020$ 	Female * 35-44 Years	-0.078 (0.079)	$\begin{array}{c} 0.026 \\ (0.067) \end{array}$	-0.007 (0.052)		
Female * ≥ 55 Years       -0.181       0.262***       0.192***         Married       0.054       -0.032       -0.016         Number of Children       -0.020       0.018       0.012         Disabled       -0.092       -0.183***       -0.158***         German Nationality       0.528***       0.349***       0.397***         Owner of House/Dwelling       0.065       0.089**       0.034)         Number of Critigher Technical College)       -0.188***       0.113       0.0070         No School Degree       -1.089       -0.198***       0.159***         Lower/Intermediate School Degree       0.055       0.084***       0.039)         Apprenticeship       -0.158****       0.292***       0.369***         Vocational School       0.545****       0.292***       0.369***         University Degree       0.285****       0.292***       0.369***         University Degree       0.065       0.003       0.003         Unemployment Experience (in years)       -0.005       -0.003       -0.003         Unemployment Experience (in years)       -0.037***       -0.071***       -0.0071***         Real Net HH income last month of 2 years ago (in 1000 €)       -0.037***       0.009       -0.001 </td <td>Female * 45-54 Years</td> <td><math>\begin{array}{c} 0.050 \\ (0.081) \end{array}</math></td> <td><math>0.118^{*}</math> (0.063)</td> <td><math>0.105^{**}</math> (0.052)</td>	Female * 45-54 Years	$\begin{array}{c} 0.050 \\ (0.081) \end{array}$	$0.118^{*}$ (0.063)	$0.105^{**}$ (0.052)		
Married $\begin{pmatrix} 0.130 \\ 0.054 \\ 0.052 \\ -0.032 \\ -0.032 \\ -0.016 \\ (0.034) \end{pmatrix}$ $\begin{pmatrix} 0.074 \\ -0.032 \\ -0.032 \\ -0.016 \\ (0.034) \end{pmatrix}$ Number of Children $-0.020 \\ (0.027) \\ (0.020) \\ (0.020) \\ (0.020) \\ (0.016) \end{pmatrix}$ $0.012 \\ (0.020) \\ (0.016) \end{pmatrix}$ Disabled $-0.092 \\ (0.094) \\ (0.072) \\ (0.072) \\ (0.058) \end{pmatrix}$ $-0.158^{***} \\ (0.113) \\ (0.070) \\ (0.061) \end{pmatrix}$ German Nationality $0.528^{***} \\ (0.113) \\ (0.070) \\ (0.039) \\ (0.032) \end{pmatrix}$ $0.084^{***} \\ (0.047) \\ (0.039) \\ (0.039) \\ (0.032) \end{pmatrix}$ Educatio (ref. Higher Technical College) No School Degree $-1.089 \\ (0.748) \\ (0.228) \\ (0.228) \\ (0.213) \end{pmatrix}$ $-0.400^* \\ (0.228) \\ (0.213) \\ (0.039) \end{pmatrix}$ Lower/Intermediate School Degree $0.105^* \\ (0.062) \\ (0.047) \\ (0.047) \\ (0.039) \end{pmatrix}$ $-0.198^{***} \\ (0.052) \\ (0.047) \\ (0.036) \\ (0.036) \end{pmatrix}$ Vocational School $0.545^{***} \\ (0.068) \\ (0.054) \\ (0.054) \\ (0.044) \\ (0.044) \\ (0.044) \\ (0.044) \\ (0.044) \\ (0.044) \\ (0.044) \\ (0.044) \\ (0.044) \\ (0.003) \\ (0.005) \\ (0.005) \\ (0.005) \\ (0.004) \\ (0.003) \\ (0.003) \\ (0.003) \\ (0.003) \\ (0.004) \\ (0.003) \\ (0.003) \\ (0.004) \\ (0.003) \\ (0.003) \\ (0.001) \\ (0.001) \\ (0.001) \\ (0.001) \\ (0.001) \\ (0.001) \\ (0.001) \\ (0.001) \\ (0.001) \\ (0.001) \\ (0.001) \\ (0.001) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002) \\ (0.011) \\ (0.001) \\ (0.002)$	Female $* \ge 55$ Years	-0.181	0.262***	0.192***		
Married       0.054 (0.052)       -0.032 (0.041)       -0.034 (0.034)         Number of Children       -0.020 (0.020)       0.018 (0.020)       0.012 (0.020)         Disabled       -0.092 (0.094)       -0.183** (0.072)       -0.158*** (0.058)         German Nationality       0.528*** (0.113)       0.070)       (0.061)         Owner of House/Dwelling       0.065 (0.047)       0.089** (0.039)       0.084*** (0.032)         Educatio (ref. Higher Technical College) No School Degree       -1.089 (0.748)       -0.319 (0.228)       -0.400* (0.213)         Lower/Intermediate School Degree       0.105* (0.062)       0.198*** (0.047)       0.159**** (0.039)         Apprenticeship       -0.158*** (0.052)       -0.199*** (0.045)       -0.198*** (0.036)         Vocational School       0.545*** (0.066)       0.292*** (0.064)       0.369*** (0.044)         University Degree       0.285*** (0.066)       0.292*** (0.044)       0.290*** (0.005)         Unemployment Experience (IT + PT) (in years)       -0.005 (0.005)       -0.003 (0.012)       -0.071*** (0.011)         Real Net HH income last month of 2 years ago (in 1000 €)       -0.037*** (0.066)       0.009 (0.007)       -0.001 (0.005)         Region (ref. West Germany) East Germany       0.214** (0.106)       0.293*** (0.058)       0.261*** <td></td> <td>(0.130)</td> <td>(0.087)</td> <td>(0.074)</td>		(0.130)	(0.087)	(0.074)		
Number of Children $-0.020$ $(0.027)$ $(0.017)$ $(0.020)$ $(0.016)$ $(0.016)$ Disabled $-0.092$ $(0.094)$ $-0.183^{**}$ $(0.072)$ $-0.158^{***}$ $(0.072)$ $-0.158^{***}$ $(0.058)$ German Nationality $0.528^{***}$ $(0.113)$ $0.349^{***}$ $(0.070)$ $0.397^{***}$ $(0.061)$ Owner of House/Dwelling $0.055$ $(0.047)$ $0.089^{**}$ $(0.039)$ $0.084^{***}$ $(0.032)$ Educatio (ref. Higher Technical College) No School Degree $-1.089$ $(0.748)$ $-0.319$ $(0.228)$ $-0.400^*$ $(0.213)$ Lower/Intermediate School Degree $0.105^*$ $(0.062)$ $0.198^{***}$ $(0.047)$ $0.159^{***}$ $(0.039)$ Apprenticeship $-0.158^{***}$ $(0.052)$ $-0.198^{***}$ $(0.045)$ $0.198^{***}$ $(0.036)$ Vocational School $0.545^{***}$ $(0.066)$ $0.292^{***}$ $(0.054)$ $0.369^{***}$ $(0.044)$ University Degree $0.285^{***}$ $(0.066)$ $0.294^{***}$ $(0.004)$ $0.003$ $(0.004)$ Unemployment Experience (FT + PT) (in years) $(0.023)$ $-0.075^{***}$ $(0.012)$ $-0.071^{***}$ $(0.011)$ Real Net HH income last month of 2 years ago (in 1000 €) $-0.037^{***}$ $0.007$ $0.009$ $(0.007)$ Region (ref. West Germany) East Germany $0.214^{**}$ $(0.106)$ $0.293^{***}$ $(0.058)$ $0.261^{***}$ $(0.058)$ South Germany $-0.130^{**}$ $0.072$ $-0.014$	Married	(0.054)	-0.032 (0.041)	-0.016 (0.034)		
Disabled $-0.092$ (0.094) $-0.183^{***}$ (0.058) $-0.158^{****}$ (0.058)German Nationality $0.528^{***}$ (0.113) $0.349^{***}$ (0.070) $0.37^{****}$ (0.061)Owner of House/Dwelling $0.065$ (0.047) $0.089^{**}$ (0.039) $0.084^{****}$ (0.032)Educatio (ref. Higher Technical College) No School Degree $-1.089$ (0.748) $-0.400^{*}$ (0.228)I.ower/Intermediate School Degree $0.105^{*}$ (0.062) $0.198^{***}$ (0.047) $0.159^{***}$ (0.039)Apprenticeship $-0.158^{***}$ 	Number of Children	-0.020 (0.027)	0.018 (0.020)	0.012 (0.016)		
German Nationality $0.528^{***}$ (0.113) $0.349^{***}$ (0.070) $0.397^{***}$ (0.061)Owner of House/Dwelling $0.065$ (0.047) $0.089^{**}$ (0.039) $0.084^{***}$ (0.032)Educatio (ref. Higher Technical College) No School Degree $-1.089$ (0.748) $-0.319$ (0.228) $-0.400^*$ 	Disabled	-0.092 (0.094)	$-0.183^{**}$ (0.072)	$-0.158^{***}$ (0.058)		
Owner of House/Dwelling $0.065$ (0.047) $0.089^{**}$ (0.039) $0.084^{***}$ (0.032)Educatio (ref. Higher Technical College) No School Degree $-1.089$ (0.748) $-0.319$ (0.228) $-0.400^*$ (0.213)Lower/Intermediate School Degree $0.105^*$ (0.062) $0.198^{***}$ (0.047) $0.159^{***}$ 	German Nationality	$\begin{array}{c} 0.528^{***} \\ (0.113) \end{array}$	$\begin{array}{c} 0.349^{***} \\ (0.070) \end{array}$	$\begin{array}{c} 0.397^{***} \\ (0.061) \end{array}$		
Educatio (ref. Higher Technical College) No School Degree-1.089 (0.748)-0.319 (0.228)-0.400* (0.213)Lower/Intermediate School Degree $0.105^*$ (0.062) $0.198^{***}$ (0.047) $0.159^{***}$ (0.039)Apprenticeship $-0.158^{***}$ (0.052) $-0.199^{***}$ (0.045) $-0.198^{***}$ (0.036)Vocational School $0.545^{***}$ (0.068) $0.292^{***}$ (0.054) $0.369^{***}$ (0.044)University Degree $0.285^{***}$ (0.066) $0.294^{***}$ (0.054) $0.290^{***}$ (0.044)Work Experience (FT + PT) (in years) (0.005) $-0.003$ (0.004) $-0.003$ (0.003)Unemployment Experience (in years) $-0.067^{***}$ (0.023) $-0.075^{***}$ (0.012)Real Net HH income last month of 2 years ago (in 1000 €) $-0.037^{***}$ (0.014) $0.009$ (0.007)Region (ref. West Germany) East Germany $0.214^{**}$ (0.106) $0.293^{***}$ (0.058) $0.261^{***}$ (0.052)South Germany $-0.130^{**}$ $0.072$ $-0.014$	Owner of House/Dwelling	$0.065 \\ (0.047)$	$0.089^{**}$ (0.039)	$\begin{array}{c} 0.084^{***} \\ (0.032) \end{array}$		
No School Degree-1.089 (0.748)-0.319 (0.228)-0.400* (0.213)Lower/Intermediate School Degree0.105* 	Educatio (ref. Higher Technical College)					
Lower/Intermediate School Degree $0.105^*$ $(0.062)$ $0.198^{***}$ $(0.047)$ $0.159^{***}$ $(0.039)$ Apprenticeship $-0.158^{***}$ $(0.052)$ $-0.199^{***}$ $(0.045)$ $-0.198^{***}$ $(0.036)$ Vocational School $0.545^{***}$ $(0.068)$ $0.292^{***}$ $(0.054)$ $0.369^{***}$ $(0.044)$ University Degree $0.285^{***}$ $(0.066)$ $0.294^{***}$ $(0.054)$ $0.290^{***}$ $(0.044)$ Work Experience (FT + PT) (in years) $-0.005$ $(0.005)$ $-0.003$ $(0.004)$ $-0.003$ $(0.003)$ Unemployment Experience (in years) $-0.067^{***}$ $(0.023)$ $-0.075^{***}$ $(0.012)$ $-0.071^{***}$ $(0.011)$ Real Net HH income last month of 2 years ago (in 1000 €) $-0.037^{***}$ $(0.014)$ $0.009$ $(0.009)$ $-0.001$ $(0.007)$ Region (ref. West Germany) East Germany $0.214^{**}$ $(0.106)$ $0.293^{***}$ $(0.058)$ $0.261^{***}$ $(0.052)$ South Germany $-0.130^{**}$ $0.072$ $-0.014$	No School Degree	-1.089 (0.748)	-0.319 (0.228)	$-0.400^{*}$ (0.213)		
Apprenticeship $-0.158^{***}$ (0.052) $-0.199^{***}$ (0.045) $-0.198^{***}$ (0.036)Vocational School $0.545^{***}$ (0.068) $0.292^{***}$ (0.054) $0.369^{***}$ (0.044)University Degree $0.285^{***}$ (0.066) $0.294^{***}$ (0.054) $0.290^{***}$ (0.044)Work Experience (FT + PT) (in years) 	Lower/Intermediate School Degree	$0.105^{*}$ (0.062)	$0.198^{***}$ (0.047)	$0.159^{***}$ (0.039)		
Vocational School $0.545^{***}$ $(0.068)$ $0.292^{***}$ $(0.054)$ $0.369^{***}$ $(0.044)$ University Degree $0.285^{***}$ $(0.066)$ $0.294^{***}$ $(0.054)$ $0.290^{***}$ $(0.044)$ Work Experience (FT + PT) (in years) $-0.005$ $(0.005)$ $-0.003$ $(0.004)$ $-0.003$ $(0.003)$ Unemployment Experience (in years) $-0.067^{***}$ 	Apprenticeship	$-0.158^{***}$ (0.052)	$-0.199^{***}$ (0.045)	$-0.198^{***}$ (0.036)		
University Degree $0.285^{***}$ $(0.066)$ $0.294^{***}$ $(0.054)$ $0.290^{***}$ $(0.044)$ Work Experience (FT + PT) (in years) $-0.005$ $(0.005)$ $-0.003$ $(0.004)$ $-0.003$ $(0.003)$ Unemployment Experience (in years) $-0.067^{***}$ $(0.023)$ $-0.075^{***}$ $(0.012)$ $-0.071^{***}$ $(0.011)$ Real Net HH income last month 	Vocational School	$0.545^{***}$ (0.068)	$0.292^{***}$ (0.054)	$0.369^{***}$ (0.044)		
Work Experience $(FT + PT)$ (in years) $-0.005$ $(0.005)$ $-0.003$ $(0.004)$ $-0.003$ $(0.003)$ Unemployment Experience (in years) $-0.067^{***}$ $(0.023)$ $-0.075^{***}$ $(0.012)$ $-0.071^{***}$ $(0.011)$ Real Net HH income last month of 2 years ago (in 1000 $\textcircled{e}$ ) $-0.037^{***}$ $(0.014)$ $0.009$ $(0.009)$ $-0.001$ 	University Degree	$0.285^{***}$ (0.066)	$0.294^{***}$ (0.054)	$0.290^{***}$ (0.044)		
Unemployment Experience (in years) $-0.067^{***}$ (0.023) $-0.075^{***}$ (0.012) $-0.071^{***}$ (0.011)Real Net HH income last month of 2 years ago (in 1000 €) $-0.037^{***}$ (0.014) $0.009$ (0.009) $-0.001$ (0.007)Region (ref. West Germany) East Germany $0.214^{**}$ (0.106) $0.293^{***}$ 	Work Experience $(FT + PT)$ (in years)	-0.005 (0.005)	-0.003 (0.004)	-0.003 (0.003)		
Real Net HH income last month of 2 years ago (in 1000 €) $-0.037^{***}$ (0.014) $0.009$ (0.009) $-0.001$ (0.007)Region (ref. West Germany) East Germany $0.214^{**}$ (0.106) $0.293^{***}$ (0.058) $0.261^{***}$ (0.052)South Germany $-0.130^{**}$ $0.072$ $-0.014$	Unemployment Experience (in years)	$-0.067^{***}$ (0.023)	$-0.075^{***}$ (0.012)	$-0.071^{***}$ (0.011)		
Region (ref. West Germany) $0.214^{**}$ $0.293^{***}$ $0.261^{***}$ East Germany $0.106$ $(0.058)$ $(0.052)$ South Germany $-0.130^{**}$ $0.072$ $-0.014$	Real Net HH income last month of 2 years ago (in 1000 $\in$ )	$-0.037^{***}$ (0.014)	$0.009 \\ (0.009)$	-0.001 (0.007)		
South Germany -0.130** 0.072 -0.014	Region (ref. West Germany) East Germany	$0.214^{**}$ (0.106)	$\begin{array}{c} 0.293^{***} \\ (0.058) \end{array}$	$0.261^{***}$ (0.052)		
	South Germany	-0.130**	0.072	-0.014		

Table A.4: On-the-job training participation – conditional gender differences: age heterogeneity based on the SOEP

	(0.066)	(0.061)	(0.043)
North Germany	-0.074	0.039	-0.005
Toron Cormany	(0.076)	(0.061)	(0.050)
City States	$\begin{array}{c} 0.017 \\ (0.101) \end{array}$	$-0.295^{***}$ (0.086)	$-0.190^{***}$ (0.068)
Unemployment Rate	-0.013 (0.012)	-0.005 (0.013)	$-0.013^{*}$ (0.007)
GDP	$0.002 \\ (0.004)$	$\begin{array}{c} 0.001 \\ (0.002) \end{array}$	0.001 (0.002)
White-collar Worker	$-0.407^{***}$ (0.086)	$-0.284^{***}$ (0.074)	$-0.321^{***}$ (0.058)
Blue-collar Worker	$-1.455^{***}$ (0.104)	$-0.894^{***}$ (0.088)	$-1.063^{***}$ (0.070)
Member Tradeunion	$0.249^{***}$ (0.055)	$0.250^{***}$ (0.050)	$\begin{array}{c} 0.252^{***} \\ (0.039) \end{array}$
Member Tradeassiocation	$0.196^{***}$ (0.071)	$0.517^{***}$ (0.067)	$0.404^{***}$ (0.051)
Manager	$0.247^{***}$ (0.063)	$0.293^{***}$ (0.046)	$\begin{array}{c} 0.284^{***} \\ (0.038) \end{array}$
Tenure (in years)	$0.005 \\ (0.003)$	$-0.006^{***}$ (0.002)	$-0.003^{*}$ (0.002)
Contract type (ref. Other)			
Permanent	$0.261^{**}$ (0.103)	$\begin{array}{c} 0.335^{***} \\ (0.109) \end{array}$	$\begin{array}{c} 0.308^{***} \ (0.078) \end{array}$
Temporary	-0.042 (0.133)	$\begin{array}{c} 0.076 \ (0.121) \end{array}$	0.041 (0.090)
Full-time Employed	$\begin{array}{c} 0.197^{***} \\ (0.062) \end{array}$	$0.165^{***}$ (0.044)	$\begin{array}{c} 0.173^{***} \\ (0.037) \end{array}$
Number Employees in Firm (Firm Size)	$\begin{array}{c} 0.058^{***} \\ (0.009) \end{array}$	$\begin{array}{c} 0.054^{***} \\ (0.007) \end{array}$	$0.057^{***}$ (0.005)
Sector (ref. Other)			
Manufacturing	$0.174^{*}$ (0.100)	-0.071 (0.105)	$0.023 \\ (0.075)$
Agriculture	$0.451^{**}$ (0.225)	$0.096 \\ (0.207)$	$0.207 \\ (0.161)$
Mining, Quarrying, Energy, Water	$0.375^{**}$ (0.175)	-0.024 (0.208)	$0.182 \\ (0.134)$
Chemicals/Pulp/Paper	-0.138 (0.128)	$-0.389^{***}$ (0.133)	$-0.284^{***}$ (0.097)
Construction	-0.184 (0.132)	-0.101 (0.132)	-0.134 (0.094)
Iron/Steel	-0.084 (0.136)	$-0.238^{*}$ (0.140)	$-0.173^{*}$ (0.099)
Textile/Apparel	$-1.296^{***}$ (0.418)	-0.589 (0.409)	$-0.909^{***}$ (0.296)
Wholesale/Retail	$-0.351^{***}$ (0.109)	$-0.206^{*}$ (0.113)	$-0.248^{***}$ (0.082)
Transportation/Communication	-0.089 (0.125)	$0.214^{*}$ (0.123)	$0.117 \\ (0.090)$
Public Service	$\begin{array}{c} 0.325^{***} \\ (0.089) \end{array}$	$\begin{array}{c} 0.443^{***} \\ (0.093) \end{array}$	$0.403^{***}$ (0.066)
Financials/Private Services	$0.164^{*}$	0.017	0.100

	(0.099)	(0.104)	(0.074)
			× /
Big 5	0.005***	0 105***	0.00.4***
Openness	$(0.065^{\circ})$	$(0.105^{\circ})$	(0.094)
	(0.022)	(0.010)	(0.013)
Conscientiousness	-0.043	-0.041**	-0.039**
	(0.028)	(0.020)	(0.017)
	. ,		
Extraversion	0.022	0.035**	0.031**
	(0.022)	(0.017)	(0.014)
Agreeableness	-0.043*	-0.027	-0.031**
1.Broombronopp	(0.024)	(0.019)	(0.015)
	· · · ·	( )	( )
Neuroticism	0.028	-0.038**	-0.021*
	(0.020)	(0.015)	(0.013)
Willingness to take risks	0.065**	0.004	0.015
winnigness to take fisks	(0.029)	(0.022)	(0.013)
	(0.020)	(0:022)	(01010)
Locus of control	$0.197^{***}$	$0.070^{***}$	$0.103^{***}$
	(0.027)	(0.020)	(0.017)
Varue (maf. 2010) 2000	0.096***		0.000***
Years (ref. 2019) 2000	-0.230 (0.057)		-0.208 (0.083)
	(0.057)		(0.085)
2004	$-0.164^{***}$		$-0.244^{***}$
	(0.052)		(0.083)
2008	0.000		-0.078
	(.)		(0.076)
2014		0.131	$0.125^{*}$
		(0.095)	(0.073)
		. ,	. ,
2015		-0.073	-0.080
		(0.095)	(0.072)
2016		-0.012	-0.021
2010		(0.095)	(0.021)
		( )	( )
2017		-0.099	-0.109
		(0.092)	(0.068)
2018		0.000	0.019
2010		-0.009	-0.013
Number of Observations	16.538	36.131	52.669
Log-Likelihood	-8,376	-20,267	-28,800
5	,	1	,

Source: SOEP version 36. Own calculations. Note: This table shows the parameter estimates of the logit estimation with training participation as independent and age interacted with gender (female = 1) as the main independent variables, in addition to controls. The results correspond to the marginal effects presented in Panel (C) of Table 1. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level.

	Training Participation				
	Employer financed	Self-financed	General	Specific	
Female (ref. Male)	$-0.369^{***}$ (0.122)	$\begin{array}{c} 0.410^{***} \\ (0.133) \end{array}$	-0.016 (0.061)	$-0.120^{*}$ (0.073)	
Age (ref. $\geq$ 55 Years) <35 Years	$\begin{array}{c} 0.091 \\ (0.265) \end{array}$	$0.105 \\ (0.287)$	$\begin{array}{c} 0.665^{***} \\ (0.158) \end{array}$	$0.181 \\ (0.188)$	
35-44 Years	$0.347 \\ (0.213)$	-0.208 (0.230)	$\begin{array}{c} 0.534^{***} \\ (0.122) \end{array}$	$0.284^{**}$ (0.144)	
45-54 Years	$0.119 \\ (0.162)$	-0.088 (0.172)	$\begin{array}{c} 0.383^{***} \\ (0.092) \end{array}$	$0.214^{**}$ (0.104)	
Married	$0.123 \\ (0.109)$	$-0.284^{**}$ (0.115)	$0.002 \\ (0.057)$	$0.070 \\ (0.070)$	
Number of Children	-0.022 (0.058)	$0.013 \\ (0.059)$	0.013 (0.030)	-0.026 (0.037)	
Disabled	$0.062 \\ (0.215)$	0.080 (0.233)	-0.105 (0.112)	-0.093 (0.122)	
German Nationality	$\begin{array}{c} 0.173 \\ (0.183) \end{array}$	-0.243 (0.190)	$0.581^{***}$ (0.133)	$0.367^{**}$ (0.166)	
Owner of House/Dwelling	$0.204^{*}$ (0.109)	-0.036 (0.116)	$0.045 \\ (0.053)$	$0.031 \\ (0.063)$	
Education (ref. Higher Technical College) No School Degree	-0.653 (0.607)	$0.336 \\ (0.719)$	-1.665 $(1.055)$	-0.655 $(0.985)$	
Lower/Intermediate School Degree	$-0.239^{*}$ (0.129)	$0.369^{***}$ (0.133)	$0.136^{**}$ (0.067)	$\begin{array}{c} 0.031 \\ (0.081) \end{array}$	
Apprenticeship	$0.295^{**}$ (0.122)	$-0.272^{**}$ (0.127)	$-0.116^{**}$ (0.058)	-0.097 (0.069)	
Vocational School	-0.120 (0.136)	$\begin{array}{c} 0.055 \\ (0.132) \end{array}$	$\begin{array}{c} 0.424^{***} \\ (0.074) \end{array}$	$\begin{array}{c} 0.466^{***} \\ (0.089) \end{array}$	
University Degree	-0.201 (0.144)	$\begin{array}{c} 0.154 \\ (0.138) \end{array}$	$0.154^{**}$ (0.073)	$\begin{array}{c} 0.375^{***} \\ (0.084) \end{array}$	
Work Experience $(FT + PT)$ (in years)	-0.000 (0.009)	-0.003 (0.010)	-0.003 (0.006)	-0.009 (0.007)	
Unemployment Experience (in years)	$-0.071^{***}$ (0.027)	$-0.062^{*}$ (0.037)	$-0.049^{*}$ (0.025)	$-0.082^{**}$ (0.037)	
Real Net HH income last month of 2 years ago (in 1000 $\in$ )	-0.040 (0.031)	$0.053^{*}$ (0.029)	$-0.026^{*}$ (0.015)	-0.029 (0.019)	
Region (ref. West Germany) East Germany	0.018 (0.159)	$0.206 \\ (0.164)$	$0.216^{*}$ (0.116)	0.173 (0.139)	
South Germany	-0.115 (0.172)	$0.112 \\ (0.177)$	$-0.123^{*}$ (0.073)	-0.099 (0.090)	
North Germany	-0.210 (0.158)	$0.284^{*}$ (0.165)	-0.041 (0.088)	-0.046 (0.099)	
City States	-0.220 (0.228)	$0.000 \\ (0.234)$	$0.072 \\ (0.111)$	-0.079 (0.130)	
Unemployment Rate	$\begin{array}{c} 0.007 \\ (0.039) \end{array}$	-0.022 (0.040)	$-0.024^{*}$ (0.013)	$0.005 \\ (0.016)$	
GDP	0.003	-0.002	0.007	-0.000	

Table A.5: On-the-job training participation - conditional gender differences: training type heterogeneity

	(0,006)	(0.007)	(0,004)	(0.005)
White coller Worker	0.008	0.925	0.210**	0.270***
winte-conar worker	(0.193)	(0.181)	(0.095)	(0.104)
Blue-collar Worker	-0.216 (0.254)	$0.140 \\ (0.267)$	$-1.278^{***}$ (0.118)	$-1.150^{***}$ (0.136)
Member Tradeunion	-0.176 (0.137)	$0.262^{*}$ (0.141)	$\begin{array}{c} 0.171^{***} \\ (0.062) \end{array}$	$\begin{array}{c} 0.194^{***} \ (0.070) \end{array}$
Member Tradeassiocation	$-0.668^{***}$ (0.138)	$0.959^{***}$ (0.132)	$0.294^{***}$ (0.077)	-0.040 (0.096)
Manager	$0.029 \\ (0.126)$	$\begin{array}{c} 0.332^{***} \\ (0.123) \end{array}$	$\begin{array}{c} 0.360^{***} \ (0.069) \end{array}$	-0.101 (0.089)
Tenure (in years)	$0.040^{***}$ (0.007)	$-0.037^{***}$ (0.007)	-0.002 (0.003)	$0.013^{***}$ (0.004)
Contract type (ref. Other)				
Permanent	$0.014 \\ (0.321)$	$\begin{array}{c} 0.471 \\ (0.332) \end{array}$	$0.189 \\ (0.122)$	$0.224^{*}$ (0.135)
Temporary	$-0.939^{***}$ (0.342)	$0.688^{*}$ (0.362)	-0.007 (0.152)	-0.027 (0.180)
Full-time Employed	0.077 (0.114)	$-0.287^{**}$ (0.118)	$\begin{array}{c} 0.183^{***} \\ (0.070) \end{array}$	$0.096 \\ (0.085)$
Number Employees in Firm (Firm Size)	$\begin{array}{c} 0.112^{***} \\ (0.018) \end{array}$	$-0.070^{***}$ (0.018)	$\begin{array}{c} 0.012 \\ (0.010) \end{array}$	$0.120^{***}$ (0.013)
Sector (ref. Other)				
Manufacturing	$\begin{array}{c} 0.282 \\ (0.316) \end{array}$	$-1.116^{***}$ (0.314)	$\begin{array}{c} 0.333^{***} \\ (0.118) \end{array}$	-0.170 (0.142)
Agriculture	$1.305^{*}$ (0.775)	$^{-1.566^{**}}_{(0.775)}$	-0.175 (0.284)	$\begin{array}{c} 0.838^{***} \\ (0.291) \end{array}$
Mining, Quarrying, Energy, Water	$0.518 \\ (0.718)$	-1.118 (0.710)	$0.265 \\ (0.205)$	$\begin{array}{c} 0.348 \\ (0.220) \end{array}$
Chemicals/Pulp/Paper	$0.486 \\ (0.459)$	$-1.046^{**}$ (0.446)	-0.121 (0.150)	-0.204 (0.172)
Construction	$\begin{array}{c} 0.329 \\ (0.413) \end{array}$	-0.476 (0.399)	-0.022 (0.151)	$-0.532^{**}$ (0.209)
Iron/Steel	$ \begin{array}{c} 0.434 \\ (0.456) \end{array} $	$-1.627^{***}$ (0.584)	$\begin{array}{c} 0.086 \ (0.153) \end{array}$	$-0.332^{*}$ (0.190)
Textile/Apparel	-0.200 (0.943)	-0.223 (0.865)	$-0.915^{**}$ (0.453)	$-2.227^{**}$ (1.019)
Wholesale/Retail	$\begin{array}{c} 0.013 \\ (0.324) \end{array}$	$-0.755^{**}$ (0.325)	$-0.325^{**}$ (0.127)	$-0.380^{**}$ (0.155)
Transportation/Communication	-0.026 (0.348)	$-0.879^{**}$ (0.377)	-0.178 (0.149)	-0.000 (0.162)
Public Service	$0.298 \\ (0.266)$	$-0.701^{***}$ (0.247)	$\begin{array}{c} 0.293^{***} \\ (0.105) \end{array}$	$0.180 \\ (0.123)$
Financials/Private Services	$0.478 \\ (0.312)$	$-1.362^{***}$ (0.305)	$0.124 \\ (0.117)$	$\begin{array}{c} 0.033 \\ (0.138) \end{array}$
Big 5				
Openness	$-0.086^{*}$ (0.046)	$0.216^{***} \\ (0.047)$	$0.069^{***}$ (0.024)	0.016 (0.029)
Conscientiousness	$\begin{array}{c} 0.023 \ (0.061) \end{array}$	-0.048 (0.063)	-0.000 (0.032)	$-0.112^{***}$ (0.036)
Extraversion	$0.070 \\ (0.046)$	$-0.081^{*}$ (0.048)	$0.029 \\ (0.025)$	$\begin{array}{c} 0.008 \\ (0.030) \end{array}$
Agreeableness	0.054	-0.036	0.003	-0.083***

	(0.054)	(0.055)	(0.027)	(0.032)
	()	()	()	()
Neuroticism	$0.073^{*}$	-0.036	0.015	0.023
	(0.043)	(0.046)	(0.022)	(0.027)
			( )	
Willingness to take risks	-0.022	0.024	$0.070^{**}$	0.047
-	(0.062)	(0.065)	(0.032)	(0.037)
		× ,	· · · ·	
Locus of control	0.045	0.038	$0.246^{***}$	0.052
	(0.056)	(0.058)	(0.030)	(0.037)
	· · · ·	. ,	· · ·	. ,
Years (ref. 2019)				
2015	-0.258	$0.782^{***}$	0.000	0.000
	(0.273)	(0.251)	(.)	(.)
2017	-0.273	$0.839^{***}$	0.000	0.000
	(0.265)	(0.243)	(.)	(.)
2000			-0.222***	-0.336***
			(0.066)	(0.081)
222.4				0.4.4.4.4
2004			-0.147**	-0.141**
			(0.059)	(0.072)
	0.140	1 400*	0 100***	0.505***
Constant	0.168	-1.488**	-3.496***	-2.707***
	(0.834)	(0.891)	(0.431)	(0.502)
Number of Observations	6,109	6,109	16,538	16538
Log-Likelihood	-2,095	-2,108	-6,822	-5,072

Source: SOEP version 36. Own calculations.

Note: This table shows the parameter estimates of the logit estimation with participation in employer-financed training (column 1), self-financed training (column 2), general training (column3) and specific training (column 4) as independent variables and gender (female = 1) as the main dependent variable, in addition to controls. The results correspond to the marginal effects presented in Panel (B) of Table 1. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level.

#### Mixed logit regressions

Table A.6: Parameter estimates for mixed logit models with interactions for female only and male only managers

	Mixed Logit					
	Only Mar	Female nagers	Only Mar	V Male nagers		
	Basic (1)	Interacted (2)	Basic (3)	Interacted (4)		
Mean:	0.055	0.419	0.000*	0.040		
Female (ref. Male)	(0.055)	(0.418) (0.376)	(0.099)	(0.358)		
Age (ref. 55 Years Old)		( )		( )		
25 Years Old	$0.709^{***}$	1.123***	$1.034^{***}$	$1.041^{***}$		
	(0.099)	(0.195)	(0.101)	(0.180)		
35 Years Old	0.662***	0.802***	1.001***	0.962***		
45 Veens Old	(0.095)	(0.185)	(0.103)	(0.177)		
45 Years Old	$(0.093)^{-1}$	(0.527)	(0.091)	(0.168)		
Occupational Competency (ref. Below Average	e)	(0.110)	(0.001)	(0.100)		
Average	0.479***	0.209	$0.550^{***}$	$0.573^{***}$		
	(0.075)	(0.160)	(0.071)	(0.150)		
Above Average	0.766***	0.660***	1.035***	0.864***		
Job Mobility	(0.100) -0.452***	(0.182) -0.360***	(0.098) -0.594***	(0.169) -0.513***		
Job Mobility	(0.452)	(0.085)	(0.047)	(0.081)		
Hashility in other Finnes (not Only Hashle in I	(0.010)	(0.000)	(0.011)	(0.001)		
Usability in other Firms (ref. Only Usable in F	$-0.415^{***}$	-0.230	-0.517***	-0.702***		
I def of y	(0.075)	(0.163)	(0.072)	(0.152)		
Completely	-0.527***	-0.498***	-0.559***	-0.765***		
1 0	(0.079)	(0.159)	(0.073)	(0.149)		
Training Duration	-0.065***	-0.076***	$-0.045^{***}$	-0.063***		
	(0.011)	(0.021)	(0.010)	(0.020)		
Cost Coverage by the Employer (ref. 0 Percent	t) 0.010	0.115	0.059	0.000*		
50 Fercent	(0.019)	(0.168)	(0.038)	(0.288)		
100 Percent	-0.291***	$-0.305^{*}$	$-0.125^*$	0.157		
	(0.073)	(0.166)	(0.068)	(0.156)		
Interaction with Female Candidate by:						
Age (ref. 55 Years Old)						
25 Years Old		$-0.947^{***}$		-0.076		
		(0.303)		(0.271)		
35 Years Old		-0.384		-0.009		
45 Years Old		(0.292) 0.039		(0.269)		
40 10013 010		(0.297)		(0.276)		
Occupational Competency (ref. Bolow Average	2)	()		()		
Average	-)	$0.479^{*}$		0.023		
·o-		(0.288)		(0.261)		
Above Average		0.146		0.432		
		(0.311)		(0.283)		
Job Mobility		-0.260*		-0.043		
		(0.143)		(0.131)		
Usability in other Firms (ref. Only Usable in I	Firm)	0.001		0.051		
Partly		-0.384		0.351		
Completely		(0.277)		(0.255) 0.325		
Comprovery		(0.273)		(0.253)		
Training Duration		0.020		0.036		
		(0.038)		(0.036)		
Cost Coverage by the Employer (ref. 0 Percent	t)					
50 Percent	,	0.235		-0.444*		
		(0.289)		(0.262)		
100 Percent		0.020		$-0.607^{**}$		
SD:		(0.292)		(0.276)		
Female (ref. Male)	0.152	0.157	$0.588^{***}$	$0.582^{***}$		
	(0.277)	(0.272)	(0.101)	(0.104)		
Age (ref. 55 Years Old)	. ,	. /	. ,	. /		

25 Years Old	$0.543^{***}$	$0.585^{***}$	$-0.480^{**}$	-0.468**
	(0.201)	(0.189)	(0.213)	(0.220)
35 Years Old	0.120	0.096	$0.720^{***}$	$0.735^{***}$
	(0.302)	(0.321)	(0.173)	(0.176)
45 Years Old	-0.332	$0.533^{**}$	0.206	0.214
	(0.346)	(0.213)	(0.319)	(0.303)
Occupational Competency (ref. Below Average	e)			
Average	0.030	0.052	0.147	0.180
-	(0.257)	(0.273)	(0.352)	(0.346)
Above Average	1.188***	1.186***	1.202***	1.233***
-	(0.127)	(0.132)	(0.122)	(0.125)
Job Mobility	$0.347^{***}$	0.349***	0.442***	0.447***
·	(0.083)	(0.086)	(0.071)	(0.072)
Usability in other Firms (ref. Only Usable in F	Firm)			
Partly	0.007	-0.028	-0.096	-0.094
v	(0.230)	(0.250)	(0.262)	(0.283)
Completely	-0.478***	-0.470* <sup>**</sup>	-0.096	-0.103
	(0.155)	(0.160)	(0.234)	(0.244)
Training Duration	0.088***	0.092***	0.110***	0.112***
	(0.020)	(0.020)	(0.018)	(0.019)
Cost Coverage by the Employer (ref. 0 Percent	;)			
50 Percent	$0.359^{*}$	$0.358^{*}$	-0.360*	$-0.367^{*}$
	(0.203)	(0.207)	(0.195)	(0.195)
100 Percent	0.014	0.193	0.009	-0.003
	(0.566)	(0.294)	(0.249)	(0.245)
Number of Observations	5,812	5,812	7,682	7,682
Log-Likelihood	-1,762	-1,746	-2,277	-2,271

Source: BIBB-CBS 2017/2018. Own calculations.

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows the parameter estimates of the mixed logit estimates for the sample divided into only female and only male decision makers. Columns (1) and (2) provide the estimates for basic and interacted mixed logit estimation for female respondents only. Columns (3) and (4) show the estimates for the basic and interacted mixed logit estimation for male respondents only. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

# Weighted regression & without owners

	Logit Estimation	MSB (%	bias)		
	P(Female = 1) (1)	Unmatched (2)	Matched (3)	(4)t-test	p-value (5)
Firm Position:			. *		
Owner	-2.216***	-65.4	-5.1	-2.77	0.006
CEO	(0.104) -1.683*** (0.105)	-25.2	-1.7	-0.96	0.336
Department Head	(0.103) -1.034*** (0.113)	-3.4	-3.7	-1.82	0.069
Head HR	(0.113) $0.685^{***}$ (0.098)	58.6	5.8	2.33	0.020
Head Commerce	(0.093) $-0.716^{***}$ (0.110)	7.0	0.3	-0.17	0.867
Head of Training	$-0.3212^{***}$ (0.118)	16.2	-0.4	-0.17	0.867
Other Position	Ref.	35.1	5.4	2.25	0.025
Firm Tenure in Years	$0.002 \\ (0.003)$	-30.7	3.9	1.95	0.051
Educational Status:					
No Vocational Degree	$-1.693^{***}$ (0.354)	-8.6	-0.9	-0.62	0.536
Vocational Degree	$0.551^{***}$ (0.069)	32.0	12.0	5.45	0.000
Advanced Voc. Degree	$-0.135^{**}$ (0.059)	-24.6	-3.1	-1.56	0.118
Academic Degree	Ref.	-1.6	-6.8	-3.31	0.001
Firm's Training Decision:					
Alone	$-1.359^{***}$	-46.4	-4.7	-2.53	0.011
Together	(0.113) -1.033*** (0.103)	-6.8	-6.4	-3.13	0.002
Support	$-0.689^{***}$ (0.107)	37.2	13.4	5.89	0.000
Not Involved	Ref.	36.7	1.2	0.46	0.647
Reciprocity	$-0.164^{***}$ (0.020)	-17.6	12.6	5.58	0.000
Internal Locus of Control	$-0.058^{*}$ (0.035)	-6.5	-2.2	-1.11	0.266
Big Five:					
Openness	$0.206^{***}$	10.5	5.8	2.89	0.004
Conscientiousness	(0.026) $0.343^{***}$	18.9	8.8	4.50	0.000
	(0.034)	0.0		1.05	0.000
Extraversion	$(0.091^{****})$	9.8	2.2	1.07	0.282
Agreeableness	$(0.132^{+++})$ (0.028) $(0.027^{+++})$	14.1	-0.2	-0.10	0.923
Number of Employees in Firm	(0.023)	-20.0	7.0	2.50	0.002
Vocational Training Provider	(0.000) (0.000) -0.223***	-2.2	-7.5	-3.52	0.000
Firm.	(0.055)	-2.2	-4.1	-2.04	0.042
Export-oriented	$-1.044^{***}$ (0.089)	-17.3	1.1	0.62	0.538
High Competition	-0.036 (0.055)	2.0	1.3	0.63	0.530
Training Cooperations	-0.173*** (0.058)	-3.9	1.3	0.65	0.519
Profit Sharing	-0.215*** (0.055)	-3.1	-6.6	-3.21	0.001
Flexible Work Hours	(0.002) (0.053)	5.0	-0.8	-0.42	0.677
Autonomous Individual Holding	$\begin{array}{c} 0.467^{***} \\ (0.119) \end{array}$	-16.5	6.6	-3.21	0.001

Table A.7: Robustness analysis: propensity score estimation and matching quality

Independent Operation as Part of Enterprise	0.238*	7.6	2.0	0.92	0.356
Corporate Headquarter	(0.134) 0.275*	10.8	-24	-1.05	0 294
Corporate meauquarter	(0.144)	10.0	-2.4	-1.05	0.234
Branch Office	0.047	-0.3	-4.4	-2.09	0.037
	(0.140)				
Foundation, Institution, Authority	-0.192	4.8	3.8	1.83	0.068
Something Different	(0.188)	9 E	19.9	5.94	0.000
Something Different	nei.	0.0	-12.0	-0.24	0.000
Firm's Utilized Capacity	0.003	0.3	3.9	1.90	0.057
	(0.002)				
Firm Sector:					
Agriculture (A)	$0.387^{**}$	-6.3	0.3	0.15	0.884
Manufacturing $(C)$	(0.187) 0.524***	20.6	0.3	0.20	0.849
Manufacturing (C)	(0.125)	-20.0	-0.5	-0.20	0.642
Water Supply (E)	0.150	5.1	0.8	0.36	0.718
	(0.297)				
Construction (F)	-1.234* <sup>**</sup>	-35.6	1.8	1.35	0.178
	(0.137)				
Wholesale, Retail Trade (G)	0.230**	-5.0	-8.4	-4.05	0.000
Transportation (II)	(0.103) 0.506***	0.7	1 1	0.64	0.525
mansportation (II)	-0.590	-9.1	-1.1	-0.04	0.525
Accommodation Activities (I)	0.112	0.5	-7.2	-3.31	0.001
(-)	(0.126)			0.01	0.00-
Information Activities (J)	$0.291^{**}$	9.5	0.1	0.05	0.958
	(0.142)				
Finance and Insurance (K)	0.012	2.0	-0.2	-0.09	0.931
Pool Estato Activition (I)	(0.182) 0.471**	5.4	2.0	1.96	0.206
Real Estate Activities (L)	(0.471)	0.4	-3.0	-1.20	0.200
Professional Activities (M)	0.306***	0.7	9.3	4.81	0.000
	(0.117)		0.0		
Administrative Activities (N)	$1.198^{***}$	18.4	-1.9	-0.81	0.421
	(0.121)				
Public Administration (O)	-0.601***	-8.2	1.6	0.93	0.351
Education (D)	(0.211)	91.9	15.0	6.00	0.000
Education (F)	(0.260)	21.2	15.8	0.99	0.000
Human Health, Social Work (Q)	1.056***	24.3	10.8	4.89	0.000
	(0.108)	-			
Arts, Recreation (R)	$0.501^{**}$	2.8	-2.6	-1.14	0.255
	(0.253)				
Other service Activities (S)	1.131***	10.1	-12.2	-5.02	0.000
Other Prenches (in] Mining P. Electricity ()	(0.127)	5.0	0.5	0.25	0 802
Other Drahches (iiii. Minning D, Electricity C)	nei.	-5.0	-0.5	-0.25	0.805
Work Council	-0.638***	7.1	-10.4	-4.82	
	(0.076)				
Collective Bargaining Coverage	0.057	-4.2	-3.5	-1.71	0.087
<b>a</b>	(0.055)				
Constant	-0.281				
Observations	(0.369)				
Sample	Ps R9	LB chi2	n>chi?	Mean Rise	R
Unmatched	0.278	4419.84	0.00	14.5	137.4
Matched	0.035	460.51	0.00	4.6	44.3

-

 $Source: {\rm BIBB-CBS\ } 2017/2018, {\rm own\ calculations}. {\rm Standard\ errors\ in\ parentheses}. {***/**/*\ indicate\ statistical\ significance\ statistical\ significance\ statistical\ significance\ statistical\ statistical\$ at the 1%/5%/10%-level.

Note: The mean standardized bias (MSB) is reported before matching in column (2) and after matching in column (3). The t-test statistics in column (4) and the complementary p-values in column (5) correspond to a t-test for equality of

means in the two samples, before and after matching. The summary statistics contain for both the unmatched sample and the matched sample the Pseudo  $R^2$  values in column (1), the test statistics for the likelihood ratio test on the joint significance of all regressors in column (2) and the corresponding *p*-values in column (3), the mean biases in column (4), and Rubin's *B* estimates in column (5).

	Mixed Logit Interacted Weight			
	Only Female Managers (1)	Only Male Managers (2)		
Mean:	( )	( )		
Female (ref. Male)	$\begin{array}{c} 0.180 \\ (0.413) \end{array}$	$0.558 \\ (1.040)$		
Age (ref. 55 Years Old) 25 Years Old	1 101***	1 463***		
20 10/15 014	(0.206)	(0.403)		
35 Years Old	0.706***	0.653**		
	(0.200)	(0.328)		
45 Years Old	$0.468^{**}$	$0.591^{*}$		
Occupational Competency (ref. Below Average)	(0.198)	(0.312)		
Average	0.107	0.479		
	(0.183)	(0.302)		
Above Average	$0.654^{***}$	$1.055^{***}$		
	(0.208)	(0.358)		
Job Mobility	-0.417***	-0.514**		
Usability in other Firms (ref. Only Usable in Firm)	(0.086)	(0.207)		
Partly	-0.115	-0.371		
i di ury	(0.179)	(0.318)		
Completely	-0.560***	-0.343		
- F S	(0.173)	(0.256)		
Training Duration	-0.077* <sup>**</sup> *	-0.123**		
	(0.023)	(0.049)		
Cost Coverage by the Employer (ref. 0 Percent)				
50 Percent	-0.048	1.029**		
100 Demonst	(0.183)	(0.424)		
100 Percent	-0.293	(0.222)		
Interaction with Female Candidate by: Age (ref. 55 Years Old)	(0.165)	(0.352)		
25 Years Old	-1.041***	-0.456		
25 Voora Old	(0.323)	(0.694)		
55 Tears Old	(0.291)	(0.509)		
45 Years Old	0.163	0.074		
	(0.356)	(0.639)		
Occupational Competency (ref. Below Average) Average	0.761**	0.123		
0	(0.327)	(0.554)		
Above Average	0.329	0.169		
	(0.340)	(0.466)		
Job Mobility	-0.249	-0.152		
	(0.154)	(0.346)		
Usability in other Firms (ref. Below Average)	0 507*	0.954		
r ar try	-0.307 (0.303)	(0.234)		
Completely	-0.005	-0.265		
completely	(0.291)	(0.478)		
Training Duration	0.029	0.116		
<u> </u>	(0.041)	(0.083)		
Cost Coverage by the Employer (ref. 0 Percent)				
50 Percent	0.226	-1.115*		
	(0.315)	(0.623)		
100 Percent	-0.050	-1.029*		
SD.	(0.323)	(0.600)		
SD: Female (ref. Male)	0.919	0.308		
Temale (Iei. Male)	(0.212)	(0.350)		
Age (ref. 55 Years Old)	(0.210)	(0.000)		
25 Years Old	$0.753^{***}$	0.056		
	(0.192)	(0.090)		
35 Years Old	0.026	-0.524		
	(0.407)	(0.537)		
45 Years Old	-0.567**	-0.314		
Occurrentional Communication of D. 1. A	(0.242)	(0.366)		
Average	-0.047	0.115		

Table A.8: Parameter estimates for mixed logit models with interactions for female only and male only managers using propensity weights

-		
	(0.081)	(0.144)
Above Average	$1.115^{***}$	$1.760^{***}$
- -	(0.146)	(0.282)
Job Mobility	0.378***	0.239
	(0.085)	(0.149)
Usability in other Firms (ref. Only Usable in Firm)	· · · ·	
Partly	-0.111	$-0.437^{*}$
	(0.221)	(0.239)
Completely	-0.467* <sup>**</sup>	0.715***
	(0.178)	(0.262)
Training Duration	$0.095^{***}$	0.144***
	(0.023)	(0.030)
Cost Coverage by the Employer (ref. 0 Percent)	. ,	. ,
50 Percent	0.190	-0.068
	(0.331)	(0.131)
100 Percent	-0.077	-0.035
	(0.187)	(0.069)
Number of Observations	4,944	6,742
Log-Likelihood	-1,472	-1,318

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows the parameter estimates of the mixed logit estimation interacted with the gender (female = 1) of the potential training candidate for the sample split by region. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

#### Weighted regression & without owners

	Only Female Managers		Only Man	Male Magers
	ME	SE	ME	$\mathbf{SE}$
	(1)	(2)	(3)	(4)
Age				
25 Years Old	$-0.1341^{**}$	(0.0607)	0.0132	(0.1231)
35 Years Old	-0.0178	(0.0582)	0.1492	(0.1189)
45 Years Old	0.0550	(0.0588)	0.0880	(0.1139)
55 Years Old	0.0297	(0.0547)	0.0791	(0.1185)
Occupational Competency				
Below Average	0.0306	(0.0555)	0.0848	(0.1259)
Average	$0.1415^{***}$	(0.0505)	0.0882	(0.0965)
Above Average	0.0755	(0.0630)	0.0918	(0.1079)
Job Mobility	-0.0284	(0.0519)	0.0479	(0.0877)
Usability in other Firms				
Only Usable in Firm	0.0276	(0.0503)	0.0734	(0.1116)
Partly	-0.0521	(0.0553)	0.0416	(0.0880)
Completely	0.0282	(0.0505)	0.0398	(0.0959)
Training Duration	0.0628	(0.0479)	$0.1913^{*}$	(0.1070)
Cost Coverage by the Employer		. ,		. ,
0 Percent	0.0282	(0.0514)	0.0747	(0.1136)
50 Percent	0.0634	(0.0557)	-0.0721	(0.1123)
100 Percent	0.0208	(0.0570)	-0.0824	(0.1167)
Number of Observations	4,944		6,742	

Table A.9: Gender gap in marginal effects - weighted

Source: BIBB-CBS 2017/2018. Own calculations.

Note: This table shows the gender gaps in marginal effects corresponding to Table A.8. A positive value corresponds to a preference of male over female training candidates in the corresponding attribute. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

	Mixed Log	it Interacted - W	ithout Owner
	All Managers (1)	Only Female Managers (2)	Only Male Managers (3)
Mean: Female (ref. Male)	0.500	0.420	0.515
remaie (rei. Maie)	(0.311)	(0.414)	(0.503)
Age (ref. 55 Years Old)	1 1 0 9 * * *	1 190***	1.000***
25 Years Old	$1.163^{+++}$	$1.130^{+++}$	$1.286^{****}$
35 Years Old	0.101)	0.210)	(0.203) 1 228***
55 Itals Old	(0.152)	(0.199)	(0.257)
45 Years Old	0.677***	0.535***	0.892***
Occupational Competency (ref. Below Average)	(0.146)	(0.190)	(0.243)
Average	0.303**	0.178	$0.469^{**}$
0	(0.130)	(0.174)	(0.212)
Above Average	0.726***	$0.628^{***}$	$0.862^{***}$
	(0.148)	(0.196)	(0.240)
Job Mobility	-0.390***	-0.321***	-0.510***
	(0.069)	(0.091)	(0.113)
Usability in other Firms (ref. Only Usable in Firm)	0 /19***	0 127	0 020***
i ai uly	-0.410	-0.137 (0.176)	$(0.052^{\circ})$
Completely	-0.564***	-0.418**	-0.827***
	(0.130)	(0.173)	(0.212)
Training Duration	-0.063***	-0.072***	-0.063**
~	(0.017)	(0.022)	(0.028)
Cost Coverage by the Employer (ref. 0 Percent)			
50 Percent	0.077	-0.095	$0.381^{*}$
100 D	(0.135)	(0.181)	(0.219)
100 Percent	-0.079	-0.363**	(0.293)
Interaction with Female Candidate by: Age (ref. 55 Years Old)	(0.155)	(0.175)	(0.221)
25 Years Old	-0.458*	$-0.772^{**}$	-0.046
	(0.243)	(0.325)	(0.388)
35 Years Old	-0.296	-0.324	-0.288
47 Verse Old	(0.233)	(0.311)	(0.380)
45 Years Old	(0.242)	(0.323)	-0.392
Occupational Competency (ref. Below Average)	(0.212)	(0.020)	(0.001)
Average	0.264	0.430	0.156
	(0.233)	(0.315)	(0.372)
Above Average	0.263	0.155	0.557
	(0.251)	(0.337)	(0.406)
Job Mobility	$-0.191^{*}$	-0.291*	-0.066
Usability in other Firms (ref. Only Usable in Firm)	(0.115)	(0.155)	(0.183)
Partly	-0.115	-0.518*	0.452
	(0.223)	(0.300)	(0.358)
Completely	-0.043	-0.274	0.346
- •	(0.222)	(0.298)	(0.356)
Training Duration	-0.003	0.017	-0.020
Cost Coverage by the Employer (ref. 0 Percent)	(0.031)	(0.041)	(0.050)
50 Percent	-0.112	0.191	-0.613*
	(0.231)	(0.311)	(0.372)
100 Percent	-0.323	$0.150^{'}$	-1.004**
	(0.238)	(0.313)	(0.396)
SD:	0.000*	0.094	0 495***
remaie (ref. Male)	$0.269^{*}$	-0.084	$0.435^{***}$
Age (ref. 55 Years Old)	(0.158)	(0.208)	(0.108)
25 Years Old	-0.572***	0.612***	0.472
	(0.168)	(0.211)	(0.303)
35 Years Old	-0.218	0.084	0.589**
	(0.330)	(0.313)	(0.264)
45 Years Old	0.295	$-0.504^{**}$	-0.168
	(0.256)	(0.252)	(0.310)
Occupational Competency (ref. Below Average)	0.947	0.097	0 900
Average	(0.247)	-0.027	-0.388
	1.007***	(0.290)	(0.200)

Table A.10: Parameter estimates for mixed logit models with interactions without firm owners

	(0.112)	(0.144)	(0.199)
Job Mobility	0.381***	0.393***	0.422***
	(0.067)	(0.088)	(0.108)
Usability in other Firms (ref. Only Usable in Firm)			
Partly	-0.020	0.065	0.001
	(0.217)	(0.295)	(0.239)
Completely	$0.322^{*}$	$0.442^{**}$	0.003
	(0.180)	(0.190)	(0.348)
Training Duration	$0.097^{***}$	$0.081^{***}$	$0.127^{***}$
	(0.017)	(0.023)	(0.026)
Cost Coverage by the Employer (ref. 0 Percent)			
50 Percent	-0.219	-0.251	0.298
	(0.273)	(0.327)	(0.445)
100 Percent	0.003	0.179	0.005
	(0.164)	(0.292)	(0.201)
Number of Observations	8,874	4,816	4,058
Log-Likelihood	-2,638	-1,448	-1,169

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows the parameter estimates of the mixed logit estimates for... \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

		1	0.1.7		0.1	
	A	1	Only I	emale	Only	Male
	Mana	gers	Managers		Managers	
	ME	SE	ME	SE	ME	SE
	(1)	(2)	(3)	(4)	(5)	(6)
Age						
25 Years Old	0.0065	(0.0437)	$-0.0965^{*}$	(0.0560)	0.0653	(0.0663)
35 Years Old	0.0326	(0.0396)	0.0157	(0.0562)	0.0322	(0.0619)
45 Years Old	0.0626	(0.0419)	0.0887	(0.0593)	0.0183	(0.0650)
55 Years Old	$0.0822^{**}$	(0.0396)	0.0709	(0.0558)	0.0770	(0.0656)
Occupational Competency				. ,		. ,
Below Average	$0.0856^{**}$	(0.0406)	0.0725	(0.0563)	0.0815	(0.0677)
Average	$0.1151^{***}$	(0.0404)	$0.1318^{**}$	(0.0528)	0.0905	(0.0616)
Above Average	$0.1124^{**}$	(0.0450)	0.0880	(0.0616)	$0.1386^{**}$	(0.0673)
Job Mobility	0.0378	(0.0372)	0.0017	(0.0523)	0.0626	(0.0585)
Usability in other Firms		. ,		. ,		. ,
Only Usable in Firm	$0.0757^{**}$	(0.0357)	0.0658	(0.0517)	0.0695	(0.0582)
Partly	$0.0614^{*}$	(0.0362)	-0.0159	(0.0562)	$0.1390^{**}$	(0.0588)
Completely	$0.0728^{**}$	(0.0319)	0.0239	(0.0472)	$0.1236^{**}$	(0.0535)
Training Duration	$0.0765^{**}$	(0.0338)	$0.0888^{*}$	(0.0482)	0.0539	(0.0545)
Cost Coverage by the Employer				. ,		. ,
0 Percent	$0.0778^{**}$	(0.0370)	0.0670	(0.0524)	0.0721	(0.0617)
50 Percent	0.0605	(0.0413)	$0.0975^{*}$	(0.0580)	-0.0335	(0.0683)
100 Percent	0.0282	(0.0427)	0.0925	(0.0590)	-0.0997	(0.0699)
Number of Observations	8,874	,	4,816	,	4,058	,

Table A.11: Gender gap in marginal effects - without owners

Source: BIBB-CBS 2017/2018. Own calculations.4,0104,058Note: This table shows the gender gap in marginal effects corresponding to Table A.10. A positive value corresponds to a preference of male over female training candidates in the corresponding attribute.\*\*\*/\*\*/\*\*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

## Heterogeneity/potential channels

Table A.12: Parameter estimates for mixed logit models with interactions for female only and male only managers divided by gender composition of sectors

	Mixed Logi Female dominated sector		t Interacted Male dominated sector		
	Only Female Managers (1)	Only Male Managers (2)	Only Female Managers (3)	Only Male Managers (4)	
Mean: Female (ref. Male)	1.168	0.055	0.086	-0.239	
Age (ref. 55 Years Old) 25 Years Old	1.694***	0.852**	1.334***	1.072***	
35 Years Old	(0.471) $0.922^{**}$ (0.424)	(0.399) 0.567 (0.200)	(0.285) $0.737^{***}$ (0.266)	(0.256) $0.912^{***}$ (0.252)	
45 Years Old	(0.424) 0.446 (0.393)	(0.390) 0.161 (0.375)	(0.200) 0.410 (0.252)	(0.253) $0.659^{***}$ (0.238)	
Occupational Competency (ref. Below Average) Average	-0.381	0.625*	-0.080	0.892***	
Above Average	(0.363) 0.410 (0.400)	(0.340) 0.543 (0.260)	(0.230) $0.547^{**}$ (0.252)	(0.215) $0.975^{***}$ (0.244)	
Job Mobility	(0.400) - $0.464^{**}$ (0.190)	(0.309) $-0.377^{**}$ (0.173)	(0.253) $-0.331^{***}$ (0.125)	(0.244) $-0.568^{***}$ (0.115)	
Usability in other Firms (ref. Only Usable in Firm) Partly	-0.799**	-0.996***	-0.213	-0.792***	
Completely	(0.400) -0.548	(0.361) -0.924***	(0.233) -0.631***	(0.219) -0.857***	
Training Duration	(0.343) -0.073 (0.045)	(0.349) -0.051 (0.045)	(0.228) -0.078** (0.031)	(0.217) -0.103*** (0.028)	
Cost Coverage by the Employer (ref. 0 Percent) 50 Percent	0.133	0.966**	-0.182	0.505**	
100 Percent	(0.377) -0.506	(0.377) 0.398	(0.237) -0.154	(0.221) 0.360	
<b>Interaction with Female Candidate by:</b> Age (ref. 55 Years Old)	(0.369)	(0.360)	(0.234)	(0.220)	
25 Years Old	$-1.210^{*}$ (0.673)	-0.075 (0.610)	$-1.283^{***}$ (0.440)	$\begin{array}{c} 0.106 \ (0.378) \end{array}$	
35 Years Old	-0.601 (0.653)	$0.726 \\ (0.610) \\ 0.280$	-0.369 (0.421)	$\begin{array}{c} 0.089\\ (0.381)\\ 0.025 \end{array}$	
45 Years Old	(0.657)	(0.623)	(0.430)	(0.388)	
Average	$1.334^{**}$ (0.668)	-0.154 (0.571)	$1.052^{**}$ (0.414)	-0.359 (0.372)	
Above Average	0.353 (0.690)	0.994 (0.662)	0.417 (0.443)	0.462 (0.398)	
Job Mobility	-0.362 (0.309)	-0.003 (0.292)	-0.335 (0.209)	$\begin{array}{c} 0.015 \\ (0.185) \end{array}$	
Partly	-0.090 (0.635)	0.835 (0.587)	-0.226 (0.394)	0.485 (0.367)	
Completely	-0.692 (0.612)	0.437 (0.582)	-0.007 (0.399)	0.286 (0.358)	
Training Duration	-0.068 (0.084)	$\begin{array}{c} 0.011 \\ (0.079) \end{array}$	$\begin{array}{c} 0.070 \\ (0.055) \end{array}$	$\begin{array}{c} 0.097^{*} \\ (0.050) \end{array}$	
Cost Coverage by the Employer (ref. 0 Percent) 50 Percent	-0.288	$-1.355^{**}$	0.302	$-0.827^{**}$	
100 Percent	(0.047) -0.050 (0.638)	(0.641) $-1.215^{*}$ (0.642)	(0.403) -0.304 (0.408)	(0.375) -1.107*** (0.396)	
<b>SD:</b> Female (ref. Male)	-0.051	0.345 (0.378)	0.144 (0.335)	0.734***	
Age (ref. 55 Years Old) 25 Years Old	0.755**	0.738*	0.502*	0.183	
35 Years Old	(0.367) 0.125 (0.435)	(0.412) -0.787* (0.415)	(0.300) -0.129 (0.429)	(0.455) $0.947^{***}$ (0.234)	

45 Years Old	$0.772^{**}$	0.275	0.453	0.161
	(0.391)	(0.465)	(0.361)	(0.435)
Occupational Competency (ref. Below Average)	, ,	. ,	. ,	. ,
Average	-0.140	0.148	-0.171	-0.533**
5	(0.556)	(0.307)	(0.293)	(0.242)
Above Average	1.535***	1.289***	1.082***	1.448***
Ũ	(0.346)	(0.306)	(0.180)	(0.194)
Job Mobility	$0.376^{*}$	$0.338^{*}$	0.392***	0.519***
v	(0.198)	(0.194)	(0.106)	(0.105)
Usability in other Firms (ref. Only Usable in Firms)		( )	( )	( )
Partly	0.352	-0.012	-0.101	0.241
	(0.357)	(0.504)	(0.357)	(0.450)
Completely	-0.697**	-0.541	-0.117	0.146
	(0.322)	(0.380)	(0.296)	(0.364)
Training Duration	0.042	0.114***	0.095***	$0.109^{***}$
3	(0.109)	(0.039)	(0.028)	(0.028)
Cost Coverage by the Employer (ref. 0 Percent)		( )	( )	( )
50 Percent	$0.839^{***}$	$0.627^{*}$	-0.312	-0.317
	(0.323)	(0.374)	(0.304)	(0.295)
100 Percent	$0.689^{**}$	0.008	-0.198	0.096
	(0.339)	(0.771)	(0.381)	(0.384)
Number of Observations	1,676	1,628	2,816	4,402
Log-Likelihood	-477	-488	-837	-1,279

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows the parameter estimates of the mixed logit estimation interacted with the gender (female = 1) of the potential training candidate for the sample split by region. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

	Mixed Logit – Labor market tightness			
	Only Female		Only	Male
	Managers		Man	agers
	Below median (1)	Above median (2)	Below median (3)	Above median (4)
Mean: Female (ref. Male)	0.081	0.562	0.648	-0.265
Age (ref. 55 Years Old) 25 Years Old	1.031***	1.175***	(0.013) $0.567^*$	1.280***
35 Years Old	(0.331)	(0.255)	(0.323)	(0.227)
	$1.161^{***}$	$0.605^{**}$	$1.092^{***}$	$0.906^{***}$
45 Years Old	(0.319)	(0.240)	(0.332)	(0.217)
	$0.618^{**}$	$0.527^{**}$	0.457	$0.825^{***}$
Professional Competency (ref. Below Average)	(0.302)	(0.233)	(0.310)	(0.206)
Average	-0.051	$0.367^*$	0.046	$0.800^{***}$
Above Average	(0.270)	(0.211)	(0.281)	(0.186)
	0.476	$0.812^{***}$	$0.719^{**}$	$0.955^{***}$
Job Mobility	(0.313)	(0.235)	(0.317)	(0.208)
	-0.343**	-0.405***	-0.484***	- $0.550^{***}$
	(0.150)	(0.108)	(0.150)	(0.099)
Usability in other Firms (ref. Only Usable in Firm) Partly	-0.044	-0.396*	-0.522*	(0.033)
Completely	(0.285)	(0.209)	(0.277)	(0.187)
	- $0.658^{**}$	- $0.473^{**}$	-0.316	-0.933***
Training Duration	(0.292)	(0.201)	(0.290)	(0.182)
	-0.132***	-0.050*	-0.037	-0.077***
	(0.028)	(0.026)	(0.037)	(0.024)
Cost Coverage by the Employer (ref. 0 Percent) 50 Percent	-0.201	-0.136	(0.037) 0.591**	(0.024)
100 Percent	(0.287)	(0.221)	(0.301)	(0.186)
	-0.323	-0.319	0.345	0.129
Interaction with Female Candidate by: Age (ref. 55 Years Old)	(0.279)	(0.219)	(0.295)	(0.191)
35 Years Old	(0.510)	(0.397)	(0.521)	(0.334)
	-0.728	-0.172	-0.166	0.066
45 Years Old	(0.495)	(0.382)	(0.499)	(0.330)
	0.057	-0.030	0.058	-0.208
	(0.510)	(0.386)	(0.522)	(0.237)
Professional Competency (ref. Below Average) Average	0.749	0.352	0.649	-0.225
Above Average	(0.475)	(0.382)	(0.496)	(0.318)
	0.220	0.116	0.228	0.517
	(0.558)	(0.396)	(0.552)	(0.340)
Job Mobility	(0.339) (0.250)	-0.245 (0.184)	(0.002) (0.007) (0.248)	(0.010) -0.067 (0.159)
Usability in other Firms (ref. Only Usable in Firm) Partly	-1.012**	-0.020	0.218	0.409
Completely	(0.496)	(0.347)	(0.471)	(0.313)
	-0.115	-0.138	0.158	0.347
	(0.479)	(0.351)	(0.489)	(0.307)
Training Duration	$0.116^{*}$	-0.031	-0.049	$(0.073^{*})$
	(0.067)	(0.049)	(0.067)	(0.043)
Cost Coverage by the Employer (ref. 0 Percent) 50 Percent	0.304	0.303	-0.718	-0.326
100 Percent	(0.490)	(0.383)	(0.505)	(0.310)
	0.173	-0.032	$-1.072^{**}$	-0.525
	(0.494)	(0.383)	(0.527)	(0.335)
SD: Female (ref. Male)	-0.065	0.381**	0.680***	0.476***
Age (ref. 55 Years Old)	(0.256)	(0.188)	(0.174)	(0.146)
25 Years Old 35 Years Old	$0.818^{***}$ (0.301) -0.072	-0.385 (0.316) -0.093	(0.429) (0.529)	$(0.081^{***})$ (0.217) $0.926^{***}$
45 Years Old	(0.472)	(0.443)	(0.376)	(0.195)
	0.083	-0.651**	-0.053	0.306
Professional Competency (ref. Below Average)	(0.708)	(0.262)	(0.338)	(0.335)

Table A.13: Parameter estimates for mixed logit models with interactions for female only and male only managers divided by median worker availability
Average	-0.508*	0.034	0.115	-0.109
	(0.299)	(0.232)	(0.614)	(0.287)
Above Average	1.043***	1.286***	1.194***	1.280***
	(0.224)	(0.175)	(0.233)	(0.154)
Job Mobility	$0.362^{**}$	$0.413^{***}$	0.295	$0.499^{***}$
	(0.149)	(0.102)	(0.202)	(0.084)
Usability in other Firms (ref. Only Usable in Firm)				
Partly	-0.244	0.085	0.211	-0.043
	(0.442)	(0.304)	(0.724)	(0.348)
Completely	$0.804^{***}$	-0.073	-0.091	0.014
	(0.218)	(0.449)	(0.421)	(0.454)
Training Duration	$0.087^{**}$	$0.107^{***}$	$0.121^{***}$	$0.108^{***}$
	(0.042)	(0.025)	(0.033)	(0.024)
Cost Coverage by the Employer (ref. 0 Percent)	· · · ·		× /	. ,
50 Percent	$0.601^{**}$	-0.021	0.182	$0.527^{***}$
	(0.281)	(0.494)	(0.967)	(0.194)
100 Percent	-0.032	0.289	-0.015	-0.085
	(0.657)	(0.359)	(0.310)	(0.346)
Number of Observations	2,146	3,666	2,030	5,652
Log-Likelihood	-643	-1,087	-600	-1,643

Source: BIBB-CBS 2017/2018. Own calculations. Note: \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

	Mi	xed Logit – I	High compet	ition
	Only Mar	Female agers	Only Man	Male agers
	No (1)	Yes (2)	No (3)	$\operatorname{Yes}_{(4)}$
Mean: Female (ref. Male)	1.606*	0.001	-0.011	0.058
Age (ref. 55 Years Old) 25 Years Old	(0.864) $1.665^{***}$	(0.464) $1.044^{***}$	(0.767) $1.045^{***}$	(0.449) $1.169^{**}$
35 Years Old	(0.452) $1.256^{***}$	(0.240) $0.707^{***}$	(0.364) $1.123^{***}$	(0.236) $1.081^{**}$
45 Years Old	(0.439) $0.922^{**}$ (0.403)	(0.225) $0.445^{**}$ (0.215)	(0.376) 0.511 (0.341)	(0.230) $0.914^{***}$ (0.223)
Professional Competency (ref. Below Average)	(0.405)	(0.210)	(0.041)	(0.225)
Average	-0.289	$0.372^{*}$	$1.194^{***}$	$0.416^{**}$
A.b	(0.341)	(0.201)	(0.342)	(0.191)
Above Average	(0.348)	$(0.827^{****})$	$1.491^{+++}$	(0.915)
Joh Mohility	(0.307) -0.264	(0.229) -0.411***	(0.380) -0.461***	(0.213) -0 501**
JOD MODILLY	(0.169)	(0.106)	(0.170)	(0.104)
Usability in other Firms (ref. Only Usble in Firm)	(0.100)	(0.100)	(0.110)	(0.104)
Partly	-0.196	-0.196	-0.836***	-0.761**
-	(0.337)	(0.200)	(0.315)	(0.196)
Completely	$-0.614^{*}$	-0.477* <sup>*</sup> *	$-1.122^{***}$	-0.742**
	(0.332)	(0.198)	(0.326)	(0.192)
Training Duration	$-0.076^{*}$	-0.083***	$-0.072^{*}$	-0.064**
	(0.045)	(0.026)	(0.042)	(0.025)
Cost Coverage by the Employer (ref. 0 Percent)			0.044	0.004
50 Percent	-0.206	-0.127	0.241	0.324
100 D	(0.363)	(0.208)	(0.318)	(0.198)
100 Percent	-0.517	-0.267	0.099	0.211
Interation with Female Candidate by: Age (ref. 55 Years Old) 25 Vears Old	-1 389**	-0.910**	0.468	-0.274
20 Tears Old	(0.626)	(0.379)	(0.553)	(0.349)
35 Years Old	-0.779	-0.242	0.215	-0.170
	(0.617)	(0.361)	(0.558)	(0.347)
45 Years Old	0.034	0.054	0.261	-0.298
	(0.626)	(0.364)	(0.562)	(0.358)
Professional Competency (ref. Below Average)	. ,	. ,		· · · ·
Average	0.652	$0.622^{*}$	-0.823	0.361
	(0.609)	(0.359)	(0.554)	(0.333)
Above Average	-0.201	0.398	-0.252	0.830**
	(0.648)	(0.388)	(0.564)	(0.375)
Job Mobility	-0.384	-0.284	-0.345	0.048
	(0.311)	(0.179)	(0.271)	(0.165)
Usability in other Firms (ref. Only Usable in Firm)	1.004	0.00 <b>-</b>		0.004
Partly	-1.064*	-0.305	0.370	0.394
C I I I	(0.633)	(0.336)	(0.524)	(0.324)
Completely	-0.400	-0.063	(0.368)	(0.408)
Training Duration	(0.081)	(0.342)	(0.529)	(0.325)
	-0.003 (0.089)	(0.055	(0.000)	(0.014)
Cost Coverage by the Employer (ref. 0 Percent)	(0.062)	(0.040)	(0.075)	(0.040)
50 Percent	0.220	0.312	-0.177	-0.579*
	(0.605)	(0.360)	(0.536)	(0.338)
100 Percent	0.333	-0.107	0.012	-0.980**
	(0.619)	(0.361)	(0.565)	(0.358)
SD:	( · · · /	× /	<pre>/</pre>	( 0)
Female (ref. Male)	$0.624^{**}$	0.113	$0.868^{***}$	$0.546^{**}$
	(0.263)	(0.261)	(0.220)	(0.143)
	. ,			. ,
Age (ref. 55 Years Old)	0 620	$0.760^{***}$	-0.425	$0.667^{**}$
Age (ref. 55 Years Old) 25 Years Old	-0.059			(0,000)
Age (ref. 55 Years Old) 25 Years Old	(0.418)	(0.223)	(0.429)	(0.233)
Age (ref. 55 Years Old) 25 Years Old 35 Years Old	(0.418) 0.537	$(0.223) \\ 0.032$	(0.429) -1.245***	(0.233) $0.612^{**}$
Age (ref. 55 Years Old) 25 Years Old 35 Years Old	(0.418) (0.537) (0.468)	$(0.223) \\ 0.032 \\ (0.411)$	(0.429) -1.245*** (0.336)	(0.233) $0.612^{**}$ (0.266)
Age (ref. 55 Years Old) 25 Years Old 35 Years Old 45 Years Old	(0.418) (0.468) $(0.780^{**})$	(0.223) 0.032 (0.411) $-0.468^*$	(0.429) -1.245*** (0.336) $0.763^*$	(0.233) $0.612^{**}$ (0.266) -0.028

Table A.14: Parameter estimates for mixed logit models with interactions for female only and male only managers divided by high competition status (yes/no)

Average	$0.768^{**}$	-0.021	0.001	$0.626^{***}$
	(0.315)	(0.205)	(0.279)	(0.199)
Above Average	1.361***	$1.175^{***}$	1.252***	1.391***
	(0.321)	(0.163)	(0.267)	(0.171)
Job Mobility	0.551***	0.303***	$0.658^{***}$	0.450***
	(0.181)	(0.107)	(0.156)	(0.097)
Usability in other Firms (ref. Only Usable in Firm)		· · ·	. ,	. ,
Partly	-0.130	0.196	-0.103	0.192
	(0.618)	(0.238)	(0.367)	(0.349)
Completely	-0.020	-0.500* <sup>**</sup>	0.314	0.070
	(0.549)	(0.187)	(0.337)	(0.342)
Training Duration	$0.132^{***}$	$0.092^{***}$	$0.149^{***}$	$0.119^{***}$
	(0.046)	(0.026)	(0.037)	(0.024)
Cost Coverage by the Employer (ref. 0 Percent)	. ,	. ,	. ,	. ,
50 Percent	$0.877^{***}$	0.222	$-0.684^{**}$	$-0.437^{*}$
	(0.307)	(0.300)	(0.323)	(0.224)
100 Percent	-0.197	0.090	-0.035	-0.244
	(0.387)	(0.708)	(0.319)	(0.295)
Number of Observations	1,908	3,892	2,522	5,160
Log-Likelihood	-581	-1,135	-731	-1,519

Source: BIBB-CBS 2017/2018. Own calculations. Note: \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

	Mixed Logit – Tenure					
	Only Man	Female agers	Only Man	Male agers		
	Below median (1)	Above median (2)	Below median (3)	Above median (4)		
Mean:						
Female (ref. Male)	0.549	0.334	0.914	-0.658		
Age (ref. 55 Years Old)	(0.547)	(0.570)	(0.575)	(0.498)		
25 Years Old	1.481***	$0.813^{***}$	$1.265^{***}$	$0.997^{***}$		
25 Veers Old	(0.292)	(0.288)	(0.296)	(0.248)		
35 Tears Old	(0.266)	(0.289)	(0.285)	(0.249)		
45 Years Old	0.931***	0.187	0.803***	0.708***		
Professional Competency (ref. Polow Average)	(0.263)	(0.276)	(0.272)	(0.232)		
Average	0.133	0.390	0.309	$0.799^{***}$		
	(0.223)	(0.252)	(0.241)	(0.211)		
Above Average	0.609**	$0.795^{***}$	$1.001^{***}$	0.788***		
Job Mobility	(0.200) -0.324***	(0.276) -0.455***	(0.272) -0.528***	(0.237) -0.553***		
	(0.119)	(0.132)	(0.129)	(0.113)		
Usability in other Firms (ref. Only Usable in Firm)	0 501 **	0.014	0	0.000***		
Partly	$-0.521^{**}$ (0.239)	(0.014)	$-0.797^{***}$ (0.247)	-0.698*** (0.208)		
Completely	-0.804***	-0.228	-0.700***	-0.867***		
	(0.236)	(0.240)	(0.237)	(0.211)		
Training Duration	$-0.054^{*}$	$-0.120^{***}$	-0.014	$-0.098^{***}$		
Cost Coverage by the Employer (ref. 0 Percent)	(0.050)	(0.032)	(0.032)	(0.028)		
50 Percent	-0.197	0.092	0.297	0.319		
100 Democrat	(0.240)	(0.263)	(0.247)	(0.216)		
100 Percent	(0.234)	(0.155)	(0.254)	(0.215)		
<b>Interaction with Female Candidate by:</b> Age (ref. 55 Years Old)	(0.201)	(0.202)	(0.202)	(0.220)		
25 Years Old	-1.408***	-0.409	-0.069	-0.114		
35 Years Old	(0.433)	(0.466)	(0.438)	(0.376) 0.138		
55 Tears Ord	(0.410)	(0.458)	(0.438)	(0.368)		
45 Years Old	-0.837*	0.876*	-0.226	-0.002		
Professional Competency (ref. Below Average)	(0.436)	(0.465)	(0.445)	(0.384)		
Average	0.504	0.430	0.433	-0.311		
	(0.411)	(0.438)	(0.420)	(0.360)		
Above Average	0.295	0.100	0.565	0.445		
Job Mobility	-0.348*	-0.201	-0.065	-0.019		
v	(0.204)	(0.220)	(0.209)	(0.180)		
Training Duration	0.009	0.045	-0.054	$0.089^{*}$		
Usability in other Firms (ref. Only Usable in Firm)	(0.055)	(0.057)	(0.057)	(0.050)		
Partly	-0.035	$-0.815^{*}$	0.179	0.510		
Completely	(0.385)	(0.446)	(0.401)	(0.357)		
Completely	(0.391)	(0.419)	(0.404)	(0.354)		
Cost Coverage by the Employer (ref. 0 Percent)	· · · ·	· · · ·	· · · ·			
50 Percent	0.319	-0.042	-0.442	-0.490		
100 Percent	(0.415) 0.167	-0.219	(0.421) -1.385***	-0.087		
	(0.408)	(0.464)	(0.460)	(0.377)		
SD:	0.909	0.180	0 547***	0 650***		
remaie (rei. maie)	(0.202)	(0.189)	(0.172)	(0.141)		
Age (ref. 55 Years Old)	· /	x/	<u> </u>	x/		
25 Years Old	$0.775^{***}$	-0.221	0.483	$-0.633^{**}$		
35 Years Old	(0.243) 0.020	(0.405) -0.505	(0.387) -0.422	0.980***		
	(0.349)	(0.326)	(0.353)	(0.217)		
45 Years Old	-0.117	$0.814^{***}$	0.076	-0.325		
	10.4101	10.4001	10.0101	10.0101		

Table A.15: Parameter estimates for mixed logit models with interactions for female only and male only managers divided by median tenure

Professional Competency (ref. Below Average)				
Average	-0.160	-0.237	0.203	-0.451*
	(0.432)	(0.410)	(0.299)	(0.230)
Above Average	$1.337^{***}$	$1.153^{***}$	1.416***	1.219***
	(0.212)	(0.202)	(0.223)	(0.170)
Job Mobility	$0.415^{***}$	$0.374^{***}$	$0.395^{***}$	$0.562^{***}$
	(0.118)	(0.113)	(0.120)	(0.098)
Usability in other Firms (ref. Only Usable in Firm)				
Partly	-0.090	-0.030	0.054	-0.270
	(0.256)	(0.501)	(0.279)	(0.338)
Completely	0.413	$0.542^{**}$	0.130	0.102
	(0.265)	(0.240)	(0.330)	(0.373)
Training Duration	$0.131^{***}$	0.023	$0.149^{***}$	$0.085^{***}$
	(0.028)	(0.076)	(0.028)	(0.027)
Cost Coverage by the Employer (ref. 0 Percent)				
50 Percent	$-0.509^{**}$	-0.349	0.435	-0.360
	(0.223)	(0.309)	(0.321)	(0.282)
100 Percent	0.196	-0.137	-0.059	0.211
	(0.325)	(0.721)	(0.260)	(0.418)
Number of Observations	3,210	2,602	3,242	4,440
Log-Likelihood	-964	-760	-924	-1,322

Source: BIBB-CBS 2017/2018. Own calculations. Note: \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

	Mixed Logit – Collective Baragining				
	Only Fema	ale Managers	Only Mal	e Managers	
	Yes (1)	No (2)	Yes (3)	No (4)	
Mean: Formale (ref. Male)	0.347	0.248	1 185*	0 108	
remaie (rei. maie)	(0.580)	(0.488)	(0.627)	(0.498)	
Age (ref. 55 Years Old)					
25 Years Old	$0.765^{**}$	$1.357^{***}$	$1.105^{***}$	$1.210^{***}$	
35 Years Old	(0.273) $0.857^{**}$	(0.202) $1.116^{***}$	(0.311) $0.737^{**}$	(0.203) $0.940^{***}$	
	(0.282)	(0.247)	(0.301)	(0.250)	
45 Years Old	$0.602^{**}$	0.826***	$0.747^{**}$	$0.425^{*}$	
Professional Competency (ref. Below Average)	(0.265)	(0.237)	(0.289)	(0.236)	
Average	$0.568^{**}$	$0.565^{**}$	0.290	0.080	
0	(0.232)	(0.212)	(0.259)	(0.217)	
Above Average	0.860**	0.851***	$0.676^{**}$	0.686**	
Job Mobility	(0.275)	(0.230)	(0.292) -0.352**	(0.242)	
Job Mobility	(0.126)	(0.115)	(0.140)	(0.115)	
Usability in other Firms (ref. Only Usable in Firms)		( )	( )	( )	
Partly	-0.912***	-0.610**	-0.525**	-0.059	
Completely	(0.253) 0.013***	(0.205)	(0.267)	(0.215) 0.600**	
Completely	(0.245)	(0.202)	(0.256)	(0.213)	
Training Duration	-0.071**	-0.062**	-0.058*	-0.089**	
	(0.031)	(0.027)	(0.033)	(0.028)	
50 Percent	0.266	0.354*	-0.017	-0.281	
50 Tercent	(0.250)	(0.213)	(0.272)	(0.228)	
100 Percent	0.137	0.249	-0.084	-0.526**	
	(0.246)	(0.217)	(0.267)	(0.227)	
Interacted with Female Candidate by:					
25 Years Old	0.459	-0.534	-0.946*	-1.042**	
	(0.424)	(0.385)	(0.483)	(0.406)	
35 Years Old	0.243	-0.217	-0.237	-0.563	
45 Voors Old	(0.424)	(0.379) 0.345	(0.469) 0.411	(0.391)	
45 Tears Old	(0.445)	(0.343)	(0.477)	(0.320)	
Professional Competency (ref. Below Average)	( )	( )	( )	( )	
Average	0.129	0.019	-0.139	1.076**	
Above Average	(0.415) 0.381	(0.363) 0.503	(0.451) 0.162	(0.403)	
Above Average	(0.463)	(0.386)	(0.505)	(0.416)	
Job Mobility	-0.231	0.094	-0.306	-0.278	
	(0.210)	(0.180)	(0.235)	(0.200)	
Usability in other Firms (ref. Only Usable in Firm)	0 510	0.000	0.040	0.405	
Partly	(0.518)	(0.260)	-0.246	-0.495 (0.364)	
Completely	0.494	(0.347) 0.139	(0.449)	-0.020	
Comprovely	(0.412)	(0.345)	(0.445)	(0.364)	
Training Duration	0.033	0.037	0.000	0.025	
Cast Community by the England (ref. 0 Demonst)	(0.057)	(0.049)	(0.061)	(0.050)	
50 Percent	-0.283	-0.617*	0.044	0.552	
50 T CICCILI	(0.422)	(0.362)	(0.463)	(0.394)	
100 Percent	-0.643	$-0.705^{*}$	-0.217	0.255	
	(0.440)	(0.382)	(0.476)	(0.390)	
SD: Female (ref. Male)	0.511**	0 713***	-0.013	በ /ዓ6**	
	(0.200)	(0.137)	(0.211)	(0.175)	
Age (ref. 55 Years Old)	· · · /	· · · /	· /	( · · · )	
25 Years Old	-0.321	0.516*	-0.424	0.706**	
25 Veens Old	(0.428)	(0.311)	(0.342)	(0.247)	
35 Years Old	0.996*** (0.255)	-0.555** (0.267)	(0.101)	(1.484)	
45 Years Old	0.070	0.443	-0.546*	0.453	
	(0.352)	(0.371)	(0.324)	(0.489)	
Professional Competency (ref. Below Average)	0.055		0.005	0.007	
Average	-0.270	$-0.420^{*}$	-0.039	-0.007	

Table A.16: Parameter estimates for mixed logit models with interactions for female only and male only managers by collective bargraining agreement availability

	(0.01 -)	(0.000)	(0,000)	
	(0.317)	(0.229)	(0.280)	(0.767)
Above Average	$1.416^{***}$	$1.197^{***}$	$1.043^{***}$	$1.200^{***}$
	(0.210)	(0.176)	(0.202)	(0.185)
Job Mobility	$0.453^{***}$	$0.517^{***}$	$0.360^{**}$	$0.392^{***}$
	(0.117)	(0.100)	(0.127)	(0.111)
Usability in other Firms (ref. Only Usable in Firm)	· · · ·	· /	· /	· /
Partly	$0.493^{**}$	-0.064	0.003	-0.062
	(0.245)	(0.303)	(0.312)	(0.761)
Completely	0.242	-0.012	-0.648**	0.281
- •	(0.293)	(0.563)	(0.213)	(0.398)
Training Duration	0.086**	$0.136^{***}$	0.080* <sup>*</sup>	$0.110^{***}$
0	(0.030)	(0.026)	(0.037)	(0.027)
Cost Coverage by the Employer (ref. 0 Percent)	,	· /	( )	· /
50 Percent	0.276	0.412	$0.727^{**}$	-0.057
	(0.346)	(0.291)	(0.222)	(0.337)
100 Percent	0.049	0.138	0.044	0.158
	(0.345)	(0.424)	(0.442)	(0.461)
Number of Observations	3,168	4,514	2,274	3,526
Log-Likelihood	-940	-1,318	-698	-1,027

Source: BIBB-CBS 2017/2018. Own calculations. Note: \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

## IEB Merge

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean	Matched	Not Matched	ttest	Matched	ttest
	(All)	(CBS-Vign + IEB)	(only CBS-Vign)	(2) = (3)	(on all vars)	(5) = (3)
Gender	~ /	( 0 /	( )	( ) ( )		() ()
Male	0.57	0.62	0.51	0.00	0.59	0.01
Female	0.43	0.38	0.49	0.00	0.41	0.01
Firm Position						
Owner	0.36	0.43	0.27	0.00	0.31	0.11
CEO	0.14	0.15	0.12	0.10	0.18	0.01
Department Head	0.07	0.07	0.07	0.73	0.09	0.50
Head HR	0.17	0.17	0.18	0.42	0.21	0.27
Head Commerce	0.09	0.06	0.12	0.00	0.06	0.00
Head of Training	0.06	0.05	0.09	0.01	0.07	0.30
Other Position	0.11	0.08	0.15	0.00	0.08	0.00
Qualification						
No Vocational Training	0.01	0.01	0.00	0.25	0.00	0.86
Vocational Training	0.21	0.21	0.20	0.66	0.21	0.68
Advanced Voc Degree	0.35	0.33	0.37	0.14	0.28	0.00
Academic Degree	0.44	0.45	0.42	0.38	0.51	0.01
Firm Tenure in Years	14.59	15.42	13.58	0.00	14.32	0.27
Risk-Affinity	5.46	5.51	5.40	0.39	5.56	0.28
Altruism	251.35	276.63	218.10	0.00	283.78	0.00
Reciprocity	6.20	6.19	6.21	0.81	6.11	0.25
Locus of Control	5.78	5.76	5.81	0.49	5.83	0.81
B5 Openness	5.12	5.13	5.11	0.73	5.08	0.61
B5 Conscientiousness	6.09	6.01	6.19	0.00	5.97	0.00
B5 Extraversion	5.17	5.15	5.20	0.56	5.16	0.64
B5 Agreeableness	5.60	5.60	5.60	0.87	5.60	0.99
B5 Emotional Stability	4.82	4.78	4.87	0.20	4.79	0.33
Firm's Training Decision						
Alone	0.30	0.34	0.26	0.01	0.26	0.84
Together	0.45	0.45	0.46	0.91	0.49	0.34
Support	0.16	0.15	0.16	0.44	0.18	0.60
Not Involved	0.09	0.06	0.12	0.00	0.08	0.05
Number of firms	1,132	622	511		428	

Table A.17: Descriptive Manager Statistics - Matched versus Non-Matched

Source: BIBB-CBS 2017/2018 + IEB. Own calculations. Note: Shows means of managers' characteristics for all Vignette firms in column (1), for Vignette firms that could be matched with IEB in column (2), for Vignette firms that could not be matched with IEB in column (3) and for Vignette firms that could be matched with IEB and have non missing information on all new variables in column (5). Column (4) and (6) show the p-value of the respective t-test on equality of means.

	(1)	(2)	(3)	(4)	(5)	(6)
	Mean	(2) Matched	Not Matched	(4) ttest	Matched	ttest
	(All)	(CBS-Vign + IEB)	(only CBS-Vign)	(2) = (3)	(on all vars)	(5) = (3)
Training yes/no	0.77	0.81	0.71	0.00	0.86	0.00
Number of Employees	70.62	55.03	89.60	0.00	76.23	0.20
Firmtype						
Autonomous Holding	0.64	0.71	0.57	0.00	0.61	0.15
Independent Operation	0.11	0.09	0.13	0.03	0.13	0.91
Cooperate Headquarter	0.07	0.06	0.08	0.14	0.07	0.84
Branch Office	0.09	0.07	0.11	0.05	0.10	0.55
Foundation	0.05	0.04	0.06	0.11	0.05	0.72
Something Different	0.05	0.03	0.06	0.03	0.04	0.10
Work Council	0.22	0.18	0.26	0.00	0.24	0.50
Collective Bargaining Coverage	0.40	0.41	0.38	0.38	0.41	0.44
Firm						
Export-oriented	0.10	0.09	0.12	0.19	0.12	0.85
High Competition	0.67	0.66	0.68	0.56	0.68	0.89
Labor Market Tightness	3.89	3.97	3.80	0.01	3.83	0.64
Training Cooperations	0.25	0.26	0.23	0.30	0.29	0.07
Profit Sharing	0.34	0.35	0.32	0.30	0.41	0.00
Flexible Working Hours	0.58	0.57	0.59	0.47	0.62	0.34
Firm's Utilized Capacity	88.89	89.17	88.55	0.47	89.43	0.35
Branch						
Agriculture	0.02	0.02	0.02	0.82	0.02	0.87
Mining Industry	0.00	0.00	0.00	0.36	0.00	0.27
Manufacturing	0.08	0.11	0.05	0.00	0.12	0.00
Electricity	0.01	0.01	0.01	0.53	0.00	0.36
Water Supply	0.01	0.00	0.01	0.81	0.00	0.41
Construction	0.08	0.09	0.06	0.06	0.07	0.63
Wholesale, Retail Trade	0.16	0.17	0.14	0.13	0.18	0.09
Transportation	0.03	0.02	0.04	0.14	0.03	0.40
Accommodation Activities	0.07	0.07	0.07	0.76	0.08	0.51
Information Activities	0.04	0.04	0.04	0.85	0.05	0.57
Finance and Insurance	0.02	0.02	0.02	0.94	0.02	0.76
Real Estate Activities	0.02	0.01	0.03	0.07	0.01	0.03
Professional Activities	0.10	0.09	0.10	0.71	0.10	0.84
Administrative Activities	0.07	0.06	0.08	0.31	0.06	0.28
Public Administration	0.03	0.02	0.03	0.46	0.04	0.75
Education	0.02	0.02	0.02	0.96	0.02	0.72
Human Health, Social Work	0.12	0.12	0.11	0.40	0.11	0.90
Arts, Recreation	0.01	0.01	0.01	0.53	0.01	0.95
Other Service Activities	0.06	0.04	0.08	0.00	0.03	0.00
Other Branches	0.08	0.07	0.10	0.19	0.06	0.03
Number of firms	1,132	622	511		428	

Table A.18: Descriptive Firm Statistics - Matched versus Non-Matched

Source: BIBB-CBS 2017/2018 + IEB. Own calculations. Note: Shows means of firms' characteristics for all Vignette firms in column (1), for Vignette firms that could be matched with IEB in column (2), for Vignette firms that could not be matched with IEB in column (3) and for Vignette firms that could be matched with IEB and have non missing information on all new variables in column (5). Column (4) and (6) show the p-value of the respective t-test on equality of means.

	Manager						
	All	Male	Female	ttest			
	(1)	(2)	(3)	(4)			
Gender							
Male	0.62	1.00	0.00				
Female	0.38	0.00	1.00				
Firm Position							
Owner	0.43	0.54	0.25	0.00			
CEO	0.15	0.16	0.13	0.21			
Department Head	0.07	0.07	0.07	0.94			
Head HR	0.17	0.08	0.31	0.00			
Head Commerce	0.06	0.06	0.06	0.88			
Head of Training	0.05	0.04	0.06	0.42			
Other Position	0.08	0.05	0.13	0.00			
Qualification							
No Vocational Training	0.01	0.01	0.00	0.29			
Vocational Training	0.21	0.15	0.32	0.00			
Advanced Voc Degree	0.33	0.39	0.23	0.00			
Academic Degree	0.45	0.45	0.44	0.79			
Firm Tenure in Years <sup>a</sup>	15.41	16.49	13.63	0.00			
Risk-Affinity <sup>a</sup>	5.51	5.67	5.24	0.02			
Number of Employees	57.06	51.01	67.06	0.15			
Small Firm (1-49)	0.75	0.79	0.70	0.01			
Large Firm $(50+)$	0.25	0.21	0.30	0.01			
Export Oriented <sup>a</sup>	0.09	0.10	0.09	0.66			
High Competition <sup>a</sup>	0.66	0.65	0.68	0.57			
Labor Market Tightness <sup>ab</sup>	3.97	4.09	3.79	0.00			
Number of Observations	623	388	235	623			

 Table A.19:
 Selected summary statistics - Merge

Source: BIBB-CBS 2017/2018, IEB merge. Own calculations. Note: This table shows descriptive statistics about the participants of the vignette experiment. Column (1) shows the number of observed characteristics. Column (2) reports the overall mean of each characteristic. Columns (3) and (4) provide the averages in all characteristics of all male and female respondents, respectively. In column (4) the *p*-values of the ttest on differences in means between female and male choices are reported.

<sup>a</sup> For these variables the number of observations is slightly lower due to item non-response.

<sup>b</sup> Labor market tightness is measured on a 5-point scale: "How would you consider the availability (quantity) and fit (quality) of workers on the labour market?"

	Lo	Logit		d Logit
	Basic	Interacted	Basic	Interacted
	(1)	(2)	(3)	(4)
Mean:	0.059	0.202	0.061	0 494
Female (fei. Male)	(0.032)	(0.392)	(0.001)	(0.342)
	(0.001)	(0.200)	(0.000)	(0.042)
Age (ref. 55 Years Old)	0.040***	0.000***	0.051***	1 05 4***
25 Years Old	(0.067)	(0.105)	(0.006)	(0.175)
25 Voora Old	(0.007)	(0.120)	(0.090)	(0.175)
55 Tears Old	(0.067)	(0.435)	(0.094)	(0.051)
45 Years Old	0.441***	$0.418^{***}$	$0.613^{***}$	0.611***
	(0.066)	(0.122)	(0.092)	(0.164)
Occupational Competency (ref. Below Av	araga)	· · · ·	· · · ·	· · · ·
Average	0.340***	0.422***	0.440***	0.526***
11,01080	(0.057)	(0.113)	(0.069)	(0.144)
Above Average	$0.617^{***}$	0.555***	0.860***	0.746***
0	(0.066)	(0.119)	(0.092)	(0.160)
Job Mobility	-0.365* <sup>**</sup> *	-0.311* <sup>**</sup>	-0.496***	$-0.428^{***}$
	(0.029)	(0.054)	(0.045)	(0.076)
Usability in other Firms (ref. Only Usable	in Firm)			
Partly	-0.326***	-0.448***	$-0.471^{***}$	-0.651***
-	(0.050)	(0.110)	(0.070)	(0.147)
Completely	-0.444***	-0.511* <sup>**</sup> *	-0.610***	-0.696* <sup>**</sup>
	(0.053)	(0.109)	(0.073)	(0.144)
Training Duration	-0.039***	$-0.045^{***}$	$-0.054^{***}$	$-0.065^{***}$
	(0.007)	(0.015)	(0.010)	(0.019)
Cost Coverage by the Employer (ref. 0 Pe	rcent)			
50 Percent	0.009	0.094	0.020	0.128
	(0.053)	(0.111)	(0.069)	(0.150)
100 Percent	-0.128***	0.107	-0.185* <sup>**</sup>	0.144
	(0.049)	(0.115)	(0.066)	(0.152)
Interaction with Female Candidate h	by:			
Age (ref. 55 Years Old)				
25 Years Old		$-0.474^{**}$		-0.603**
		(0.200)		(0.272)
35 Years Old		0.049		0.011
		(0.199)		(0.263)
45 Years Old		-0.124		-0.254
		(0.212)		(0.272)
Occupational Competency (ref. Below Ave	erage)			
Average		-0.177		-0.188
		(0.187)		(0.252)
Above Average		0.155		(0.282)
Joh Mohilita		(0.204)		(0.275)
JOD MODILITY		(0.095)		(0.103)
		(0.030)		(0.127)
Usability in other Firms (ref. Only Usable	in Firm)	0.150		0.000
Partly Useable		0.158		(0.236)
Completely Useeble		(0.180)		(0.245)
Completely Useable		(0.188)		(0.024)
Training Duration		0.012		(0.247) 0.022
		(0.012)		(0.034)
		(0.021)		(01001)
Cost Coverage by the Employer (ref. 0 Per	rcent)	0 197		0.147
50 Percent		-0.127		-0.147
100 Percent		-0.441**		-0.638**
100 Tercent		(0.207)		(0.268)
SD:		()		()
Female (ref. Male)			$0.384^{***}$	$-0.375^{***}$
			(0.126)	(0.128)
Age (ref. 55 Years Old)				
25 Years Old			$0.499^{**}$	$0.507^{**}$
			(0.207)	(0.206)
35 Years Old			0.416*	0.456**
			(0.238)	(0.221)
45 Years Old			$0.455^{**}$	$0.477^{**}$
			(0.203)	(0.196)

Table A.20: Parameter estimates for logit and mixed logit	Table A.20:	Parameter	estimates	for	logit	and	mixed	logit	model
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	\ \			
Professional Competency (ref. Below Average	ge)			
Average			0.229	0.182
			(0.229)	(0.271)
Above Average			$1.095^{***}$	1.093***
-			(0.116)	(0.115)
Job Mobility			0.422***	0.428***
			(0.070)	(0.070)
Usability in other Firms (ref. Only Usable i	n Firm)			
Dorthy			0.003	0.033
1 at try			(0.000)	(0.000)
~			(0.230)	(0.280)
Completely			0.099	0.036
			(0.311)	(0.419)
Training Duration			0.097***	0.099***
			(0.018)	(0.018)
Cost Coverage by the Employer (ref. 0 Perc	ent)			
50 Demonst	(110)		0.415**	0.205**
50 reicent			(0.410)	0.395
			(0.168)	(0.182)
100 Percent			-0.033	-0.085
			(0.209)	(0.191)
Number of Observations	7,384	7,384	7,384	7,384
Log-Likelihood	-2,270	-2,259	-2,221	-2,210

Source: BIBB-CBS 2017/2018, IEB merge. Own calculations. Note: This table shows the parameter estimates of the basic conditional logit estimation (column 1) and of the basic mixed logit estimation (column 3). Further, the table reports the parameter estimates of the conditional logit estimation (contain b). Further, the table reports the parameter estimates of the conditional logit and (correlated) mixed logit estimations, interacted with the gender (female = 1) of the potential training candidate in columns (2) and (4). \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

	Mixed Logit Interacted High Wage Gap Low Wage Gap					
	All	Only Female	Only Male	All	Only Female	, Only Male
	Managers (1)	Managers (2)	Managers (3)	Managers (4)	$\begin{array}{c} \text{Managers} \\ (5) \end{array}$	Managers (6)
Mean:	0 162	1 991	1 010	1 5/7**	1 996**	1 507
Female	(0.163) (0.577)	(1.007)	(0.798)	(0.690)	(0.902)	(1.173)
Age	0 719**	0.007	1 100***	1 = 01 * * *	0 1 4 0 * * *	1 0 4 0 * * *
25 Years Old	$(0.713^{**})$	(0.097)	(0.401)	(0.359)	$2.146^{+++}$	$1.848^{***}$
35 Years Old	0.377	-0.017	(0.401) $0.708^{*}$	$1.043^{***}$	0.811**	$1.405^{**}$
	(0.279)	(0.507)	(0.383)	(0.327)	(0.403)	(0.561)
45 Years Old	0.309	-0.273	$0.744^{*}$	$1.011^{***}$	$1.155^{***}$	$1.108^{**}$
	(0.283)	(0.488)	(0.401)	(0.310)	(0.426)	(0.540)
Above Average	0.619**	0.771	0.647*	0 910***	0.949	1 90/***
Above Average	(0.018)	(0.771)	(0.371)	(0.319)	(0.242)	(0.587)
Average	$0.483^{**}$	0.287	$0.530^{*}$	$0.618^{**}$	0.150	$1.455^{***}$
	(0.242)	(0.427)	(0.321)	(0.277)	(0.351)	(0.529)
Job Mobility	-0.509***	-0.063	$-0.774^{***}$	$-0.471^{***}$	-0.606* <sup>**</sup>	-0.433*
	(0.130)	(0.228)	(0.183)	(0.144)	(0.204)	(0.247)
Usability in other Firms	0 699***	1 091**	0 500*	0 090***	0 629*	1 470***
Completely	-0.688	(0.439)	$-0.592^{\circ}$ (0.327)	$-0.838^{++}$	$-0.038^{\circ}$ (0.365)	$-1.4(9^{-1})$
Partly	-0.439*	-0.006	-0.739**	-0.965***	-0.639*	-1.676***
1 cu ory	(0.248)	(0.445)	(0.337)	(0.280)	(0.377)	(0.521)
Cost Coverage by the Employer	× /	· · · ·	~ /		· · · ·	× ,
100 Percent	0.326	-0.380	$0.659^{*}$	-0.087	0.284	-0.380
	(0.270)	(0.463)	(0.376)	(0.278)	(0.376)	(0.491)
50 Percent	(0.208)	-0.275	(0.360)	-0.164	-0.053	-0.007
Training Duration	(0.203)	-0.239***	(0.300)	(0.278)	(0.387)	(0.483)
	(0.034)	(0.068)	(0.045)	(0.034)	(0.049)	(0.057)
Interaction with Female Can Age	didate by:	()	()	()	()	()
25 Years Old	-0.616	-0.219	-0.712	$-1.827^{***}$	$-3.013^{***}$	-1.188
	(0.468)	(0.819)	(0.636)	(0.533)	(0.769)	(0.891)
35 Years Old	0.168	0.861	-0.122	-0.663	-0.924	-0.333
45 Verse Old	(0.460)	(0.867)	(0.611)	(0.498)	(0.650)	(0.842)
45 Years Old	-0.212 (0.480)	(0.525)	(0.678)	-0.846 (0.497)	(0.708)	-0.342 (0.849)
Occupational Competency	(0.400)	(0.020)	(0.078)	(0.431)	(0.700)	(0.043)
Above Average	0.695	0.491	0.780	0.379	0.897	-0.301
	(0.486)	(0.856)	(0.675)	(0.511)	(0.718)	(0.846)
Average	-0.022	1.069	-0.507	-0.434	0.453	-1.832**
	(0.426)	(0.786)	(0.563)	(0.479)	(0.618)	(0.873)
JOD MODILITY	-0.154 (0.212)	$-0.931^{\circ\circ}$	(0.133)	-0.319	-0.206	-0.401
Usability in other Firms	(0.212)	(0.417)	(0.213)	(0.240)	(0.510)	(0.413)
Completely	-0.125	0.148	-0.217	-0.049	-0.387	0.848
	(0.416)	(0.713)	(0.561)	(0.464)	(0.640)	(0.765)
Partly	-0.174	-0.711	0.170	0.352	-0.125	1.047
	(0.413)	(0.770)	(0.544)	(0.459)	(0.633)	(0.785)
Training Duration	(0.088)	$(0.263^{**})$	-0.004	-0.070	(0.003)	-0.139
Cost Coverage by the Employer	(0.058)	(0.110)	(0.078)	(0.004)	(0.091)	(0.105)
100 Percent	-0.797*	-0.154	$-1.276^{*}$	-0.421	-1.288*	0.066
	(0.476)	(0.831)	(0.658)	(0.498)	(0.670)	(0.896)
50 Percent	-0.370	-0.166	-0.559	0.441	0.042	0.435
~~~	(0.450)	(0.762)	(0.611)	(0.470)	(0.645)	(0.803)
SD: Formala	0.100	0.095	0.910	0.971	0.971	0 101
reinale	(0.160)	-0.035 (0.204)	0.319	0.2(1)	(0.271)	(0.101)
Age	(0.410)	(0.294)	(0.307)	(0.303)	(0.361)	(0.730)
25 Years Old	-0.022	-0.156	0.274	$0.914^{***}$	$1.007^{***}$	0.903
	(0.565)	(0.721)	(0.486)	(0.286)	(0.350)	(0.563)
35 Years Old	0.003	0.008	0.068	$0.777^{**}$	0.327	$1.372^{***}$
	(0.367)	(0.388)	(0.630)	(0.313)	(0.630)	(0.515)
45 Years Old	(0.082)	-0.313	0.156	-0.573*	-0.456	0.477
Occupational Competency	(0.328)	(0.556)	(0.516)	(0.331)	(0.005)	(0.054)
occupational competency						

Table A.21: Parameter estimates for mixed logit models with interactions for female only and male only managers divided by wage gap in the firm

Above Average	1.293***	$0.715^{*}$	1.615***	$1.242^{***}$	0.775**	2.014***
	(0.226)	(0.396)	(0.335)	(0.237)	(0.313)	(0.524)
Average	$0.482^{*}$	-0.055	-0.713**	$0.559^{**}$	-0.197	1.135***
	(0.261)	(0.456)	(0.314)	(0.270)	(0.359)	(0.407)
Job Mobility	$0.395^{***}$	0.344	$-0.340^{**}$	$0.425^{***}$	$0.486^{***}$	-0.181
	(0.125)	(0.221)	(0.173)	(0.146)	(0.176)	(0.330)
Usability in other Firms						
Completely	0.024	-0.368	0.115	-0.062	0.395	-0.072
	(0.295)	(0.506)	(0.341)	(0.424)	(0.494)	(0.415)
Partly	-0.086	-0.027	-0.056	$-0.464^{*}$	-0.436	-0.007
	(0.229)	(0.268)	(0.368)	(0.273)	(0.470)	(0.907)
Cost Coverage by the Employer						
100 Percent	-0.325	-0.009	$-0.728^{**}$	0.051	-0.220	0.003
	(0.295)	(0.368)	(0.310)	(0.269)	(0.446)	(0.364)
50 Percent	-0.370	-0.621	-0.014	0.316	-0.472	-0.228
	(0.305)	(0.421)	(0.994)	(0.385)	(0.363)	(0.718)
Training Duration	$0.112^{***}$	0.068	$0.151^{***}$	$0.076^{*}$	-0.039	$0.131^{**}$
	(0.030)	(0.054)	(0.043)	(0.045)	(0.071)	(0.063)
Number of Observations	2,560	800	1,760	2,554	1,306	1,248
Log-Likelihood	-749	-217	-507	-738	-378	-337

Source: BIBB-CBS 2017/2018. Own calculations. Note: This table shows the parameter estimates of the mixed logit estimation interacted with the gender (female = 1) of the potential training candidate for the sample split by region. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.

	Mixed Logit Interacted High Wage Growth Female Employees Male Employees				
	All Managers (1)	Only Female Managers (2)	Only Male Managers (3)	All Managers (4)	Only Female Managers (5)
Mean:			(-)		(-)
Female	$1.392^{**}$	$1.777^{*}$	1.369	0.331	-0.604
	(0.608)	(1.001)	(1.011)	(0.584)	(1.188)
Age					
25 Years Old	$1.083^{***}$	$0.976^{**}$	$1.590^{***}$	$1.265^{***}$	$2.395^{*}$
	(0.303)	(0.488)	(0.519)	(0.298)	(1.321)
35 Years Old	$0.778^{***}$	0.281	1.566***	$0.681^{**}$	1.220
45 Verne Old	(0.287)	(0.432)	(0.533)	(0.284)	(0.930)
45 Years Old	(0.733)	(0.844)	(0.450)	(0.286)	(0.758)
Occupational Competence	(0.277)	(0.409)	(0.439)	(0.280)	(0.758)
Above Average	0 750***	0 493	1 106***	0.771***	1.075
Above Average	(0.759)	(0.425)	(0.459)	(0.278)	(0.787)
Average	(0.271) 0.441*	(0.435) 0.470	(0.439) 0.537	0.684***	(0.787)
Ilvelage	(0.243)	(0.398)	(0.393)	(0.247)	(0.536)
Job Mobility	-0.408***	-0.377*	-0.570***	-0.515***	-0.557
· · · · · · · · · · · · · · · · · · ·	(0.129)	(0.213)	(0.211)	(0.129)	(0.366)
Usability in other Firms	()	()	()	()	()
Completely	$-0.734^{***}$	-0.628	-1.078***	-0.793***	$-1.836^{*}$
1 0	(0.239)	(0.382)	(0.399)	(0.251)	(0.962)
Partly	-0.864* <sup>**</sup>	-0.650	-1.229***	-0.647* <sup>**</sup>	-0.571
-	(0.253)	(0.408)	(0.423)	(0.249)	(0.569)
Cost Coverage by the Employer					
100 Percent	0.095	0.672	-0.350	0.079	-1.138
	(0.258)	(0.428)	(0.412)	(0.259)	(0.770)
50 Percent	0.427	$0.762^{*}$	0.451	-0.329	-1.550
	(0.262)	(0.442)	(0.423)	(0.255)	(1.029)
Training Duration	-0.038	-0.066	-0.029	-0.085***	-0.188*
	(0.032)	(0.054)	(0.052)	(0.032)	(0.110)
Interaction with Female Can	didate by:				
Age	0.676	1 101	0 507	1 100***	9.099*
25 Years Old	-0.0(0	-1.191	-0.307	-1.190	-3.033
	(0.402)	(0.754)	(0.755)	(0.402)	(1.000)
35 Years Old	0.051	0.742	-0 721	-0.345	-1 655
55 Tears Old	(0.441)	(0.696)	(0.733)	(0.454)	(1.412)
45 Years Old	-0.419	-0.782	-0.271	-0.664	-1.030
	(0.454)	(0.748)	(0.729)	(0.470)	(1.168)
Occupational Competency	(0.101)	(011-00)	(0.1-0)	(01210)	()
Above Average	0.157	0.606	0.099	0.597	0.506
0	(0.461)	(0.758)	(0.738)	(0.474)	(1.060)
Average	-0.310	0.063	-0.581	-0.243	1.268
-	(0.427)	(0.716)	(0.670)	(0.424)	(0.961)
Job Mobility	$-0.394^{*}$	$-0.664^{*}$	-0.222	-0.192	-0.771
	(0.218)	(0.354)	(0.342)	(0.208)	(0.582)
Usability in other Firms					
Completely	-0.195	-0.615	0.294	0.362	1.164
	(0.424)	(0.722)	(0.682)	(0.418)	(1.052)
Partly	0.065	-0.236	0.284	0.483	-0.089
	(0.409)	(0.671)	(0.632)	(0.419)	(0.894)
Training Duration	-0.050	0.034	-0.119	0.032	0.192
	(0.058)	(0.101)	(0.093)	(0.056)	(0.133)
Lost Coverage by the Employer	0.457	1 701**	0.001	0.659	0.800
100 Fercent	-0.43(	-1.(01)	(0.201)	-0.008	(1.07c)
50 Democrat	(0.430)	(0.777)	(0.730)	(0.402)	(1.070)
JU I EICEIII	(0.434)	-0. <i>3</i> 43 (0.736)	-0.200 (0.688)	(0.431	(1.578)
SD:	(0.404)	(0.100)	(0.000)	(0.403)	(1.010)
Female	-0.241	0.410	-0.255	-0.367*	-0.740
	(0.282)	(0.312)	(0.352)	(0.215)	(0.581)
Age	()	()	()	()	()
25 Years Old	-0.432	0.618	-0.508	$0.686^{**}$	1.331
	(0.350)	(0.460)	(0.573)	(0.280)	(0.844)
35 Years Old	-0.479	-0.004	0.780	-0.413	0.199
	(0.309)	(0.962)	(0.477)	(0.337)	(0.591)
45 Years Old	-0.128	-0.406	0.486	0.321	-0.302

Table A.22: Parameter estimates for mixed logit models with interactions for female only and male only managers divided by wage growth in the firm

	(0.674)	(0.777)	(0.593)	(0.437)	(0.803)
Occupational Competency	(0.01-)	(01111)	(01000)	(01-01)	(0.000)
Above Average	$1.054^{***}$	$0.748^{*}$	$1.565^{***}$	$1.291^{***}$	$1.450^{*}$
5	(0.215)	(0.388)	(0.432)	(0.212)	(0.812)
Average	-0.119	-0.092	-0.533	$0.484^{**}$	0.287
0	(0.346)	(0.319)	(0.485)	(0.241)	(0.712)
Job Mobility	$0.328^{**}$	0.542***	-0.137	$0.528^{***}$	0.548
	(0.137)	(0.195)	(0.403)	(0.119)	(0.398)
Usability in other Firms	· /	. ,	. ,	. ,	· /
Completely	-0.038	0.176	0.035	$-0.449^{*}$	1.046
	(0.237)	(0.682)	(0.294)	(0.268)	(0.857)
Partly	0.300	-0.024	-0.631	0.037	-0.512
	(0.336)	(0.404)	(0.400)	(0.239)	(0.705)
Cost Coverage by the Employer	. ,	. ,		. ,	, ,
100 Percent	0.006	-0.223	-0.128	-0.188	-0.743
	(0.294)	(0.565)	(0.566)	(0.376)	(0.886)
50 Percent	0.603***	$0.794^{**}$	$-0.691^{*}$	-0.338	1.179
	(0.222)	(0.343)	(0.391)	(0.361)	(0.741)
Training Duration	$0.098^{***}$	0.013	$0.203^{***}$	$0.095^{***}$	$0.201^{*}$
	(0.032)	(0.050)	(0.056)	(0.032)	(0.117)
Number of Observations	2,536	1,042	1,494	3,044	1,208
Log-Likelihood	-740	-300	-418	-893	-343

Source: BIBB-CBS 2017/2018. Own calculations.

*Note:* This table shows the parameter estimates of the mixed logit estimation interacted with the gender (female = 1) of the potential training candidate for the sample split by region. \*\*\*/\*\*/\* indicate statistical significance at the 1%/5%/10%-level. Estimation based on 300 scrambled Halton draws.