Non-Wage Benefits and Employee Sorting

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Keywords: non-wage benefits, sorting, workplace preferences, compensation inequality, gender differences

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Abstract

We document substantial within-firm variation in the number and types of non-wage benefits employees receive. We argue that within-firm variation in benefits allows firms to improve employee satisfaction and retention by sorting employees into remuneration arrangements based on their preferences. Consistent with this notion, we find gender differences in the number and types of benefits employees receive that are consistent with preference-based sorting. Furthermore, analyses that exploit data on employee satisfaction and cross-sectional variation in employer characteristics corroborate preference-based sorting as the explanation. Last, we find that firms with more benefit variation are associated with higher employee satisfaction and retention.

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1. Introduction

Non-wage benefits are supplementary perks and amenities that employers provide to their employees in addition to salary or wages.[1] Such benefits comprise a substantial part of firms' total costs of employment and are considered increasingly important elements for attracting, retaining, and motivating employees (e.g., Willis Towers Watson 2020; Bhaskaran, Davis, Desbrière, and Wasserteil 2022; Mercer 2023).[2] Because different employees may value benefits differently, offering benefits instead of an equivalent amount of additional pay can serve as a sorting mechanism. That is, firms can exploit employees' heterogeneous preferences by offering specific benefits to attract and contract with the type of employees who value the respective benefits (Oyer 2008; Eriksson and Kristensen 2014).

Prior research has shown that firms can use benefits as an attraction mechanism to target employees with particular characteristics in their hiring (e.g., Oyer 2008; Eriksson and Kristensen 2014; Liu, Makridis, Ouimet, and Siminitzi 2023). While benefits can thereby facilitate the sorting of employees across firms, limited insight exists into the question of whether benefits can also facilitate the sorting of employees into different remuneration arrangements within a given firm. Exploring this question is important because although certain benefits (such as health insurance and maternity leave) are generally fixed for all employees within a firm due to legal constraints, many other types of benefits are considered to be relatively flexible and negotiable in practice (DePaul 2020; Gallo 2015; Prossack 2019). As such, they could serve as valuable tools for tailoring

[1] We use "non-wage benefits" and "benefits" interchangeably throughout this paper. Prior research has furthermore used the terms "fringe benefits" and "perks" as other synonyms.

[2] For example, in the U.S., data collected on employer costs for civilian, private industry, state, and local government workers suggests that expenses for benefits constitute about 30 percent of employer costs for employee compensation (Bureau of Labor Statistics 2023).

compensation packages to individual employees, leading to improvement in employee outcomes such as satisfaction and retention.

In this study, we exploit a large dataset of employee-level observations provided by *Kununu*, a German employer review website similar to its U.S. equivalent *Glassdoor*, to provide novel insights into the sorting role of benefits within firms. Specifically, we obtain 532,937 employee reviews across 107,096 firms between January 2019 and February 2024, for which we observe the submitting employee's job-related characteristics (i.e., employer, job title, tenure, and managerial responsibilities) and remuneration (i.e., amount of pay and benefits received across 17 possible categories).

We begin our analysis with a variance decomposition to examine the extent to which variation in benefits largely stems from between-firm or within-firm variation. This is because considerable within-firm variation of benefits is a necessary condition for the sorting role of benefits within firms, implying that employees can also vary their benefits through contracting with a given employer. Our results suggest that the total number of benefits employees receive and the propensity to receive each of the 17 benefit categories captured by *Kununu* show substantial variation within firms. Specifically, we find that the variance in the total number of benefits employees receive stems about two-thirds (one-third) from within-firm (between-firm) variation, and the relative share of within-firm variance in the propensity to receive each of the 17 benefit categories varies between 48.2 percent and 75.2 percent.

To examine the role of benefits as a sorting mechanism, we focus on gender and its relation with the benefit types an employee receives based on prior literature that documents gender differences in individuals' preferences for workplace characteristics closely related to benefits. Prior research has documented that female relative to male employees prefer workplace

characteristics that allow them to devote more time to their family-related obligations, including the possibility of working from home and the avoidance of irregular work schedules (Mas and Pallais 2017), the possibility of working part-time (Wiswall and Zafar 2018), and a short commute to work (Le Barbanchon, Rathelot, and Roulet 2021). Controlling for a wide range of confounders, including firm-job title-year fixed effects and job-related characteristics, we find robust evidence that female employees receive more benefits than male employees. Analyses, where we distinguish between the different benefit types, suggest that this relation between gender and benefits is driven by benefits that allow an employee to combine their work with household-related responsibilities – i.e., benefits that are considered "family-friendly" (Liu et al. 2023; Wiswall and Zafar 2018; Mas and Pallais 2017; Le Barbanchon et al. 2021). At the same time, we find no gender differences for relatively fungible "gender-neutral" benefits, such as corporate phones, internet plans, or employer-supported share purchase plans.

Next, we conduct tests to explore explanations of the gender differences in benefits we document by using additional data from *Kununu* on employees' reported satisfaction. If women receive more "family-friendly" benefits than men because of differential preferences, we would expect to see gender differences in the strength of the relation between benefits and employee satisfaction. We find evidence consistent with this explanation. While higher pay and more generous benefit packages are generally associated with greater employee satisfaction, we find that for female employees the relation between family-friendly benefits and satisfaction is stronger than for male employees, but we find no statistically significant gender difference in the strength of the relation between non-family-related benefits and satisfaction. At the same time, we also find that the relation between pay and satisfaction is weaker for female employees than for male employees.

We corroborate the preference-based explanation of the gender differences in received benefits by conducting two sets of cross-sectional tests where we identify firms at which employees, regardless of their gender, are more likely to obtain remuneration elements according to their preferences. First, we identify firms with relatively more transparent remuneration practices that explicitly offer flexible choice-based benefit plans to their employees. Consistent with preference-based sorting, we find that the gender differences in the propensity to receive family-friendly benefits are more pronounced in firms that we identify as offering flexible choice-based benefit plans. Second, we identify firms with relatively greater espoused commitment to gender diversity by exploiting the introduction of a new legislation in Germany that mandates firms to set and disclose targets for female participation in the three highest levels of management. Again, consistent with preference-based sorting, we find that gender differences in family-friendly benefits are more pronounced in firms that demonstrated greater commitment to gender diversity.

In our last set of analyses, we examine whether firms offering more variation in benefit arrangements are associated with more positive workforce outcomes. If employees, regardless of their gender, receive remuneration packages that better reflect their preferences as a result of a wider spectrum of offered benefits, we would expect that firms offering greater variability in their remuneration packages – especially greater variability in their offered benefit arrangements – are associated with better employment outcomes such as higher employee satisfaction and greater employee retention. To do so, we develop measures at the firm-job-year level that capture the variability in offered benefit packages and pay. In line with our arguments, our results show that greater variability in benefit arrangements, but not pay variability, is positively associated with higher employee satisfaction and retention.

Our findings contribute to several streams of literature. First, our results contribute to the literature on the use of non-wage benefits in employee remuneration. Prior research has discussed three main reasons why employers offer benefits instead of additional pay. First, they might be able to obtain these benefits at a comparatively lower cost due to economies of scale in purchasing (Woodbury 1983) or preferential tax treatment (Feldstein 1973; Cymrot 1980). Second, because certain benefits can reduce the disutility of additional work hours, employers might provide them to particularly productive employees to elicit more work hours (Oyer 2008). Third, employers can make use of employees' heterogeneous preferences and offer benefits that are particularly valuable to certain types of employees to facilitate employee sorting (Oyer 2008; Liu et al. 2023; Eriksson and Kristensen 2014). However, prior research has generally regarded the choice of what benefits to offer as an employer-fixed decision. Our results extend this literature by highlighting that many types of benefits are frequently varied for different employees in the same firm. As a result, the choice of benefit arrangement should not be seen as a firm-wide decision that needs to trade off the advantages of serving the preferences of certain employees against the drawbacks of neglecting the preferences of others. Instead, employers can offer a range of possible benefit arrangements to serve the preferences of many employees and ultimately sort employees into different remuneration arrangements based on individual preferences.

Second, our findings on the role of benefits as sorting mechanisms also have important practical implications, particularly in light of growing corporate interest in how to effectively attract, retain, and foster talent, driven by increasing pressure from investors (e.g., Taylor 2021; Heath, Macciocchi, Michaely, and C. Ringgenberg 2023) and regulatory bodies (e.g., Vaseghi, Marcogliese, and Bieber 2020); and the difficulty in achieving such objectives by varying pay levels, especially by gender (e.g., Blau and Kahn 2017). In particular, we also show gender-specific

preferences for particular benefit types, which adds to our understanding of gender differences in overall remuneration packages (e.g., Carter, Franco, and Gine 2017; Brenner 2015).

Finally, our results contribute more broadly to research on the optimal design of compensation contracts. It is well understood that workers can have specific preferences for certain aspects of compensation design that would make different, but economically equivalent, compensation packages appear differently attractive to them. For example, workers generally prefer incentive contracts that are formulated as a bonus for good performance over economically equivalent contracts with a penalty for poor performance (Luft 1994; Van der Stede, Wu, and Wu 2020). Prior research suggests that by considering workers' preferences and assigning them to different compensation schemes, firms can elicit higher effort (Opitz, Sliwak, Vogelsang, and Zimmermann 2024). Our evidence for preference-based sorting suggests that offering greater variability in remuneration packages through diverse benefit offerings can enhance the overall attractiveness of the contracts and, thus, strengthen incentives.

2. Related literature & theoretical background

2.1. Incentive design and employee self-selection

Research has long been interested in the possibility of employee selection through the offering of incentive contracts (Shields and Waller 1988). The underlying idea is that when being offered alternative compensation contracts, individuals do not choose randomly but self-select into the contract that best fits them (Waller and Chow 1985). Analytical studies argue that higher-skilled individuals are more likely to self-select into contracts with a performance-based pay component than their lower-skilled counterparts (Jensen and Meckling 1976; Salop and Salop 1976; Demski and Feltham 1978; Fama 1980). This notion is supported by evidence from experimental (Chow 1983; Waller and Chow 1985; Cadsby, Song, and Tapon 2007; Dohmen and

Falk 2011) as well as field studies (Lazear 2000; Banker, Lee, Potter, and Srinivasan 2001; Román 2009).

Waller and Chow (1985) extend the findings on the role of task-related capabilities for contract choice to risk preferences and personality traits. They propose and find evidence for a relation between individuals' level of risk aversion and their choice of safer fixed-pay contracts as opposed to riskier performance-based pay contracts. In a more recent effort to further investigate the role of personality traits on contract choice, Fehrenbacher, Kaplan, and Pedell (2017) conducted an experimental study focusing on risk preferences, need for achievement, and locus of control. Specifically, the authors hypothesize and find that individuals with a lower (higher) risk aversion, higher (lower) need for achievement, and external (internal) locus of control are more (less) likely to select a performance-based pay contract (Fehrenbacher et al. 2017).

Apart from the general provision of performance-based pay, prior research has argued that compensating employees with stock options can facilitate the sorting of middle and lower-level employees. Like other forms of performance-based pay, stock options attract employees who are more skilled and less risk-averse (Hall and Murphy 2002). Hall and Murphy (2003) argue that because of their risky but potentially high payout, stock options also help firms attract entrepreneurial and optimistic employees. In an attempt to disentangle the incentive, attraction, and retention effects of stock options, Oyer and Schaefer (2005) find that stock options are a highly inefficient way to motivate employee effort. The authors conclude that companies widely use stock options as compensation components for middle and lower-level employees primarily for their employee (self-)selection and retention effects.

2.2. Non-wage benefits in remuneration

Non-wage benefits refer to supplementary perks and amenities provided by employers to employees in addition to their base salary or wages. Frequently used examples of benefits include health insurance, retirement plans, and flexible work/telecommuting arrangements. As such, these benefits differ from monetary compensation (such as pay) in that they provide tangible, non-monetary value directly to employees. Given that benefits can constitute substantial costs for firms, prior research has explored reasons why firms might choose to offer non-wage benefits instead of paying employees the equivalent amount in the form of a higher salary. This research has provided three main arguments for why non-wage benefits create economic value beyond what employees could achieve through equivalent cash compensation (Oyer 2008).

First, due to economies of scale (e.g., Woodbury 1983) or preferential tax treatments (e.g., Feldstein 1973; Cymrot 1980), firms can obtain certain benefits at a lower cost than employees. As a result, firms may offer, for example, collective retirement plans instead of higher pay to provide employees with the same utility at a lower cost to the firm. Second, certain benefits can reduce the marginal costs of effort of the employee. Firms would therefore offer, e.g., meals at the workplace, to entice employees with a high marginal product of labor to work longer hours. Third, because employees differ in their valuations of different types of benefits, firms can achieve higher utility for employees with particularly high valuations of these benefits at constant cost to the firm. Firms would, therefore, create higher utility for, e.g., employees with families, by offering health insurance plans with family coverage.

One consequence of the second and third arguments discussed above is that employees will sort themselves into firms based on their valuation of the benefits that these firms offer (Oyer 2008). In a more recent study, Liu et al. (2023) discuss the possibility that firms can, therefore, strategically use benefits as an attraction mechanism by offering benefits that are valued

particularly highly by the type of employees that the firm aims to attract. In addition to the pay level, negotiations on employees' total remuneration arrangements also involve detailing the number and type of non-wage benefits (e.g., Gallo 2015; DePaul 2020; Prossack 2019). This may, thus, explicitly allow for employee sorting into different remuneration arrangements within a given organization, which may have been difficult to achieve when solely relying on pay-related elements. In this study, we examine whether firms vary their benefit practices across employees consistent with the notion of sorting employees into different compensation arrangements based on their respective preferences.

3. Data, sample, and descriptive statistics

To investigate the role of non-wage benefits as employee sorting mechanisms, we collaborate with *Kununu* (www.kununu.com), the leading German platform where current and former employees anonymously review companies. Similar to its U.S. equivalent, *glassdoor.com*, *Kununu* collects information on employment conditions and employee satisfaction for companies in Germany, Austria, and Switzerland. According to their website, *Kununu* currently provides several million employee reviews for more than one million companies. Each review submitted to *Kununu* consists of answers to several standardized questions regarding satisfaction with their employer along multiple dimensions, as well as open text reviews where employees provide more detailed information, particularly on their perception of corporate values, their satisfaction with employment conditions, and career perspectives at their employer. After providing an employer review, users receive a separate invitation to provide additional information on their pay as well as the number and type of non-wage benefits that their employer provides them across 17 possible categories. It is worth noting that the 17 categories of benefits regarded by *Kununu* exclude two types of benefits often discussed in prior research based on U.S. data: paid maternity leave and

employer-sponsored health insurance. This is because in our institutional setting (i.e., Germany), paid maternity leave and participation in the public health insurance system are mandated by law and, therefore, do not vary across employers. In contrast to this, the 17 categories of benefits covered by *Kununu* are discretionary and can be varied by employers.

To conduct our research, we obtained from *Kununu* all reviews submitted between January 2019 and February 2024, including (1) employees' remuneration packages (pay and awarded non-wage benefits), (2) employees' evaluation of different aspects of their job at their employer, and (3) job- and person-related characteristics such as gender, tenure, job title, and managerial functions.[3] For our analysis, we retain only the subset of employee reviews where users have also provided information on benefits and compensation. Because access to benefits could differ between full-time and part-time employees, we retain only reviews provided by full-time employees and further drop reviews where the employee's gender is not identified as "female" or "male".[4] Our final sample contains 532,937 observations from employees working in 107,096 unique firms.

Table 1 presents descriptive statistics for our sample. Employees in our sample report an average annual pay of €58,683 (approximately US$62,790). The average pay of employees in our sample is thus comparable to the average salary reported by the Federal Statistical Office of Germany (€51,876 in 2023) (Federal Statistical Office 2023a), albeit slightly higher, which indicates that higher-paid employees might be slightly overrepresented. This is perhaps not surprising given that our sample stems from an employer review website, which is more likely to

[3] We first contacted *Kununu* regarding a possible collaboration in the Summer of 2022. After several communications, including submitting a detailed research proposal, we signed an agreement to collaborate with *Kununu* in November 2022. Under this agreement, we have access to all individual employee reviews collected by *Kununu*.

[4] All our results are robust to alternatively (1) retaining part-time employees and instead including an indicator to control for employment status as well as (2) retaining employees who responded with "other" or "prefer not to say" to the gender question.

be used by white-collar employees and employees from larger companies. About one-third of the reviews in our sample have been provided by female employees. The vast majority of reviews were provided by employees who do not work in managerial positions (84.9 percent) and do not act as supervisors of other employees (76.3 percent).

The *Kununu* data allows us to capture for every employee the total amount of pay and the number and type of received non-wage benefits. In particular, when providing their responses, employees are asked to select from a list of 17 different benefits, which of these benefits they receive from their employer.[5] We provide an overview of the different benefits and their definition by *Kununu* in Appendix I (Columns 1 and 2). All other variables used in our analysis are explained in Appendix II. On average, employees report receiving 5.913 out of the 17 categories of benefits we study. The most commonly offered benefits are flexible work hour arrangements (51.3 percent), access to employee parking (50.0 percent), and corporate retirement plans (48.7 percent). Table 2 presents correlations for the main variables in our sample.

4. Analysis & results

4.1. Variance decomposition of employer-provided non-wage benefits

We begin our analysis by examining the variance in employees' non-wage benefits. Specifically, we are interested in the question of what relative share of the variance in employees' benefits can be attributed to between-firm compared to within-firm variation. Understanding whether non-wage benefits are largely fixed within employers or whether within-firm variation in benefits exists is important because it shapes our understanding of whether benefits largely serve a sorting role across employers or whether employees can also sort into different remuneration

[5] The question *Kununu* uses to collect data on the benefits respondents receive is worded as: *Which of the following benefits does your employer provide?* Based on our conversations with *Kununu* our understanding is that respondents answer this question referring to the benefits that they personally receive and that it, therefore, is an appropriate way to capture individual-level benefit arrangements.

arrangements within employers. To conduct a variance decomposition analysis, we follow Ouimet and Tate (2023) as well as prior research that studies variation in pay and decompose the variance in benefits employees in our sample receive into within- and between-firm components (Barth, Bryson, Davis, and Freeman 2016; Song, Price, Guvenen, Bloom, and von Wachter 2019).

We present the results in Table 3. Results presented in Panel A of Table 3 suggest that 32.3 percent of the variance in the number of benefits employees receive is due to the firm component, while roughly two-thirds of the variance is within-firm dispersion. The between-firm variation is reduced to 28.9 percent (26.7 percent) if we account for industry (job title) fixed effects. Results presented in Panel B of Table 3 suggest that the dispersion within firm-years is slightly smaller than that within firms, but still, roughly two-thirds of the variation in the number of benefits are within a firm-year dispersion. Finally, Panel C presents results for individual benefits categories rather than the total number of benefits received. Results suggest that the share of variance explained by the firm-year component ranges from 28.8 percent to 51.8 percent, with the lowest between-variation (i.e., highest within-firm-year variance) exhibited by *BenefitsCoaching* and *BenefitsChildcare* and the highest between-variation (i.e., lowest within-firm-year variance) exhibited by *BenefitsCafeteria* and *BenefitsDogs*.

These results offer at least two important insights. First, we find that while a sizable share of variance in the benefits employees receive is explained by employer-fixed policies in a given year, the majority of variance is attributable to within-firm-year dispersion. We, therefore, find a less pronounced employer-fixed component in benefits and, instead, more dispersion of benefits arrangements within firm-years compared to Ouimet and Tate (2023).[6] Second, we find that the

[6] To the best of our knowledge, the only prior study that explores within-firm variation in benefits is Ouimet and Tate (2023), which finds that between-firm variation accounts for the vast majority of the variance in benefits (e.g., 86.3 percent for health benefits) while within-firm dispersion of benefits is small. These previous results are, however, likely not transferable to our setting for at least two reasons. First, Ouimet and Tate (2023) focus on three categories

share of variance that is explained by employer-fixed policies in a given year varies across benefit categories. This result is in line with the idea that certain types of benefits are more difficult to vary within a given firm-year (such as, e.g., the availability and access to a cafeteria) while other benefit types are more flexible and can thus be varied more easily in remuneration arrangements with different employees within the same firm-year (such as, e.g., access to coaching).[7]

4.2. Gender and non-wage benefits

Based on prior research that has documented gender differences in preferences for flexible workplace characteristics (Le Barbanchon et al. 2021; Wiswall and Zafar 2018; Mas and Pallais 2017), we further examine the sorting role of non-wage benefits by examining the relation between gender and non-wage benefits. The motivation to examine gender as a particular employee characteristic to test for employee sorting is similar to Liu et al. (2023). That is, if female employees exhibit higher preferences for benefits, firms should offer them more benefits relative to male employees, and firms should vary benefit practices across employees to facilitate sorting.

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of benefits that, due to legal restrictions in the U.S., are difficult to vary for different employees of the same firm (i.e., health benefits, retirement benefits, and leave benefits). In contrast, our sample includes many benefit categories that are plausibly easier to vary within firms (e.g., corporate car and phone plans). Second, due to data limitations, the observations in Ouimet and Tate (2023) are at the establishment-job-quarter level such that within-firm variation will stem from different benefit policies in different establishments and between whole job types. In contrast, we have access to data on the level of individual employees, thus allowing us to additionally observe variation that stems from different benefit arrangements made by different employees of the same firm.

[7] We acknowledge that the wording on the question asking respondents about their benefits could raise concerns about the validity of our measure if employees' responses simply capture their *awareness* of the theoretical possibility of receiving certain benefits from their employer rather than whether they actually receive the respective benefits themselves. That is, it could be possible that benefits vary less between employees of the same firm than our measure suggests and that the within-firm variation we observe in our benefits measure stems at least in part from variation in employees' awareness of the benefits their employer offers (possibly influenced by not only the benefits they personally receive but also the benefits of which they know their coworkers receive). At the same time, an employee's awareness of the availability of certain benefits could plausibly be correlated with their revealed preferences to receive such benefits. To the extent that employee awareness of different types of benefits offered by their employer is a necessary precondition for their periodic remuneration negotiations, we note that this measurement error could raise concerns about the economic significance of our results, but is unlikely to invalidate the conclusion that benefits can facilitate preference-based sorting of employees into different remuneration arrangements within a given employer. We also note that this alternative interpretation of our measure is not supported by the results of our additional analyses, which we conducted to examine the preference-based sorting explanation as discussed in Footnotes 16, 21, and 25.

To examine the relation between gender and non-wage benefits, we estimate the following model specification with standard errors clustered by firm-year:[8]

$$BenefitsSum_i = \beta_0 + \beta_1 Female_i + \sum \beta\, Controls_i + \sum \beta\, Fixed\ Effects\ + \varepsilon_i \qquad (1)$$

where i denotes the respective employee. The dependent variable *BenefitsSum* is the total number of non-wage benefits that the employee was awarded at their firm, ranging from 0 to 17. $Female$ is an indicator that takes the value of 1 if the employee is female and 0 otherwise. Furthermore, we include two important control variables. First, we control for whether the respective employee holds a managerial role within the company. Non-managerial employees often constitute the frontline workforce and operate within distinct work environments, frequently involving shift work. These circumstances typically result in a significant reduction in the number and variety of benefits that could be offered by the company instead of pay. We proxy for this group of employees using *Manager*, which is an indicator that takes a value of 1 for employees who have a managerial position and 0 otherwise. Second, we consider whether the respective employee acts as a supervisor for any subordinates. Employees with direct reports typically have additional responsibilities, such as supervisory and reporting duties, which may affect the number and variety of benefits that could be awarded to employees. For example, benefits such as home office and flexible working hours are somewhat contingent on whether their direct reports are also awarded these benefits. We proxy for this characteristic using *Supervisor*, which is an indicator that takes a value of 1 for employees that indicate having direct reports and 0 otherwise.[9] To control for employees' tenure, we include tenure category-fixed effects as *Kununu's* questionnaire does not

[8] For consistency, we estimate all of our models (i.e., also models where the dependent variable is a count-based variable) as linear OLS regressions. In untabulated robustness tests, we find that our results are robust to alternative estimations as Poisson regressions.

[9] Employees in managerial roles often act as supervisors, and vice versa, which is also evidenced by a sizable correlation of $\rho = 0.633$ between our two variables *Manager* and *Supervisor*. We nevertheless include both controls as these two concepts are defined separately in German labor law.

capture employees' exact tenure in years but rather asks respondents to select one of the categories "0-1 years", "1-3 years", "3-6 years", "6-10 years", and "more than 10 years". Furthermore, we include year, job title, and firm fixed effects. While we also present results when firm, year, and job title fixed effects are included separately, for our main specification, we make use of the size and granularity of our dataset and include combined firm-job title-year fixed effects.[10]

Table 4 presents our results. Each column presents results of estimations that differ based on the inclusion of control variables and fixed effects. Column 1 shows results for a specification where no controls or fixed effects are included. Column 2 shows results when controls and fixed effects related to job characteristics are added. Column 3 shows results when we additionally include firm fixed effects to control for variation between organizations. Finally, Column 4 shows results when we include combined firm-job title-year fixed effects. In all three specifications with controls, we find positive coefficients on our control variables *Manager* and *Supervisor*, suggesting that employees in managerial functions and those with supervisory responsibilities are associated with more benefits. For our main independent variable of interest, the gender indicator *Female*, our results show a negative coefficient in the specification with no controls (Column 1) and positive coefficients in all other specifications. This suggests that while female employees on average receive fewer benefits than male employees, this is likely driven by inherent job and employer characteristics. As soon as controls for job-related characteristics are included, we find that female employees are associated with more benefits than male employees. Our results,

[10] Prior research that estimates gender differences in pay frequently includes an individual's age and its squared term to capture human capital. While information on individuals' age is available from *Kununu*, this variable shows a large number of missing values, which would reduce our usable sample size by approximately 40 percent. We therefore do not include age as a covariate in our main specifications. Results from untabulated robustness checks suggest that all of our inferences are robust to including age and its squared term as additional covariates.

therefore, suggest that *ceteris paribus*, female employees receive more non-wage benefits compared to their male counterparts.

There may be several reasons why women are associated with more benefits than men. Consistent with preference-based sorting, women may *prefer* benefits because they allow for greater flexibility to combine work with household obligations (Mas and Pallais 2017; Wiswall and Zafar 2018; Le Barbanchon et al. 2021). However, another possibility is that women receive more benefits because they are forced into accepting remuneration packages comprising benefits with relatively low value. This explanation would be rooted in discriminatory practices whereby firms would provide female employees with many benefits as a mere token of compensation for lower pay, thereby exploiting the fact that female employees have, on average, a lower willingness to negotiate with employers (Leibbrandt and List 2015; Roussille 2024). To assess these different possible explanations, we leverage the differences in benefit types to distinguish between benefits for which female employees can be expected to exhibit stronger preferences and benefits for which we would not expect gender differences. Our benefit classification follows Liu et al. (2023). Specifically, we categorize the individual benefits into three different groups.

We form a first group of benefits that we consider family-friendly based on a narrow definition, which is in line with prior research on revealed gender preferences for family-friendly working conditions (Mas and Pallais 2017; Le Barbanchon et al. 2021; Wiswall and Zafar 2018). Specifically, we assign three benefits to this group: the possibility to flexibly choose one's work hours, the possibility to work from home, and the availability of employer-provided childcare. Accordingly, we calculate *BenefitsFamNarrow* as the sum of the three indicators *BenefitsWorkhours*, *BenefitsHomeoffice*, and *BenefitsChildcare*. Second, we form a group of benefits that we consider family-friendly based on a broader definition, that is, benefits that could

be more generally considered helpful in attenuating the disadvantages that employees with family responsibilities typically have. Based on the idea that employees with family responsibilities have higher marginal costs of work time (Oyer 2008; Liu et al. 2023) we assign to this category benefits that provide employees with time-saving and lower coordination costs if provided by the employer (i.e., availability of a medical professional, availability of a cafeteria, availability of employee parking, fitness offers, and the possibility to bring one's dog to work). Furthermore, we assign to this category two types of benefits that provide career support (i.e., coaching offers and corporate events) based on the idea that such benefits are more valuable to employees with family responsibilities as their career progress frequently suffers from fewer opportunities for social interactions with supervisors and colleagues and limited possibilities to work overtime (Cullen and Perez-Truglia 2023). Additionally, we assign the availability of employer-supported retirement plans to this category because in our research setting (i.e., Germany) employees who interrupt or leave full-time employment to care for children or other family members frequently suffer penalties in the public pension system leading to a *gender pension gap* in the accumulated pension entitlement between men and women (Even and Macpherson 1994; Federal Statistical Office 2023b).[11] Third, we aggregate the remaining benefits (i.e., corporate car, corporate phone, employer-sponsored internet plan, discounts for purchases from the employer, employer-supported share purchase programs, and food vouchers) to the group *BenefitsOther*. These constitute the type of benefits that are the least likely to provide value to employees by allowing

[11] We create two separate groups *BenefitsFamNarrow* and *BenefitsFamBroad* despite similar predictions for benefits across these two groups for clarity and in line with the idea that employees will exhibit differential preferences for benefits in the category *BenefitsFamNarrow* more unambigiously compared to benefits in the category *BenefitsFamBroad*. Our inferences remain the same if we aggregate benefits in these two groups into a single group.

them to combine work with household obligations. Instead, these constitute benefits similar to "perks" – i.e., additional incentives with a relatively clear monetary value.[12]

In Table 5, we regress *BenefitsFamNarrow*, *BenefitsFamLoose*, and *BenefitsOther* as alternative dependent variables on *Female* and our full set of controls and fixed effects. In the interest of parsimony, we present results only for our main specification, which includes all controls and firm-job title-year fixed effects. In line with the preference-based explanation for the gender differences in received benefits, we find that women are associated with more benefits in the categories *BenefitsFamNarrow* and *BenefitsFamBroad*, while we find no statistically significant gender difference for *BenefitsOther*. Overall, these results confirm that the gender differences are mainly pronounced for benefits that are less transferrable into monetary value, but rather allow for opportunities to combine work with household responsibilities – i.e., "family-friendly" benefits.[13]

4.3. Gender, non-wage benefits, and preference-based sorting

Our results, presented in Table 5, are in line with the idea that women sort into contracts with more benefits due to gender differences in preferences for benefits relative to pay. To assess this preference-based explanation more directly, we exploit information on employees' satisfaction with their employers available from the *Kununu* reviews. Specifically, we estimate the following model, including the same controls and fixed effects as in Equation 1, as well as standard errors clustered by firm-year:

[12] We present an overview of which benefits we assign to which category, as well as brief explanations for our reasoning in Appendix I, Columns 3 and 4.

[13] We also estimate Equation 1 by replacing the dependent variable *BenefitsSum* with separate indicators for each of the 17 benefit categories, which take a value of 1 if the employee receives the respective benefit and 0 otherwise. Overall, we find that the relation between gender and benefits is persistent across the majority of categories – i.e., female employees are associated with a higher propensity to receive benefits than male employees. However, we find that two benefit category (i.e., corporate cars and employer-paid internet plans) are more commonly associated with male employees. Moreover, four other categories (i.e., food allowances, corporate phone plans, and employer-supported share purchase opportunities) show no statistically significant relation with the gender indicator.

$$Satisfaction_i = \beta_0 + \beta_1 lnPay_i + \beta_2 BenefitsFamNarrow_i + \beta_3 BenefitsFamBroad_i$$
$$+\beta_4 BenefitsOther_i + \beta_5 Female_i + \beta_6 lnPay_i \times Female_i$$
$$+\beta_7 BenefitsFamNarrow_i \times Female_i + \beta_8 BenefitsFamBroad_i \times Female_i$$
$$+\beta_9 BenefitsOther_i \times Female_i + \sum \beta\ Controls_i\ + \sum \beta\ Fixed\ Effects + \varepsilon_i \quad (2)$$

The dependent variable captures employees' satisfaction with their employers. We rely on *Kununu*'s measure, which asks employees to assess their employer along 13 individual dimensions on a 5-point Likert scale. From these items, we calculate *SatisfactionOverall* as the unweighted average of all 13 items.[14] Additionally, we estimate our model using respondents' satisfaction scores provided for the two sub-dimensions "satisfaction with the remuneration provided by the employer" (*SatisfactionRemuneration*) and "satisfaction with the work conditions at the employer" (*SatisfactionWorkCond*). To assess the preference-based explanation, we are interested in the coefficient of the interaction terms with *Female*. If female employees receive more benefits because they are preferred, we expect significantly positive coefficients for β_7 and β_8.

The results presented in Table 6 show that for all three proxies for employee satisfaction, we find positive and statistically significant coefficients on the direct effects of pay and all three categories of benefits. We, therefore, find that pay and all three regarded categories of benefits are generally positively associated with employee satisfaction. Furthermore, our results for all three proxies for employee satisfaction show support for the notion that gender differences exist in how pay and different types of benefits are related to employee satisfaction. Specifically, we find a negative coefficient on the interaction *lnPay* × *Female* in all three specifications, suggesting that the positive relation between pay and satisfaction is weaker for female compared to male employees. Furthermore, we find a positive coefficient on the interactions *BenefitsFamNarrow* ×

[14] Our results are robust to alternatively calculating *Satisfaction* as the factor score of the 13 items.

Female and *BenefitsFamBroad* × *Female* in all three specifications, suggesting that the positive relation between family-friendly benefits and satisfaction is stronger for female employees compared to male employees. At the same time, the coefficient on the interaction *BenefitsOther* × *Female* is not statistically significant in any of the specifications. In sum, these results indicate consistent with the preference-based sorting explanation that pay is relatively more valued by male employees compared to female employees, while family-friendly benefits are relatively more valued by female employees compared to male employees.[15]

To gain a deeper understanding of gender differences in satisfaction with received compensation packages, we conduct an additional analysis comparing employees' actual satisfaction with predicted satisfaction based on the preferences of the opposite gender. Specifically, we estimate Equation 2 separately for female and male employees, without interaction terms between *Female* and compensation package components (*Pay*, *BenefitsFamNarrow*, *BenefitsFamBroad*, *BenefitsOther*). We then use the resulting coefficients to predict satisfaction levels for each group using the preference structure of the opposite gender. This comparison suggests that female employees report higher actual satisfaction with their compensation packages than they would have if their preferences mirrored those of male employees. This result supports the notion that gender differences exist in employees' preferences for different remuneration elements and that employees receive compensation packages that are more closely aligned with their gender-specific preferences.

4.4. Cross-sectional variation in gender differences of non-wage benefits

[15] We note that if our benefit measure picked up primarily respondents' *awareness* of what benefits their co-workers receive, it is implausible that we would find a positive link between this awareness and the satisfaction of the respondent, as well as that this positive relation is stronger for women than it is for men.

To corroborate the preference-based explanation for the observed gender differences in benefits, we conduct two additional cross-sectional analyses by identifying firms in which we would expect relatively more gender-equal remuneration practices, such that female and male employees are more likely to choose their remuneration elements according to their preferences.

4.4.1. Transparent Remuneration Practices

First, we identify firms with relatively more transparent practices for employees to select their remuneration package elements. If female employees receive more benefits than male employees because of differential preferences, then these gender differences should be more pronounced when the tradeoff between benefits and cash compensation is more transparent and the choice of benefits is more flexible. If, however, female employees receive more benefits than male employees because of discrimination or negotiability of benefits relative to pay, then these gender differences should be more pronounced when benefit plans, and specifically, the tradeoffs between benefits and additional cash compensation, are less transparent, and employees are less flexible in their choices. To identify firms that offer flexible choice-based benefit plans, we conduct an internet search for the terms "cafeteria-style benefits", "choice of benefits", and "flexible benefits" mentioned on firms' career websites, posted job advertisements, and in news articles related to employment conditions at the respective firm.[16] Because of the large number of firms in our sample, we employ ChatGPT to automate our search, submitting prompts via the OpenAI API to search for our keywords of interest, company by company.[17]

[16] Under flexible benefit plans, which are often referred to as "cafeteria-style" plans (e.g., Kawamoto, 2024), employees can exchange part of their cash compensation for non-wage benefits, which can be chosen from an employer-provided menu of options. In the U.S., for example, such plans offer tax advantages pursuant to Section 125 of the Internal Revenue Code. In our setting, i.e., Germany, tax advantages for benefits are defined separately by benefit category in Section 3 and Section 8 of the German tax code *Einkommensteuergesetz*.

[17] We take several steps to ensure the validity of our approach. First, we employ the (at the time of our data collection) most recent and, thus, most powerful and reliable version, ChatGPT 4-o. Second, after drafting a first version of our prompt, we conduct prompt engineering where we optimize the exact wording of our prompt using repeated execution via the ChatGPT interface and additional prompting to supplement the search results with reasoning and exact sources

Based on the results of our search, we construct the indicator *FlexCafeteriaPlan*, which takes a value of 1 for firms where we identify the use of at least one of our keywords of interest to describe the benefits offered to employees and 0 otherwise. To test for differences in how gender is related to benefits in firms with vs. without flexible choice-based benefit plans, we estimate an amended model of the specification in Equation 1. Specifically, we regress in separate models our three benefit group variables and *lnPay* as alternative dependent variables on the gender indicator *Female* and the interaction *FlexCafeteriaPlan* × *Female* as well as the full set of controls and fixed effects used in our previous analyses.[18]

Because our coding of *FlexCafeteriaPlan* relies on the presence of certain keywords that identify flexible benefit plans, our approach is prone to Type II errors, i.e., the false labeling of firms as not offering flexible plans due to a lack of (publicly available) descriptions of the respective firm's remuneration practices. Beyond adding noise to our measure, the presence of such Type II errors could bias our analysis if this measurement error is correlated with firm characteristics. In our setting, it is plausible that the availability of information regarding firms' remuneration practices in general and benefit plans in particular is correlated with firm size as larger firms are more likely to have more elaborate and extensive career websites and more press coverage. Given the presence of many small firms in our sample, we, therefore, limit our search to the largest 10,000 employers by the number of employee reviews (i.e., ~ 10 percent of the unique firms) in our sample and present the results of our analysis for different firm-size categories.[19]

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in a small sample of firms for which we manually research the mentioning of our keywords of interest. Third, after performing the search via ChatGPT, we randomly select 100 firms from our sample and manually verify the results, finding a 100 percent overlap between our manual coding and the results provided by ChatGPT.

[18] *FlexCafeteriaPlan* does not vary at the firm-level. Thus, the direct effect of this variable is colinear with the firm fixed effects and, therefore, omitted.

[19] Despite including just under 10 percent of our unique firms in our sample, the subsample we use for this analysis covers 58 percent of our employee-review observations and includes all firms with at least 10 employee reviews during our sample period.

Results presented in Table 7 provide further support for the notion that female employees exhibit greater preferences for family-friendly benefits compared to male employees. Specifically, results for *BenefitsFamNarrow* and *BenefitsFamBroad* and all three samples that include firms of different sizes show consistently positive and significant coefficients on *Female* and the interaction *FlexCafeteriaPlan* × *Female* (see Columns 1-6). We, therefore, find that while female employees receive more family-friendly benefits than male employees also in firms without flexible choice-based benefit plans, this gender difference is further enhanced in firms that offer such plans. For non-family-related benefits (see Columns 7-9), in contrast, we find that female employees generally receive more such benefits compared to male employees (i.e., we find positive and significant coefficients on *Female*), but this gender difference does not vary significantly between firms with vs. without a flexible choice-based plan (i.e., we find statistically insignificant coefficients on the interaction *FlexCafeteriaPlan* × *Female*). Results for *lnPay* as the dependent variable, which we present in Columns 10-12, indicate that the higher number of benefits female employees receive given a flexible choice regarding benefits stems from the trade-off they make between (additional) benefits and pay. Specifically, we find negative coefficients on the interaction *FlexCafeteriaPlan* × *Female* in all three specifications, with the coefficient being statistically significant in the samples of the 5,000 and 10,000 largest employers ($p < 0.10$, two-tailed) and approaching statistical significance at the 10% level in the sample of the 1,000 largest employers ($p = 0.188$, two-tailed). Our results, therefore, provide further suggestive evidence consistent with a preferences-based explanation for female employees receiving more family-friendly benefits.[20]

4.4.2. Commitment to Gender Diversity

[20] We note that if our benefit measure picked up primarily respondents' *awareness* of what benefits their co-workers receive, it is implausible that the increased transparency of "cafeteria-style" benefit plans would be associated with any gender differences in empoyees' awareness of how many and which benefits their co-workers receive.

Second, we identify firms with relatively greater commitment to gender diversity in their human resource practices. If the results of our main analysis can be explained by preference-based sorting, we would expect to find that gender differences in benefits are more pronounced in firms with a demonstrated commitment to gender diversity because such firms would also have a higher propensity to attract and retain female employees, thus offering remuneration packages consistent with their preferences. In contrast, if our main results are more likely driven by discrimination or differences in propensity to negotiate by women, we would expect that gender differences in benefits will be less pronounced in firms with a commitment to gender diversity. To identify firms with relatively greater commitment to gender diversity, we exploit a newly implemented law that requires German firms to set and disclose achievement of targets related to gender diversity in their employment practices (hereafter, Gender Target Law) and create two measures.[21] For our first proxy, we construct the indicator *DiversityTargetsSet*, which takes a value of 1 if a firm (1) falls under the Gender Target Law, (2) has set and reported targets for all three levels of management required by the law, and (3) has set targets that can be considered at least somewhat "serious", which we define as non-zero for the executive level and > 10 percent for the two levels below the executive level. [22] For our second proxy, we construct the indicator

[21] In April 2015, Germany passed the "Act on Equal Participation of Women and Men in Executive Positions in the Private and Public Sectors" (hereafter, the Gender Target Law). The law states that beginning on 30 September 2015, public and large private companies in Germany must set targets for the proportion of female employees in the top three management levels, i.e., the executive level and the two next management levels below that (Deutscher Bundestag, 2015). Companies are generally free to set their gender diversity target at any value, i.e., even targets of zero percent are possible. The law defines no repercussions in case a firm misses its targets, relying instead on the principle of "naming-and-shaming" through increased transparency. All information regarding a target, i.e., the target level, the time horizon until the target needs to be reached, and actual target achievement, must be published in the company's annual report. To construct our measures, we hand-collect data on (1) firms' self-set targets after the passing of the Gender Target Law, and (2) firms' subsequent target achievement.

[22] Our inferences are robust to using alternative thresholds to define targets as "serious" as long as targets of 0 percent and very close to 0 percent are treated equivalent to no targets set.

DiversityTargetsAchieved, which takes a value of 1 if a firm has set targets as defined in *DiversityTargetsSet* and subsequently achieves at least one of these targets and 0 otherwise.

To test for differences in how gender is related to benefits and pay in firms with different levels of commitment to gender diversity, we estimate amended specifications of the specification in Equation 1. Specifically, we regress *lnPay* and our three benefit group variables as alternative dependent variables on the gender indicator *Female* and include interactions between gender and our two proxies for demonstrated commitment (*DiversityTargetsSet* × *Female* and *DiversityTargetsAchieved* × *Female*). In our estimations, we also include the full set of control variables and fixed effects used in our previous analyses and cluster standard errors by firm-year.[23]

We present the results of this analysis in Table 8. Results for *BenefitsFamNarrow* and *BenefitsFamBroad* as the dependent variables presented in Columns 1-4 show a significant positive coefficient on the interactions between *Female* and both proxies for a firm's commitment to gender diversity. We therefore find evidence that is consistent with the notion that firms demonstrating commitment to gender diversity are more inclined to offer female employees relatively more family-friendly benefits compared to firms without such commitment. In contrast to this, results for *BenefitsOther* and *lnPay* as the dependent variables, which we present in Columns 5-8, show no support for a statistically significant coefficient on the interaction between *Female* and either of our two proxies for commitment to gender equality. This suggests that there is no significant difference in how firms with vs. without a commitment to gender diversity award non-family related benefits and pay to female employees compared to male employees.[24]

[23] *DiversityTargetsSet* and *DiversityTargetsAchieved* do not vary at the firm-level. Thus, the direct effect of both variables is colinear with the firm fixed effects and, therefore, omitted.

[24] We note that if our benefit measure picked up primarily respondents' *awareness* of what benefits their co-workers receive, it is implausible that in firms with a demonstrated commitment to gender diversity women would be more acutely aware that their co-workers receive many benefits compared to firms without such a commitment.

4.5. The value of variability of non-wage benefits on employee outcomes

In our last set of analyses, we assess whether offering a wider range of different benefit arrangements is indeed associated with more positive employee outcomes. If employees, regardless of their gender, receive remuneration packages that better reflect their preferences as a result of a wider spectrum of offered benefits, we would expect that firms offering a greater variability in benefit arrangements are associated with better employee outcomes. To test for employee outcomes, we examine employee satisfaction and retention. To capture the variability in benefit arrangements, we rely on the concept of Hamming distance (Hamming 1950), which calculates the distance between two vectors as the relative share of positions at which the two vectors show different values. For this, we express the benefit arrangements of each employee in our sample as a vector with 17 positions (one for each benefit type) where each position takes a value of 1 if the employee receives the respective benefit or 0 if they do not receive the respective benefit. We then calculate the Hamming distance between all pairs of employees that work for the same firm in a given year and share the same job title, and calculate *BenefitsVariability* as the simple average of the Hamming distance between all employee pairs.[25] Additionally, we capture variability in pay by calculating *PayVariability* as the standard deviation of the log of compensation of employees who work for the same firm in a given year and share the same job title.

Results of these analyses are presented in Table 9. Specifically, we conduct tests on two different levels of analysis. First, we conduct tests on the level of firm-job title-year level, where

[25] Our sample contains firms of various sizes with employees across different hierarchical levels and job functions. We calculate the distance between employees within the the same firm-job title-year cluster rather than all employees in a firm to ensure that our measure of benefit variability is based on sufficenlty comparable employees and not, e.g., inflated by the simultaneous presence of employees on low hierarchical levels (who, presumably, receive relatively few benefits) and employees on high hierarchical levels (who, presumably, receive relatively many benefits).

we regress our measures of employee satisfaction and tenure, which we average at the firm-job title-year level, on *BenefitsVariability*, *PayVariability*, and firm and year fixed effects (Panel A). Second, we perform tests on the firm-year level, where we regress our measures of employee satisfaction and tenure, which we average at the firm-year level, on firm-year averages of *BenefitsVariability*, *PayVariability*, three firm-year level controls (firm size measured as the log of total assets, profitability measured as net profit over sales, and leverage measured as equity over total assets), and industry and year fixed effects (Panel B).[26] In both analyses, we find robust evidence of a positive and statistically significant coefficient on *BenefitsVariability* for all three measures of average employee satisfaction (Models 1-3 in both panels) and employee retention measured as the average employee tenure (Model 4 in both panels). Our results, therefore, provide suggestive evidence consistent with the notion that offering a wider range of benefit arrangements allows firms to cater to a wider range of employee preferences, which is associated with higher employee satisfaction and retention. In contrast, *PayVariability* is negatively associated with employee satisfaction and retention (even though not statistically significant for the results presented in Panel B), which is consistent with potential adverse effects of pay inequality within organizations.

5. Conclusion

This study examines the sorting role of non-wage benefits within organizations by exploiting data from an employer review platform that collects information on employees' benefits, pay, gender, and employer- and job-related characteristics. Our analysis yields several main insights. First, we document that the variation in the number of benefits employees receive

[26] To calculate the three firm-year level controls, we match our Kununu dataset with archival data from the Bureau van Dijk Amadeus database. Because archival data is not avaible for all firms in our Kununu sample, the usable *N* for this analysis is reduced.

stems predominantly from within-firm dispersion rather than between-firm variation. Second, we find that *ceteris paribus* female employees receive more non-wage benefits than male employees and that this difference is driven by benefit categories that can be considered family-friendly. Third, we find consistent evidence with the notion that the observed gender differences in benefits stem from differential preferences for family-friendly benefits relative to pay by using additional data on employee satisfaction and in cross-sectional analyses identifying firms with relatively more gender-equal remuneration practices. Fourth, we find that offering employees more variability in benefit arrangements is associated with higher employee satisfaction and retention.

These results have several important implications. Our results documenting gender differences in received benefits within organizations that is consistent with a preference-based sorting explanation, complementing the literature on the effect of gender-specific preferences for remuneration practices. This also means that firms aiming to achieve higher gender equality could be more likely to offer female employees remuneration packages that include more family-friendly benefits and, thus, should be particularly attractive to female talent. Our results further indicate that it might be important to consider the value employees receive in the form of non-wage benefits when estimating gender differences in remuneration. Because we find that women receive more benefits with and without a clear monetary value compared to men, and this could be, at least in part, due to gender differences in the tradeoff employees make between benefits and pay, this gender benefits gap might explain a part of the gender pay gap typically found in organizations. Finally, our results also suggest that offering employees the choice between different benefit arrangements has value for firms, as more variability in benefits is associated with higher employee satisfaction and retention.

Our results highlight two avenues for future research. First, while our results provide suggestive evidence consistent with the notion that female employees have higher preferences for (most types of) benefits compared to male employees, our study cannot speak to the question of why this is the case. Because our data contains no information on the personal situation of the employees in our sample, we cannot infer care responsibilities or other circumstances that would likely drive individuals' preferences for benefits related to flexibility and work-life balance (Goldin 2014). Future research could use survey data to test our conjecture that female employees exhibit higher preferences for different types of benefits compared to male employees and investigate drivers of this difference, such as personal situation or personality. Second, while our results indicate that it might be important to consider both benefits and pay to assess gender differences in total remuneration, our data cannot speak to the question of what part of the gender pay gap can be explained (and compensated) by female employees receiving more benefits. Future research could use survey or (field) experimental data to obtain representative estimates of employees' willingness to pay for different types of benefits as well as contextual factors that affect it. This would make it possible to derive valid and reliable estimates for the value of individual types of benefits, allowing one to calculate the total value of remuneration packages consisting of pay and benefits to different individuals.

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TABLE 1

Descriptive statistics

	N	Mean	Std. Dev.	25-perc.	Median	75-perc.
Main variables						
BenefitsSum	532,937	5.543	4.121	2.000	5.000	9.000
lnPay	532,937	10.691	0.740	10.404	10.703	11.002
Female	532,937	0.347	0.476	0.000	0.000	1.000
Manager	532,937	0.151	0.358	0.000	0.000	0.000
Supervisor	498,144	0.237	0.425	0.000	0.000	0.000
Detailed overview individual benefits						
BenefitsWorkhours	532,937	0.513	0.500	0.000	1.000	1.000
BenefitsHomeoffice	532,937	0.472	0.499	0.000	0.000	1.000
BenefitsCafeteria	532,937	0.262	0.440	0.000	0.000	1.000
BenefitsFood	532,937	0.184	0.387	0.000	0.000	0.000
BenefitsChildcare	532,937	0.065	0.246	0.000	0.000	0.000
BenefitsRetirement	532,937	0.487	0.500	0.000	0.000	1.000
BenefitsFitness	532,937	0.318	0.466	0.000	0.000	1.000
BenefitsMedic	532,937	0.351	0.477	0.000	0.000	1.000
BenefitsCoaching	532,937	0.303	0.460	0.000	0.000	1.000
BenefitsParking	532,937	0.500	0.500	0.000	0.000	1.000
BenefitsDiscount	532,937	0.356	0.479	0.000	0.000	1.000
BenefitsCar	532,937	0.214	0.410	0.000	0.000	0.000
BenefitsPhone	532,937	0.378	0.485	0.000	0.000	1.000
BenefitsShares	532,937	0.185	0.388	0.000	0.000	0.000
BenefitsEvents	532,937	0.474	0.499	0.000	0.000	1.000
BenefitsInternet	532,937	0.358	0.479	0.000	0.000	1.000
BenefitsDogs	532,937	0.124	0.329	0.000	0.000	0.000

This table presents descriptive statistics for our sample. Benefit categories are explained in Table 1. All variables are explained in Appendix II.

TABLE 2

Correlations

Panel A: Pairwise correlations of main variables

		(1)	(2)	(3)	(4)
(1)	*BenefitsSum*	1.000			
(2)	*lnPay*	0.287***	1.000		
(3)	*Female*	-0.014***	-0.143***	1.000	
(4)	*Manager*	0.127***	0.185***	-0.084***	1.000
(5)	*Supervisor*	0.086***	0.134***	-0.057***	0.633***

Panel B: Listwise correlations of benefits with main variables

		Female	*Manager*	*Supervisor*	*lnPay*
(1)	*BenefitsWorkhours*	0.016***	0.067***	0.027***	0.238***
(2)	*BenefitsHomeoffice*	0.000	0.066***	0.014***	0.277***
(3)	*BenefitsCafeteria*	-0.024***	0.018***	-0.023***	0.146***
(4)	*BenefitsFood*	-0.022***	0.031***	0.011***	0.121***
(5)	*BenefitsChildcare*	0.020***	0.031***	0.014***	0.097***
(6)	*BenefitsRetirement*	0.011***	0.059***	0.031***	0.182***
(7)	*BenefitsFitness*	0.009***	0.071***	0.043***	0.171***
(8)	*BenefitsMedic*	0.012***	0.047***	0.022***	0.134***
(9)	*BenefitsCoaching*	0.013***	0.133***	0.115***	0.141***
(10)	*BenefitsParking*	-0.038***	0.041***	0.026***	0.098***
(11)	*BenefitsDiscount*	0.024***	0.067***	0.044***	0.085***
(12)	*BenefitsCar*	-0.090***	0.126***	0.119***	0.157***
(13)	*BenefitsPhone*	-0.093***	0.129***	0.101***	0.256***
(14)	*BenefitsShares*	-0.019***	0.078***	0.062***	0.127***
(15)	*BenefitsEvents*	0.030***	0.066***	0.055***	0.149***
(16)	*BenefitsInternet*	-0.016***	0.078***	0.072***	0.151***
(17)	*BenefitsDogs*	0.054***	0.039***	0.058***	0.043***

This table shows correlations between our main variables. Panel A shows pairwise correlations for our main variables where *BenefitsSum* is the aggregated count of benefits offered to an employee. Panel B shows correlations between our main variables and each individual benefit category included in our analysis. Benefit categories are explained in Table 1. All variables are explained in Appendix II.

TABLE 3

Variance decomposition

	(1) *Between Variance*	(2) *Within Variance*	(3) *Total Variance*	(4) *% Between Variance*	(5) *% Within Variance*
Panel A. Variance between/within firms					
BenefitsSum	5.565	11.686	17.251	32.3%	67.7%
Demean Industry	4.798	11.793	16.591	28.9%	71.1%
Demean Job Title	4.080	11.230	15.310	26.7%	73.3%
Panel B. Variance between/within firm-years					
BenefitsSum	6.754	11.029	17.783	38.0%	62.0%
Demean Industry	5.969	11.045	17.104	34.9%	65.1%
Demean Job Title	5.230	10.584	15.814	33.1%	66.9%
Panel C. Variance between/within firm-years by benefit type					
BenefitsWorkhours	0.090	0.159	0.249	36.2%	63.8%
BenefitsHomeoffice	0.111	0.139	0.250	44.2%	55.8%
BenefitsCafeteria	0.109	0.101	0.210	51.8%	48.2%
BenefitsFood	0.065	0.096	0.161	40.3%	59.7%
BenefitsChildcare	0.023	0.046	0.069	32.4%	67.6%
BenefitsRetirement	0.096	0.154	0.250	38.3%	61.7%
BenefitsFitness	0.078	0.149	0.227	34.2%	65.8%
BenefitsMedic	0.102	0.132	0.234	43.1%	56.9%
BenefitsCoaching	0.064	0.157	0.221	28.8%	71.2%
BenefitsParking	0.091	0.159	0.250	36.5%	63.5%
BenefitsDiscount	0.087	0.152	0.239	36.6%	63.4%
BenefitsCar	0.067	0.103	0.170	39.5%	60.5%
BenefitsPhone	0.099	0.141	0.240	41.1%	58.9%
BenefitsShares	0.053	0.108	0.161	32.8%	67.2%
BenefitsEvents	0.083	0.167	0.250	33.3%	66.7%
BenefitsInternet	0.077	0.154	0.231	33.3%	66.7%
BenefitsDogs	0.049	0.054	0.103	47.2%	52.8%

This table presents the results of the variance decomposition analysis. Panel A presents results for the decomposition of variance in the variable *BenefitsSum* into between- and within-firm variance. Panel B presents results for the decomposition of variance in the variable *BenefitsSum* into between- and within-firm-year variance. Panel C presents results for the decomposition of variance in the individual benefit categories into between- and within-firm-year variance. Benefit categories are explained in Table 1. All variables are explained in Appendix II.

TABLE 4

Analysis of the Relation Between Gender and Number of Non-Wage Benefits Received

	(1)	(2)	(3)	(4)
Dependent variable:	*BenefitsSum*	*BenefitsSum*	*BenefitsSum*	*BenefitsSum*
Female	-0.127***	0.090***	0.176***	0.241***
	(0.015)	(0.014)	(0.015)	(0.029)
Manager		0.775***	0.616***	0.471***
		(0.025)	(0.026)	(0.057)
Supervisor		0.048**	0.462***	0.490***
		(0.021)	(0.022)	(0.043)
Constant	Yes	Yes	Yes	Yes
Year FE	No	Yes	Yes	No
Tenure FE	No	Yes	Yes	Yes
Job Title FE	No	Yes	Yes	No
Firm FE	No	No	Yes	No
Firm-Job Title-Year FE	No	No	No	Yes
Observations	532,937	492,390	444,513	142,767
adj. R^2	0.000214	0.125	0.281	0.355

This table presents the results of the analysis of the relation between gender and the number of benefits received. Observations are on the employee-review level. The dependent variable in all models is the number of benefits received by the employee. The main variable of interest is the gender indicator *Female*. Column (1) shows results without controls or fixed effects. Column (2) shows results with controls and fixed effects related to job characteristics. Column (3) shows results with firm-fixed effects added. Column (4) shows results when separate firm-, job title-, and year-fixed effects are replaced with combined firm-job title-year-fixed effects. All models are estimated as OLS regressions with standard errors clustered by firm-year reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% two-tailed confidence level, respectively. All variables are explained in Appendix II.

TABLE 5

The Relation Between Gender and the Number of Non-Wage Benefits Received for Different Types of Benefits

	(1)	(2)	(3)
Dependent variable:	*BenefitsFamNarrow*	*BenefitsFamBroad*	*BenefitsOther*
Female	0.056***	0.175***	0.010
	(0.006)	(0.016)	(0.011)
Manager	0.069***	0.208***	0.193***
	(0.012)	(0.030)	(0.022)
Supervisor	0.049***	0.237***	0.204***
	(0.009)	(0.023)	(0.016)
Constant	Yes	Yes	Yes
Tenure FE	Yes	Yes	Yes
Firm-Job Title-Year FE	Yes	Yes	Yes
Observations	142,767	142,767	142,767
adj. R^2	0.450	0.313	0.355

This table presents the results of the analysis of the relation between gender and the number of benefits received. Observations are on the employee-review level. The dependent variable in Model 1 is the number of benefits received by the employee that can be considered "family-friendly" based on a narrow definition. The dependent variable in Model 2 is the number of benefits received by the employee that can be considered "family-friendly" based on a broad definition. The dependent variable in Model 3 is the number of "other" (i.e., non-family related) benefits received by the employee. All models are estimated as OLS regressions with standard errors clustered by firm-year reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% two-tailed confidence level, respectively. All variables are explained in Appendix I.

TABLE 6

Pay and Benefits as Drivers of Employee Satisfaction

	(1)	(2)	(3)
Dependent variable:	*SatisfactionOverall*	*SatisfactionRemuneration*	*SatisfactionWorkCond*
lnPay	0.125***	0.187***	0.125***
	(0.008)	(0.010)	(0.009)
BenefitsFamNarrow	0.202***	0.171***	0.209***
	(0.007)	(0.008)	(0.008)
BenefitsFamBroad	0.144***	0.139***	0.140***
	(0.003)	(0.004)	(0.004)
BenefitsOther	0.076***	0.084***	0.077***
	(0.004)	(0.004)	(0.005)
Female	0.529***	0.536***	0.695***
	(0.113)	(0.135)	(0.134)
lnPay × Female	-0.062***	-0.056***	-0.077***
	(0.011)	(0.013)	(0.013)
BenefitsFamNarrow × Female	0.041***	0.025**	0.059***
	(0.009)	(0.010)	(0.011)
BenefitsFamBroad × Female	0.033***	0.034***	0.032***
	(0.004)	(0.005)	(0.005)
BenefitsOther × Female	-0.004	-0.010	-0.004
	(0.005)	(0.006)	(0.007)
Manager	-0.001	0.007	-0.026
	(0.015)	(0.017)	(0.018)
Supervisor	0.122***	0.083***	0.110***
	(0.014)	(0.015)	(0.016)
Constant	Yes	Yes	Yes
Tenure FE	Yes	Yes	Yes
Firm-Job Title-Year FE	Yes	Yes	Yes
Observations	142,767	142,767	142,767
adj. R^2	0.465	0.412	0.373

This table presents the results of the analysis of employee satisfaction. Observations are on the employee-review level. The dependent variable in all models is the level of employee satisfaction. Column (1) shows results for a measure of overall satisfaction with the employer. Column (2) shows results for satisfaction specifically with the remuneration at the employer. Column (3) shows results for satisfaction specifically with the work conditions at the employer. All models are estimated as OLS regressions with standard errors clustered by firm-year reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% two-tailed confidence level, respectively. All variables are explained in Appendix II.

TABLE 7

Analysis of Sum of Benefits When Firms Offer Flexible Cafeteria-Style Benefit Plans

	(1)	(2)	(3)	(4)	(5)	(6)
Sample:	Largest 1,000 Employers	Largest 5,000 Employers	Largest 10,000 Employers	Largest 1,000 Employers	Largest 5,000 Employers	Largest 10,000 Employers
Dependent variable:	*BenefitsFamNarrow*	*BenefitsFamNarrow*	*BenefitsFamNarrow*	*BenefitsFamBroad*	*BenefitsFamBroad*	*BenefitsFamBroad*
Female	0.057***	0.053***	0.049***	0.194***	0.171***	0.163***
	(0.009)	(0.007)	(0.007)	(0.022)	(0.018)	(0.017)
FlexCafeteriaPlan × *Female*	0.088***	0.090***	0.094***	0.115*	0.137**	0.143**
	(0.030)	(0.029)	(0.029)	(0.067)	(0.065)	(0.065)
Manager	0.068***	0.063***	0.064***	0.200***	0.197***	0.196***
	(0.015)	(0.013)	(0.013)	(0.039)	(0.034)	(0.032)
Supervisor	0.026**	0.046***	0.048***	0.175***	0.222***	0.233***
	(0.012)	(0.010)	(0.010)	(0.032)	(0.027)	(0.025)
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Tenure FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Job Title-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	78,058	111,205	123,899	78,058	111,205	123,899
adj. R^2	0.448	0.442	0.444	0.297	0.301	0.303

(continued)

TABLE 7 (continued)

Sample:	(7) Largest 1,000 Employers	(8) Largest 5,000 Employers	(9) Largest 10,000 Employers	(10) Largest 1,000 Employers	(11) Largest 5,000 Employers	(12) Largest 10,000 Employers
Dependent variable:	*BenefitsOther*	*BenefitsOther*	*BenefitsOther*	*lnPay*	*lnPay*	*lnPay*
Female	0.021	0.006	0.002	-0.070***	-0.064***	-0.062***
	(0.014)	(0.012)	(0.012)	(0.006)	(0.005)	(0.005)
FlexCafeteriaPlan × *Female*	0.035	0.049	0.052	-0.019	-0.026	-0.027*
	(0.054)	(0.053)	(0.053)	(0.017)	(0.016)	(0.016)
Manager	0.197***	0.186***	0.189***	0.135***	0.130***	0.126***
	(0.028)	(0.024)	(0.023)	(0.012)	(0.010)	(0.010)
Supervisor	0.177***	0.196***	0.202***	0.044***	0.047***	0.045***
	(0.022)	(0.019)	(0.017)	(0.010)	(0.009)	(0.008)
Constant	Yes	Yes	Yes	Yes	Yes	Yes
Tenure FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Job Title-Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	78,058	111,205	123,899	78,058	111,205	123,899
adj. R^2	0.343	0.344	0.348	0.415	0.407	0.400

This table presents the results of the analysis of the relation between gender and the number of benefits received, as well as pay for firms that do vs. do not offer a flexible choice of benefits, i.e., a "cafeteria-style" benefit plan. Observations are on the employee-review level. The main variable of interest is the interaction between the gender indicator and the indicator for whether a firm offers a flexible "cafeteria-style" benefits plan (*Female* × *FlexCafeteriaPlan*). Columns (1), (4), (7), and (10) show results for a sample that includes only the 1,000 largest employers by number of employee reviews. Columns (2), (5), (8), and (11) show results for a sample that includes only the 5,000 largest employers by number of employee reviews. Columns (3), (6), (9), and (12) show results for a sample that includes only the 10,000 largest employers by number of employee reviews. All models are estimated as OLS regressions with standard errors clustered by firm-year reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% two-tailed confidence level, respectively. All variables are explained in Appendix II.

TABLE 8

Analysis of Sum of Benefits and Pay Conditional on Commtiment to Gender Diversity

Dependent variable:	(1) *Benefits FamNarrow*	(2) *Benefits FamNarrow*	(3) *Benefits FamBroad*	(4) *Benefits FamBroad*	(5) *Benefits Other*	(6) *Benefits Other*	(7) *lnPay*	(8) *lnPay*
Female	0.018	0.031	0.101*	0.114**	-0.031	-0.022	-0.069***	-0.063***
	(0.023)	(0.023)	(0.059)	(0.057)	(0.040)	(0.040)	(0.014)	(0.014)
Female × DiversityTargetsSet	0.110**		0.208*		0.068		0.010	
	(0.046)		(0.107)		(0.085)		(0.022)	
Female × DiversityTargetsAchieved		0.083*		0.193*		0.046		-0.010
		(0.049)		(0.110)		(0.090)		(0.023)
Manager	0.084**	0.083**	0.232**	0.232**	0.220***	0.220***	0.117***	0.117***
	(0.036)	(0.036)	(0.097)	(0.097)	(0.069)	(0.069)	(0.025)	(0.025)
Supervisor	-0.001	-0.001	0.141*	0.141*	0.189***	0.189***	0.005	0.005
	(0.031)	(0.031)	(0.073)	(0.073)	(0.051)	(0.051)	(0.019)	(0.019)
Constant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tenure FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Job Title-Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	18,826	18,826	18,826	18,826	18,826	18,826	18,826	18,826
adj. R^2	0.405	0.405	0.258	0.258	0.303	0.303	0.386	0.386

This table presents the results of the analysis of the relation between gender and the amount of pay and benefits received for firms with different levels of commitment to fostering female talent. Observations are on the employee-review level. The main variable of interest is the interaction between the gender indicator and the measure of the commitment of a firm to foster female talent (*Female × DiversityTargetSet* and *Female × DiversityTargetAchieved*, respectively). Columns (1) and (2) show results where the dependent variable is the number of benefits received. Columns (3) and (4) show results where the dependent variable is pay. All models are estimated as OLS regressions with standard errors clustered by firm-year reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% two-tailed confidence level, respectively. All variables are explained in Appendix II.

TABLE 9

Contract Variability as a Driver of Employee Satisfaction and Retention

Panel A: Analyses on Firm-Job-Year level

	(1)	(2)	(3)	(4)
Dependent variable:	*FirmJobYearAvrg SatisfactionOverall*	*FirmJobYearAvrg SatisfactionRemuneration*	*FirmJobyearAvrg SatisfactionWorkCond*	*FirmJobYearAvrg TenureCategory*
BenefitsVariability	0.583***	0.540***	0.607***	0.057*
	(0.042)	(0.044)	(0.046)	(0.034)
PayVariability	-0.035***	-0.017*	-0.036***	0.025**
	(0.009)	(0.010)	(0.011)	(0.011)
Constant	Yes	Yes	Yes	Yes
Firm and Year FE	Yes	Yes	Yes	Yes
Observations	40,690	40,690	40,690	40,550
adj. R^2	0.337	0.352	0.315	0.241

Panel B: Analyses on Firm-Year level

	(1)	(2)	(3)	(4)
Dependent variable:	*FirmYearAvrg SatisfactionOverall*	*FirmYearAvrg SatisfactionRemuneration*	*FirmYearAvrg SatisfactionWorkCond*	*FirmYearAvrg TenureCategory*
BenefitsVariability	1.097***	0.940***	1.206***	0.232**
	(0.146)	(0.147)	(0.154)	(0.086)
PayVariability	-0.035	-0.031	-0.036	-0.011
	(0.034)	(0.030)	(0.038)	(0.022)
FirmSize	0.007	0.046***	0.007	0.054***
	(0.011)	(0.012)	(0.012)	(0.006)
FirmProfitability	-0.001	-0.001	-0.000	-0.001**
	(0.001)	(0.001)	(0.001)	(0.000)
FirmLeverage	0.050**	0.021	0.083***	-0.011
	(0.023)	(0.023)	(0.025)	(0.024)
Constant	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	5,436	5,436	5,436	5,433
adj. R^2	0.122	0.100	0.132	0.076

This table presents the results of the analysis of contract variability as a driver of the average employee satisfaction and tenure at a firm. Panel A presents results of analyses where observations are on the firm-job title-year level. Panel B presents results of analyses where observations are on the firm-year level. The dependent variable in Models (1)-(3) is the average level of employee satisfaction. Column (1) shows results for a measure of overall satisfaction with the employer. Column (2) shows results for satisfaction specifically with the remuneration at the employer. Column (3) shows results for satisfaction specifically with the work conditions at the employer. The dependent variable in Model (4) is the average tenure of employees. All models are estimated as OLS regressions. In analyses reported in Panel A, standard errors are clustered by firm. In analyses reported in Panel B, standard errors are clustered by industry. *, **, and *** indicate significance at the 10%, 5%, and 1% two-tailed confidence level, respectively. All variables are explained in Appendix II.

Appendix I

Overview of benefits, their definitions, and groupings

No	*Benefit*	*Definition*	*Benefit Group*	*Reasoning*
1	*BenefitsWorkhours*	The possibility for an employee to decide when to work (i.e., typical office hours vs. asynchronous work) at least on a certain number of days during a typical week.	*BenefitsFamNarrow*	The temporal flexibility achieved through the possibility of choosing one's work hours flexibly facilitates the compatibility of work with family, care, and household duties.
2	*BenefitsHomeoffice*	The possibility for an employee to work at home vs. in the office at least on a certain number of days during a typical week.	*BenefitsFamNarrow*	The flexibility achieved through the possibility of working from home facilitates the compatibility of work with family, care, and household duties.
3	*BenefitsCafeteria*	The availability of a (subsidized) on-site cafeteria which, typically, offers coffee and snacks.	*BenefitsFamBroad*	Access to meals at the workplace provides time-savings compared to purchasing food at outside vendors (e.g., with a food allowance voucher) facilitating the compatibility of work with family, care, and household duties.
4	*BenefitsFood*	An awarded allowance for food through, e.g., credit for food delivery services or a company-subsidized food vendor.	*BenefitsOther*	Fungible benefit with a clear monetary value and no obvious reasons for family-related differences in preferences.
5	*BenefitsChildcare*	The availability of free-of-charge or subsidized on-site childcare (e.g., on-site company kindergarten).	*BenefitsFamNarrow*	Access to childcare facilities at the workplace facilitates the compatibility of work with family and childcare duties.
6	*BenefitsRetirement*	The possibility to participate in a corporate retirement plan.	*BenefitsFamBroad*	Due to lower income, a higher propensity to be employed part-time, and career interruptions due to childbearing, employees with families typically face a *Gender Pension Gap* (Even and Macpherson 1994; Federal Statistical Office 2023b). As a result, women have a higher need to supplement state pension with additional employer-supported pension schemes.
7	*BenefitsFitness*	The availability of free-of-charge or subsidized fitness offers (e.g., on-site gym or fitness courses.	*BenefitsFamBroad*	Access to fitness offers at the workplace provides time-savings compared to attending a "regular" class or gym thereby facilitating the compatibility of work with family, care, and household duties.

8	*BenefitsMedic*	The availability of free-of-charge or subsidized medical care (e.g., on-site practitioner).	*BenefitsFamBroad*	Access to medical care at the workplace provides time-savings compared to seeing a "regular" practitioner thereby facilitating the compatibility of work with family, care, and household duties.
9	*BenefitsCoaching*	The possibility to participate in free-of-charge or subsidized coaching or training for professional development.	*BenefitsFamBroad*	Women might exhibit lower confidence in their abilities to perform a job compared to equally-qualified men, as suggested by lower application rates of women to challenging positions (Coffman, Collis, and Kulkarni 2024). Interventions that reduce ambiguity regarding necessary qualifications have been demonstrated to reduce gender differences in applications (Coffman et al. 2024). We contend that the opportunity to receive coaching is similar in that it is reassuring to an employee that they will be supported in fulfilling the requirements of their job and their pursuit of professional growth. As a result, women will take advantage of this possibility more.
10	*BenefitsParking*	The availability of a (free) on-site parking lot.	*BenefitsFamBroad*	Fungible benefit with a clear monetary value and no obvious reasons for family-related differences in preferences.
11	*BenefitsDiscount*	A discount offered to employees on products or services of the employer.	*BenefitsOther*	Fungible benefit with a clear monetary value and no obvious reasons for family-related differences in preferences.
12	*BenefitsCar*	The free-of-charge or subsidized possibility of using a company car (e.g., employer-paid car lease).	*BenefitsOther*	Fungible benefit with a clear monetary value and no obvious reasons for family-related differences in preferences.
13	*BenefitsPhone*	A free-of-charge or subsidized company phone and phone plan.	*BenefitsOther*	Fungible benefit with a clear monetary value and no obvious reasons for family-related differences in preferences.
14	*BenefitsShares*	The possibility to obtain shares of the employing firm at beneficial conditions (e.g., employer-matching on share purchases).	*BenefitsOther*	Fungible benefit with a clear monetary value and no obvious reasons for family-related differences in preferences.

15	*BenefitsEvents*	The availability of events for employees that are organized and paid for by the company.	*BenefitsFamBroad*	Social interactions with superiors are beneficial for employees' career advancement, but employees with family responsibilities – and women in particular – have been demonstrated to fall behind in such interactions in the workplace (Cullen and Perez-Truglia 2023). We contend that corporate events can be particularly important and beneficial to employees with family responsibilities, as they provide additional and more casual opportunities to engage in social interactions with supervisors outside of the regular workplace.
16	*BenefitsInternet*	Possibility to participate in a free-of-charge or subsidized internet plan.	*BenefitsOther*	Fungible benefit with a clear monetary value and no obvious reasons for family-related differences in preferences.
17	*BenefitsDogs*	The possibility for employees to bring their dogs to work.	*BenefitsFamBroad*	The possibility of bringing one's dog to work provides flexibility, which facilitates the compatibility of work with care duties.

Appendix II

Variable descriptions

Variable Name	Definition
BenefitsSum	The number of benefits (out of 17 possible categories) that an employee receives.
BenefitsFamNarrow	The number of benefits that an employee receives out of the three categories that can be considered family-friendly, based on a narrow definition.
BenefitsFamBroad	The number of benefits that an employee receives out of the eight categories that can be considered family-friendly, based on a broad definition.
BenefitsNonFam	The number of benefits that an employee receives out of the six categories that can be considered non-family-related.
BenefitsVariability	Variability in the benefit arrangements that an employer offers. Calculated as the average Hamming distance between the benefit arrangements of employees with the same job title at a given firm.
lnPay	Natural logarithm of the annual pay in Euros that an employee receives.
PayVariability	Variability in the pay arrangements that an employer offers. Calculated as the standard deviation of pay of employees with the same job title at a given firm.
Female	An indicator that takes a value of 1 if an employee indicated their gender as *female* and 0 for *male*.
Manager	An indicator that takes a value of 1 if an employee indicated their position as a non-managerial position and 0 otherwise.
Supervisor	An indicator that takes a value of 1 if an employee indicated that they supervise at least one employee as a direct report and 0 otherwise.
SatisfactionOverall	The level of satisfaction of the employee with their employer on a 5-point Likert scale. Calculated as the unweighted average of 13 items that cover different dimensions of employer satisfaction.
FirmJobYearAvrg SatisfactionOverall	The average of *SatisfactionOverall* of the employees of a given firm who share the respective job title in a given year.
FirmYearAvrg SatisfactionOverall	The average of *SatisfactionOverall* of all employees of a given firm in a given year.
SatisfactionRemuneration	The level of satisfaction of the employee with remuneration provided by their employer on a 5-point Likert scale.
FirmJobYearAvrg SatisfactionRemuneration	The average of *SatisfactionRemuneration* of the employees of a given firm who share the respective job title in a given year.
FirmYearAvrg SatisfactionRemuneration	The average of *SatisfactionRemuneration* of all employees of a given firm in a given year.
SatisfactionWorkCond	The level of satisfaction of the employee with the work conditions at their employer on a 5-point Likert scale.

FirmJobYearAvrg SatisfactionWorkCond	The average of *SatisfactionWorkCond* of the employees of a given firm who share the respective job title in a given year.
FirmYearAvrg SatisfactionWorkCond	The average of *SatisfactionWorkCond* of all employees of a given firm in a given year.
FlexCafeteriaPlan	An indicator that captures whether an employer offers a flexible choice-based "cafeteria-style" benefits plan. Takes a value of 1 if the benefit plan offered by the firm is described as "cafeteria-style benefits", "choice of benefits", or "flexible benefits" on the firm's career website, in posted job advertisements, or in news articles on the remuneration system offered by the firm, and 0 otherwise.
DiversityTargetsSet	Indicator that captures a firm's commitment to gender equality, which takes a value of 1 if a firm falls under the Gender Target Law and has set and reported "serious" (i.e., non-zero for the executive level and > 10 percent for the two levels below executive) targets for all three levels of management required by the law, and 0 otherwise.
DiversityTargetsAchieved	An indicator that captures a firm's commitment to gender equality, which takes a value of 1 if a firm falls under the Gender Target Law, has set and reported "serious" targets for all three levels of management required by the law, and subsequently achieves at least one of its targets, and 0 otherwise.
FirmSize	Firm size, measured as the natural logarithm of total assets.
FirmProfitability	Firm profitability, measured as net profit over sales.
FirmLeverage	Firm leverage, measured as equity over total assets.