Work Meaning and Fair Wages[*]

Thimo De Schouwer[†]   Elisabeth Gsottbauer[‡]   Iris Kesternich[§]   Heiner Schumacher[¶]

Version: October 30, 2023

Abstract

Work meaning is an important driver of labor supply. Since, per definition, work meaning is associated with benefits for others, it also has an important fairness dimension. In a theoretical model, we show that work meaning may increase or decrease workers' reservation wages, depending on the relative strength of fairness concerns and meaning preferences. To examine the importance of these behavioral motives for labor supply, we conduct a survey experiment with representative samples from the Netherlands and Germany in which we vary within-subject the benefits that a job creates for others. We find that work meaning on average decreases reservation wages, but that only a minority of workers is actually willing to sacrifice wages for work meaning. Fairness concerns are negatively related to willingness to pay for work meaning, while social preferences (like altruism) show a positive association. Workers with a high willingness to pay for work meaning tend to sort into sectors with high perceived societal contributions.

Keywords: Work Meaning, Labor Supply, Fairness Preferences
JEL Classification: C83, C90, M52

1 Introduction

Many developed countries face a shortage of labor supply. This trend is mostly due to population ageing, but recently also has been reinforced by increased preferences for leisure and good working conditions (Autor, 2021, Causa et al., 2022). Policy makers all over the world are therefore discussing how to increase labor supply[1] and researchers examine which non-monetary features make a job attractive to workers, e.g., Mas and Pallais (2017), Le Barbanchon et al. (2021), Aksoy et al. (2022), and Maestas et al. (2023).

A non-monetary job attribute that received substantial interest from researchers of various disciplines is *work meaning* – the significance of a job for others or for society.[2] Workers may value being employed in a job that generates benefits for others, in particular, for needy individuals or for the environment. There is conflicting evidence on the extent to which work meaning drives labor supply. In surveys, respondents typically indicate that they care about having a job in which they can contribute to society.[3] Indeed, experimental research found that making a job meaningful increases workplace performance and labor supply.[4] Further, several papers that use administrative data document that *some* workers are willing to accept lower wages in order to work in non-profit organizations, organizations with a reputation for socially responsible behavior, in green jobs, or in industries that are not perceived as immoral.[5]

However, there are also results which suggest that work meaning has, on average, only a small or zero effect on labor supply. Leete (2001) uses data from the 1990 US census to examine whether working in the non-profit sector is associated to lower or higher pay. She finds that wages in the non-profit sector are not smaller than wages in the for-profit sector,

---

[1] See, e.g., proposals to fund childcare and preschool in the US to increase labor supply (Boushey et al., 2021) or active labor market policies in OECD countries to enable inclusive employment growth (OECD, 2021)

[2] Throughout the paper, we use the term *work meaning* synonymous with the benefits that a job creates for others and for society. This is a fairly narrow definition. In the psychological and economic literature, work meaning often also comprises other features of a job, like autonomy or the perception of accomplishment; see, e.g. Rosso et al. (2010), Steger et al. (2012), or Cassar and Meier (2018). Burbano et al. (2020) explicitly distinguish between *meaning derived from social impact at work* and *meaning derived from non-social impact at work*. In this paper, only the former type of meaning will be labeled as *work meaning*.

[3] See Dur and van Lent (2019), Kesternich et al. (2021), and Burbano et al. (2020).

[4] Positive effects of work meaning on performance in experimental settings are found in Ariely et al. (2008), Grant (2008), Chandler and Kapelner (2013), Chadi et al. (2017), Kosfeld et al. (2017), and Bäker and Mechtel (2018); positive effects on labor supply are documented in Burbano (2016), Hu and Hirsh (2017), and Non et al. (2022). Relatedly, a number of studies demonstrate that the "mission" of a project or a firm matter for workplace performance; see Tonin and Vlassopoulos (2010), Tonin and Vlassopoulos (2015), Imas (2014), Fehrler and Kosfeld (2014), Gerhards (2015), Carpenter and Gong (2016), and Cassar (2019).

[5] Nyborg and Zhang (2013) find in Norwegian register data that a firm's reputation of social responsibility is correlated with lower wages. Using Swedish administrative data, Krueger et al. (2023) that workers in sectors that are classified as sustainable earn on average nine percent less than workers in other sectors. Schneider et al. (2020) study the selection of workers into immoral industries (such as the tobacco, gambling, or weapon manufacturing). In Swiss administrative data, they find a positive and significant association between a worker's wage and the perceived immorality of her industry.

even after controlling for industry and occupation. Further, in a recent study of the valuation of working conditions in the United States, Maestas et al. (2023) find that – relative to other job attributes like schedule autonomy, work arrangements, and paid time off – workers are only willing to give up a small share of their wages to obtain a meaningful job. Moreover, while many respondents indicate in surveys that they care about work meaning, the same is true for many other job characteristics. For example, Kesternich et al. (2021) find that work meaning is only the seventh most important job characteristic (out of nine) in a representative sample of German workers. The most important job characteristics in their sample are job security, appropriate salary, and recognition. How important work meaning really is for labor supply and how one can reconcile these different perspectives remains an open question.

There is a crucial factor that is often overlooked, but that may explain differential reactions to work meaning. Per definition, work meaning is associated to benefits for others and thus has an important fairness dimension. If a worker's job creates significant benefits for others, this may generate demands for more, not less compensation. This argument is frequently made in public debates. For example, during the Covid-19 crisis, it became apparent that nurses, supermarket cashiers, truck drivers, and child care workers do jobs that are essential for society. The general reaction was to demand higher wages for these workers, especially since they often earn relatively little compared to workers in other occupations.

Indeed, starting with Akerlof (1982) and Akerlof and Yellen (1990) a large literature in economics has established that workers care about whether their wage is fair given their contributions, and that they are willing to reduce their efforts if they perceive their treatment as unfair. Akerlof's fair wage hypothesis has been examined in many lab and field experiments; see, for example, Fehr et al. (1993), Gneezy and List (2006), and Cohn et al. (2015). If compensation schemes or the employer's treatment of workers are perceived as unfair, this reduces workplace performance (Kube et al., 2013, Cohn et al., 2014, Breza et al., 2018, Heinz et al., 2020) and can have negative long-term consequences for labor supply (Krueger and Friebel, 2022). Work meaning therefore may not be an ordinary job amenity like flexibility or a short commute. If workers sufficiently care about fairness, they may demand higher – not lower – wages if a job becomes more beneficial for society.

In this paper, we evaluate how work meaning affects labor supply and to what extent responses to work meaning are driven by fairness concerns. To this end, we conduct a survey experiment with representative samples of the working age population from the Netherlands and Germany. The core feature of our experiment is that we directly elicit reservation wages for jobs with varying job attributes and degrees of work meaning. The job variation takes place within-subject so that we can uncover the heterogeneity in workers' responses to work meaning. In particular, we can distinguish between respondents with a positive willingness to pay

for work meaning (e.g., because they mostly see it as a job amenity) and those with a negative willingness to pay for work meaning (e.g., since they want to participate in the benefits they produce through their job). Further, we investigate the association between fairness concerns and the respondents' changes in reservation wages. Finally, we contrast the respondents' labor supply responses to work meaning with their responses to changes in job flexibility and to changes in employers' profits.

Our research design is different from that employed in the recent literature that elicits workers' willingness to pay for non-wage job amenities. This literature relies on hypothetical choice experiments, e.g., Eriksson and Kristensen (2014), Mas and Pallais (2017), De Schouwer and Kesternich (2023), and Maestas et al. (2023). In a hypothetical choice experiment, subjects make several binary choices between two jobs that exhibit varying wages and non-wage attributes. Typically, subjects only choose between non-dominated options. Thus, hypothetical choice experiments imply that the estimates for subjects' willingness to pay for non-monetary job amenities are (weakly) positive. The advantage of hypothetical choice experiments over open questions is that the binary option design greatly reduces the noise in respondents' answers (since extreme answers are not feasible). Their disadvantage is that they do not allow to obtain individual-level estimates of willingness to pay (except, if one would force every respondent to make a high number of choices).

In contrast, by directly eliciting reservation wages, we obtain unrestricted individual-level estimates of respondents' willingness to pay for job amenities. Reservation wage measures are used, for example, to study how unemployment benefits affect labor supply (DellaVigna and Paserman, 2005, Le Barbanchon et al., 2019) or how non-wage job attributes vary between jobs (Hall and Mueller, 2018). Hypothetical reservation wage measures have been shown to correlate with actual job acceptance decisions (Krueger and Mueller, 2016, Kesternich et al., 2022). Respondents may state extreme values for reservation wages. We manage this challenge through attention checks and standard data cleaning procedures. Additionally, we conduct a pre-test with open questions to check whether respondents understand the reservation wage elicitation procedure.

Our first main result is that respondents on average are willing to sacrifice wage for work meaning: The average willingness to pay is 5.5 percent of the reservation wage in the Netherlands and 2.3 percent in Germany. These effect sizes are similar to those found in previous studies that examine representative samples, such as Maestas et al. (2023). However, in both countries, the average effect is driven by less than 50 percent of respondents. A substantial fraction – around 20 percent – indicate higher reservation wages when their job generates additional benefits for others. To further put the effect sizes into perspective, we compare them (in the German sample) to the respondents' reaction when their job creates additional ben-

efits for the employer, and when it offers more flexibility. We find a willingness to pay for employer profits of -5.6 percent of the reservation wage (hence, respondents demand a wage increase), while the willingness to pay for flexibility is on average 9.8 percent of the reservation wage. Thus, the effect of work meaning on labor supply is in between that of a flexibility enhancement and that of a profit increase for the employer.

Next, our second main result is that respondents with higher than average fairness concerns are significantly less likely to lower their reservation wages for a meaningful job, and they have a significantly lower willingness to pay for work meaning. Respondents with high fairness concerns (according to the median split) only would be willing to sacrifice 2.7 percent of their reservation wage in the Netherlands and 1.2 percent in Germany. In contrast, Respondents with low fairness concerns (according to the median split) on average are willing to sacrifice 9.6 percent of their reservation wage in the Netherlands and 6.1 percent in Germany. These effects hold in a regression framework controlling for demographic variables and in a number of robustness checks. Therefore, fairness concerns matter considerably for how employees adjust their labor supply in response to a variation in work meaning.

For the German sample we also elicit social preferences through the survey items from the Global Preference Survey (Falk et al., 2018). We find that social preferences are associated to the respondents' willingness to pay for work meaning. For example, respondents with a high level of altruism are willing to sacrifice 9.7 percent of their reservation wage, while respondents with a low level of altruism would sacrifice -4.7 percent. Importantly, fairness concerns and social preferences have independent and opposing effects on labor supply responses to work meaning. While fairness concerns reduce the effect of work meaning on labor supply, social preferences increase it. Moreover, the effects of both fairness concerns and social preferences are more pronounced and consistent across treatments than those of demographic variables.

Our third main result is that we find sorting on work meaning in the labor market. For both the Netherlands and Germany we find a significant positive association between the respondents' willingness to pay for work meaning and the sector level of work meaning, which we proxy by the share of employees in a sector who indicate that their job generates high societal contributions. This association remains robust even when we control for gender, education, and wage. However, sorting on work meaning is not perfect. We find that 3.3 percent of respondents in the Netherlands and 5.3 percent of respondents in Germany work in a sector with low societal contributions (in the bottom quartile of the distribution) *and* and at the same time they indicate a high willingness to pay for work meaning (in the top quartile of the distribution). To put these numbers into context: Dur and van Lent (2019) find that around 8 percent of workers consider their job as useless, which leaves open the question whether these workers

are also willing to sacrifice wage in order to perform a job that generates societal contributions. Our results suggest that a significant fraction of them indeed may do so.

The paper contributes to a growing literature that studies workers' willingness to pay for having a job that generates societal contributions, either by directly eliciting preferences (Burbano, 2016, Kesternich et al., 2021, Maestas et al., 2023) or by studying the market prices for work meaning (Leete, 2001, Nyborg and Zhang, 2013, Krueger et al., 2023). Our contribution to this literature is two-fold: First, through the elicitation of reservation wages, we can detect both positive and negative willingness to pay for work meaning in representative samples of the population. This allows us to establish that only a minority of workers is willing to sacrifice wage for work meaning, and that a significant fraction of workers in fact requests a higher wage when their job becomes more meaningful. Second, we show that fairness concerns and social preferences are important predictors of workers' willingness to pay for work meaning.

Further, the paper offers a general perspective on labor supply in the context of other-regarding preferences. So far, the literature mostly separated between workers' willingness to pay for work meaning and their reaction to employer behavior, which may be shaped by reciprocity and fairness concerns; see, for example, Fehr et al. (1993), Bewley (1999), Cohn et al. (2015), and Heinz et al. (2020).[6] Our results suggest that these two domains are linked to each other. Specifically, we find that social preferences like altruism, positive reciprocity, and trust are associated to higher willingness to pay for work meaning, while fairness concerns are negatively correlated with willingness to sacrifice wage for work meaning. This interaction is an important determinant of the heterogeneity in the workers' reaction to work meaning.

Finally, the paper contributes to the literature on sorting into jobs based on preferences for work meaning and social preferences. A number of theoretical papers examine assortative matching based on mission motivation and its consequences for contracts and firm performance; see, for example, Besley and Ghatak (2005), Delfgaauw and Dur (2008), as well as Kosfeld and von Siemens (2009, 2011). Subsequently, several studies examined selection of workers into public service and typically finds strong selection effects: More honest or more trustworthy individuals tend to select into public service (Hanna and Wang, 2017, Barfort et al., 2019, Friebel et al., 2019) and more egoistic individuals seem to have a preference for working in the financial industry (Gill et al., 2023). Our data allow us to examine sorting based on preferences for work meaning in representative samples of the population. We indeed find evidence for sorting, but also substantial heterogeneity in preferences for work meaning in all considered sectors.

---

[6]Notable exceptions are Gerhards (2015), Cassar (2019), and Cassar and Meier (2021) who experimentally evaluate the workers' reaction to both the mission of a project and the employer's behavior.

The rest of the paper is organized as follows. In Section 2, we study a simple labor supply model that captures both meaning preferences and fairness concerns. In Section 3, we outline our experimental design and procedures, and we use the theoretical model to derive our empirical hypotheses. In Section 4, we examine our empirical results, in particular, the determinants of the respondents' willingness to pay for work meaning. In Section 5, we study sorting on willingness to pay for work meaning in the labor market and the potential for labor supply increases through work meaning. Finally, Section 6 concludes. The appendix contains further analyses and robustness checks.

2   Theoretical Framework

We consider a labor supply model that relates reservation wages to meaning and fairness concerns. The model is based on Kesternich et al. (2021) and captures both the meaning preference framework from Cassar and Meier (2018) and the fairness ideal framework from Cappelen et al. (2007). First, we introduce the basic model and identify the key comparative statics that will guide our empirical analysis. Next, we establish a link between fairness concerns and behavior in ultimatum bargaining, which we exploit in our experimental design.

Basic Model. We examine the labor supply of a worker who is concerned both with the meaning of her job and fairness. Suppose she receives a job offer that specifies a fixed wage $w \geq 0$ and the effort $e \geq 0$ she has to exert at the job. Effort is fixed and cannot be altered. If the worker rejects the offer, her payoff equals her reservation value $\bar{U} \geq 0$. If she accepts it, her payoff equals

$$U(w, e, x) = w + \theta m(e, x) - \alpha(\pi^f(e, e^o, x) - w)^2 - c(e). \tag{1}$$

The variable x parametrizes the productivity of the worker's job. A raise in x increases both the surplus π of stakeholders or clients of the organization as well as work meaning m. The fair wage π^f strictly increases in surplus π, which we capture by assuming that π^f also strictly increases in x. In Appendix A.1, we provide a micro-foundation for this assumption and explicitly model the association between surplus π and fair wage π^f based on the fairness ideals from Cappelen et al. (2007). For this, the model contains the worker's effort e and the effort $e^o \geq 0$ of other individuals in the organization who contribute to the final output (e.g., co-workers and management).

Work meaning m captures the utility that the worker derives from providing benefits for others or for society. It takes on weakly positive values and strictly increases in the worker's effort e and the productivity parameter x. Both functions, m and π^f, are continuously differentiable in all arguments. Any difference between the actual wage w and the fair wage π^f reduces

the worker's payoff from accepting the job offer. The utility weights θ and α characterize the worker's preferences: $\theta \geq 0$ captures how much weight the worker places on work meaning and $\alpha \geq 0$ represents her degree of fairness concerns. Finally, the costs of doing the job, $c(e)$, are weakly positive and strictly increasing in e.

The worker accepts the job if $U(w, e, x) \geq \bar{U}$ and otherwise rejects it. We define by w^* her reservation wage, that is, the smallest wage w that satisfies the equality

$$U(w, e, x) = \bar{U}. \tag{2}$$

This indifference condition allows us to examine how a variation in the worker's job that increases work meaning affects her reservation wage. Assuming an interior solution and using implicit differentiation, we get

$$\frac{dw^*}{dx} = -\frac{\theta m_x(e, x) - 2\alpha(\pi^f(e, e^o, x) - w^*)\pi_x^f(e, e^o, x)}{1 + 2\alpha(\pi^f(e, e^o, x) - w^*)}, \tag{3}$$

where m_x and π_x^f are the first derivatives with respect to x of the corresponding function. Whether the variation in the worker's job increases or decreases the reservation wage, depends on the relative strength of meaning and fairness concerns as well as on how the variation impacts on work meaning and the fair wage. Suppose the fair wage is weakly larger than the reservation wage, so that we have

$$\pi^f(e, e^o, x) - w^* \geq 0. \tag{4}$$

This inequality holds if there is a value $w \in [0, \pi^f(e, e^o, x)]$ that satisfies equality (2). For example, this is the case when the fair wage is large enough so that $\pi^f(e, e^o, x) > \bar{U} + c(e)$ and the weight on work meaning θ is not too large (i.e., θ small enough so that the worker would not accept the job if the wage w were negative). Provided that inequality (4) is satisfied, the variation in the worker's job reduces the reservation wage if and only if

$$\frac{\theta}{\alpha} \times \frac{m_x(e, x)}{\pi_x^f(e, e^o, x)} > 2(\pi^f(e, e^o, x) - w^*). \tag{5}$$

From this inequality, we can observe two regularities: An increase in work meaning reduces the reservation wage if, all else equal, fairness concerns are sufficiently small relative to meaning preferences; or if, all else equal, the increase in work meaning is sufficiently large relative to the corresponding increase in the fair wage.

Next, we consider a change in effort costs $c(e)$. Such a change represents anything that makes it easier or harder for the worker to do the job, for example, a change in job flexibility.

We again assume that inequality (4) holds. From equation (2), we then obtain that

$$\frac{dw^*}{dc(e)} = \frac{1}{1 + 2\alpha(\pi^f(e, e^o, x) - w^*)}.$$ (6)

Provided that the fair wage is weakly larger than the reservation wage, we get that the reservation wage increases in effort costs. We summarize our results.

Proposition 1. *Suppose the fair wage weakly exceeds the reservation wage, $\pi^f(e, e^o, x) \geq w^*$. The following statements then hold.*

(i) *A variation in the worker's job that raises work meaning can increase or decrease the reservation wage, depending on the relative strength of meaning preferences and fairness concerns. Specifically, there is a threshold value ξ^* so that a meaning variation decreases [increases] w^* if all else equal we have $\frac{\theta}{\alpha} > \xi^*$ [$\frac{\theta}{\alpha} < \xi^*$].*

(ii) *A variation in the worker's job that raises work meaning can increase or decrease the reservation wage, depending on how it changes the ratio between work meaning and the fair wage. Specifically, there is a threshold value ϕ^* so that a meaning variation decreases [increases] w^* if all else equal we have $\frac{m_x(e,x)}{\pi^f_x(e,e^o,x)} > \phi^*$ [$\frac{m_x(e,x)}{\pi^f_x(e,e^o,x)} < \phi^*$].*

(iii) *A variation in the worker's job that reduces effort costs $c(e)$ reduces the reservation wage w^*.*

This result highlights that a worker's degree of fairness concerns α shapes her response to a meaning variation. To identify fairness concerns, we will include an ultimatum game (UG) in our survey experiment. We characterize formally how choices in the ultimatum game are related to fairness concerns, using our framework and terminology. In the ultimatum game, a dictator first chooses the split of a fixed endowment $\bar{\pi}$ between the worker and himself. Let w_{UG} be the offer to the worker. The worker then decides between accepting or rejecting this offer. If she accepts it, she earns w, while the dictator receives $\bar{\pi} - w_{UG}$. If she rejects it, both earn zero. Let w^*_{UG} be the smallest offer that the worker is willing to accept. In our framework, this value is defined by equation (2). We normalize efforts, work meaning, costs, and reservation utility to zero. Equation (2) then becomes

$$w_{UG} - \alpha(\pi^f - w_{UG})^2 = 0,$$ (7)

where π^f is the offer that the worker would consider as fair. For example, a common fairness norm for the ultimatum game is the egalitarian fairness principles, which would imply $\pi^f = \frac{\bar{\pi}}{2}$.

We obtain the relationship between fairness concerns and the UG-reservation wage through implicit differentiation and get

$$\frac{dw^*_{UG}}{d\alpha} = \frac{(\pi^f - w^*_{UG})^2}{1 + 2\alpha(\pi^f - w^*_{UG})}. \tag{8}$$

We again assume that the fair wage is weakly larger than the UG-reservation wage, $\pi^f \geq w^*_{UG}$. The right-hand side of equation (8) is then strictly positive, that is, the smallest wage offer the worker is willing to accept increases in the degree of fairness concerns. We state this result in a proposition.

Proposition 2. *Consider the ultimatum game version of our framework and suppose the fair offer is weakly larger than the UG-reservation wage $\pi^f \geq w^*_{UG}$. An increase in the level of fairness concerns α then increases the reservation wage w^*_{UG}.*

3 Experimental Design, Procedures, and Hypotheses

The main goal of our experiment is to examine whether changes in work meaning have a positive or negative effect on reservation wages, and whether a worker's response to a variation in work meaning depends on her fairness concerns. We describe the survey experiment in Subsection 3.1 and we explain the experimental procedures in Subsection 3.2. Finally, in Subsection 3.3, we derive our research hypotheses using the framework from Section 2.

3.1 Experimental Design

In the survey experiment, we elicit reservation wages for jobs of varying characteristics. We implement three types of treatments: meaning, profit, and flexibility treatments. The meaning treatment is our main treatment. The other two treatments are control treatments that allow us to evaluate the extent to which work meaning is a work amenity or a motivation to increase the reservation wage. In the following, we explain the design of each type of treatment.

Reservation Wage Elicitation in the Meaning Treatments. At the beginning of the survey experiment, we offer a list of three job flexibility amenities (shorter commute, more optional home office, more optional unpaid days off). Subjects then choose their preferred option. The question is as follows:

[Item 0] *In the following, you see a list of three possible changes to your job. Please, select the one you like best.* [Respondent can choose between "20 minutes less commute daily (round trip)" and "one more optional day where I can work from home per week" and "one more optional unpaid day off per month"]

The survey experiment then continues with the elicitation of a reservation wage. It follows a standard routine and proceeds in two steps.[7] In the first step, subjects are asked to state their expectations about the wage they could get when searching for a new job. The question reads as follows.

[Item 1] *We are interested in what you think would be a realistic net monthly salary. Suppose you had to search for a full-time job next month. What do you think would be a realistic net monthly wage for a 38 hour work week, considering your qualifications and your experience?* [Answer is an amount in Euro]

The intention behind this question is to make subjects think about the wages that they could earn. It is often easier for them to think about expected wages than about reservation wages. In the next question, we elicit the reservation wage.

[Item 2] *How much would the monthly net wage have to be as a minimum, in order for you to be willing to take the job?* [Answer is amount w^* in Euro]

Next, we alter the job subjects have in their mind by "adding" work meaning. Our goal is to highlight additional benefits that the job generates for needy individuals, while keeping the contents of the job the same. Depending on the treatment, we quantify the size of these additional benefits. We are then interested in whether the reservation wage for this new job increases or decreases relative to the reservation wage w^* elicited in Item 2.

[Item 3] *You stated that for a 38 hour work week the minimum net monthly salary you would want to earn is w^* Euro. Now imagine that the job you are considering directly or indirectly helps needy (sick or elderly or poor) people, children or the environment. This job is the same as your previous one, but through your work you now provide direct or indirect help to others or the environment (e.g. in terms of education, health, or environmental protection). Suppose these additional benefits (to sick, poor or elderly people, children or the environment) are equivalent to X Euro per month. Can you imagine taking this job even if your salary would be less than w^* Euro?* [Respondent chooses between "Yes" and "No"]

---

[7]A similar routine is applied in the "Panel Study of Labour Market and Social Security" (PASS), which has been used in Kesternich et al. (2021), Kesternich et al. (2022), and in the "IZA Evaluation Dataset" used by Caliendo et al. (2017). The Dutch and German version of the reservation wage elicitation routine can be found in Appendix A.2 and Appendix A.3, respectively.

The benefit X varies between treatments (below, we are more specific about this). To find the new reservation wage, we distinguish between respondents who are willing to sacrifice wage for work meaning and those who are not. If a respondent chooses "Yes" in Item 3, we ask the following question.

[Item 4, if "Yes" in Item 3] *How much less than w^* Euro could your net monthly wage be in order for you to take this job with direct or indirect benefits for needy (sick or elderly or poor) people, children or the environment?* [Answer is Δ_l Euro]

In contrast, if a subject chooses "No" in Item 3, we elicit the new reservation wage through the following two questions.

[Item 4, if "No" in Item 3] *Please indicate which of the following applies to you.* [Respondent chooses between "I would take this job at a salary of w^* Euro" and "I would take this job only if the salary was higher than w^* Euro"]

[Item 4a, if "No" in Item 3 and "...higher..." in Item 4] *How much more than w^* Euro must your net monthly wage be in order for you to take this job with direct or indirect benefits for needy (sick or elderly or poor) people, children or the environment?* [Answer is Δ_h Euro]

Through Item 4 and Item 4a we elicit the reservation wage in an indirect manner. To make sure that respondents concur with our conclusion, we ask them to reaffirm their choice.

[Item 5] *You indicated that you would require at least a salary of $w^* - \Delta_l$ / w^* / $w^* + \Delta_h$ to accept a job with which you directly or indirectly help needy (sick or elderly or poor) people, children or the environment. Is that correct?* [Respondent chooses between "Yes" and "No, I want to change my reply"]

If a respondent confirms her choice, her updated reservation wage for the job with benefits for needy individuals w^{**} is set to $w^* - \Delta_l$ or w^* or $w^* + \Delta_h$, depending on her choices in Item 3, Item 4, and Item 4a. Otherwise, the elicitation routine starts anew at Item 3. By comparing the reservation wage w^* and the updated reservation wage w^{**}, we identify whether a respondent increases or decreases her reservation wage in response to the meaning variation.

The benefit X varies between treatments and takes on the values 100 Euro, 1,000 Euro, 10,000 Euro, and 100,000 Euro, depending on the subject pool (more details below). Additionally, we implement a "neutral" meaning treatment in which no amount is mentioned. The corresponding sentence (*Suppose these additional benefits...*) is then dropped from Item 3. The advantage of mentioning a monetary amount is that it fixes the respondents' belief about how much others benefit from their work. It also allows us to test whether the respondents'

reaction to work meaning depends on the magnitude of additional benefits for others. However, a potential disadvantage is that mentioning a monetary amount makes pecuniary benefits salient and may change the respondents' perception of the job's meaning. This may reduce a respondent's willingness to sacrifice wage for work meaning. Thus, we implement both treatments in which we quantify the benefits for others and a treatment in which we do not specify these benefits.

Profit and Flexibility Treatment. We run two alternative types of treatments. The first alternative treatment is the profit treatment. It proceeds like the meaning treatment, but the job variation is an increase in the employer's profit. Item 3 then reads as follows (the wording of Item 4, Item 4a, and Item 5 is adjusted accordingly).

[Item 3, Profit Treatment] *You stated that for a 38 hour work week the minimum net monthly salary you would want to earn is w* Euro. Now imagine that the job you are considering directly or indirectly increases your employer's profit. This job is the same as your previous one, but through your work you now create additional profits that go to the owners of the organization or other interested parties (e.g. stakeholders, investors). Suppose these additional profits are equivalent to X Euro per month. Can you imagine taking this job even if your salary would be less than w* Euro?*

The second control treatment is the flexibility treatment. It proceeds like the meaning treatment, but the job variation is a change in job flexibility according to the respondent's preferences as stated in Item 0. Item 3 now reads as follows (the wording of Item 4, Item 4a, and Item 5 is adjusted accordingly).

[Item 3, Flexibility Treatment] *You stated that for a 38 hour work week the minimum net monthly salary you would want to earn is w* Euro. Now imagine that the job you are considering offers [20 minutes less commute daily (round trip)/one more optional paid day on working from home (per week)/one more optional unpaid day off (per month)]. Can you imagine taking this job even if your salary would be less than w* Euro?*

Additional information. We also elicit the following information: age, gender, martial status, number of children, education, household income, household size, place of residence, current employment status, sector of employment, net monthly wage (in case of employment), and some further job characteristics (occupation, size of employer, contact with clients, job contents). Additionally, we ask subjects about the societal contributions in their current job. The precise question is: *My job allows me to help others or contribute to society on a regular basis.* The answer is provided on a scale between 0 (do not agree at all) to 10 (fully agree). To quan-

tify subjects' degree of fairness concerns, we implement the following hypothetical ultimatum game:

We would like you to imagine the following hypothetical situation: We give another person 20 Euro to share with you. You can accept or reject the division that the other person proposes. If you reject the division, no one will get the money. For example, the other person proposes to give 4 Euro to you while keeping 16 Euro. If you accept this division, you would earn 4 Euro and the other person 16 Euro. If you reject this division, no one will get any money.

Subjects can indicate whether to accept or reject a division if the other person offers to give 0, 2, 4, 6, 8, or 10 Euro, respectively. In one subsample, we elicit social preferences – altruism, positive reciprocity, negative reciprocity, and trust – for each respondent by implementing the items from the Global Preference Survey (Falk et al., 2018); see Appendix A.4 for details.

3.2 Procedures and Data Cleaning

We conduct the survey experiment with representative samples of workers from the Netherlands and Germany. The sample from the Netherlands originates from the *Longitudinal Internet Studies of the Social Sciences* (LISS) panel. LISS is a longitudinal survey hosted and operated by CentERdata at Tilburg University. Its sample is based upon a true probability sample of households drawn from the Dutch population registry and includes about 5,000 households. Panel members complete questionnaires on a monthly basis and are paid for each completed survey. Our survey experiment was fielded in May 2022. All members of the panel between 18 and 65 years of age were invited to participate. A total of 3,430 individuals completed our survey experiment.

For Germany, we use an online sample of the German population provided by the professional survey company *Bilendi*. This company has a pre-recruited sample of participants. It invites panel members to take part in surveys via email, providing information about compensation and expected completion time, but without disclosing the survey topic. Respondents receive flat fees as compensation, usually paid in vouchers or award points. The sample is quasi-representative of age, income, and gender. The data collection took place in February 2023, with 5,541 respondents. Before starting the data collection, each sample was registered on aspredicted.org (registry number #93793 for the LISS survey and #119218 for the Bilendi survey) and we obtained IRB approval from the Board for Ethical Questions in Science of the University of Innsbruck.

To check whether participants understand the reservation wage elicitation procedure, we ran a pre-test prior to the actual survey experiment; see Appendix A.5 for details. In this pre-test, we also examine the participants' conception of work meaning. Moreover, we take

several measures to ensure the accuracy and reliability of our data analysis when constructing our primary datasets. First, we exclude participants in the bottom 5 percent of completion time for each country and, in the case of Germany, those who fail our attention-check question.[8] We recognize that open-ended questions, such as those used to elicit reservation wages, are prone to outliers when respondents are not forced to respond in categories. Therefore, we remove outliers by dropping the 2.5 percent (5 percent) percentile on both ends of the distribution of the reservation wage (changes to reservation wage) question. This approach allows us to exclude both zero values for reservation wages and very high reservation wages, which may not reflect genuine responses. Removing these outliers helps us to ensure that our analysis is based on accurate and reliable data. In total, we keep 75.7 percent of the original sample in the LISS survey and 56.3 percent of the original sample in the Bilendi survey.

Table 1: Overview of Treatments and Main Demographic Variables

Country (Survey) Treatment	*N*	Share Females	Age (sd)	Share High Education	Reservation Wage in *k* Euro (sd)
The Netherlands (LISS)					
Meaning-Neutral	523	0.539	45.72 (13.06)	0.447	2.546 (0.726)
Meaning-100	471	0.577	45.97 (12.88)	0.425	2.593 (0.705)
Meaning-1k	540	0.565	46.33 (13.08)	0.407	2.603 (0.717)
Meaning-10k	506	0.555	45.87 (12.91)	0.453	2.630 (0.729)
Meaning-100k	558	0.525	45.61 (13.33)	0.452	2.623 (0.736)
diff. *p*-value		0.47	0.91	0.49	0.36
Germany (Bilendi)					
Meaning-Neutral	465	0.515	42.73 (14.03)	0.333	2.493 (0.863)
Meaning-1k	432	0.524	43.70 (13.61)	0.333	2.466 (0.785)
Meaning-10k	457	0.541	43.53 (14.01)	0.348	2.466 (0.784)
Profit-Neutral	434	0.514	42.15 (13.99)	0.343	2.512 (0.773)
Profit-1k	445	0.553	42.86 (13.09)	0.330	2.568 (0.920)
Profit-10k	433	0.597	42.87 (13.66)	0.342	2.507 (0.789)
Flexibility	455	0.545	42.48 (13.63)	0.325	2.393 (0.760)
diff. *p*-value		0.12	0.30	0.81	0.33

Table 1 provides an overview of the treatments that we run in each survey, the number of observations in each treatment (after data cleaning), as well as the main demographic variables and whether there are significant differences in these variables between treatments. In the LISS survey, we only conduct meaning treatments. The parameter *X* takes on the values 100, 1k,

---

[8]Overall, 26.0 percent of participants in our survey experiment in Germany fail the attention check. There was no attention check question in the LISS survey.

10k, and 100k. Additionally, we have a "neutral" meaning treatment that does not explicitly mention a monetary value for the additional benefits created through the job. In the Bilendi survey, we conduct all three types of treatments. The additional benefits X in the meaning and profit treatments take on the values 1k and 10k, and there are neutral treatments.

To classify respondents' educational achievements, we apply a sample split in both the Dutch and the German sample. Since the educational systems slightly differ between the two countries, the shares of individuals that are classified as highly educated vary between the Netherlands and Germany; see Appendix A.6 for details. Importantly, there are no significant differences in the demographic variables between the different treatments, so we consider our treatments to be balanced.

3.3 Research Hypotheses

We derive the research hypotheses for our survey experiment from the theoretical framework in Section 2. In each treatment t, we measure for each respondent the reservation wage w^*, the updated reservation wage w_t^{**}, the absolute change in the reservation wage $\Delta w_t^* = w_t^{**} - w^*$, as well as the relative change in the reservation wage $\Delta \tilde{w}_t^* = \frac{\Delta w_t^*}{w^*}$, which is our main outcome variable. We will state our results in terms of willingness to pay for a job variation: A negative (positive) value of $\Delta \tilde{w}_t^*$ indicates a positive (negative) willingness to pay for the job variation.

Our first research hypothesis is that, in the meaning treatments, there is both a share of respondents for whom the job variation decreases the reservation wage and a share of respondents for whom the opposite is the case. From previous research we know that there is substantial heterogeneity in fairness concerns (Andreoni and Miller, 2002, Fisman et al., 2007) and concerns for work meaning (Kesternich et al., 2021). According to Proposition 1(i) and Proposition 1(ii), the reservation wage can increase for some respondents and decrease for others if the variation in these variables is sufficiently large. The relative size of these two groups is then an empirical question.

[Hypothesis 1] *In each meaning treatment, there is a share of respondents with a positive willingness to pay for work meaning as well as a share of respondents with a negative willingness to pay for work meaning.*

Next, we hypothesize that the effect of the job variation on reservation wages differs between treatments. Each job variation potentially has effects on both work meaning and the fair wage. We expect that the (positive) effect on work meaning is larger in a meaning-X than in a profit-X treatment; and that the (positive) effect on the fair wage is smaller in a meaning-X than in a profit-X treatment. Proposition 1(ii) then implies that respondents are more willing to pay for

the job variation in the meaning-*X* treatment than in the profit-*X* treatment. Again, the size of this difference is an empirical question. Further, according to Proposition 1(iii), a reduction in effort costs strictly reduces the reservation wage.

[Hypothesis 2] *For any given value X ∈ {neutral, 1k, 10k}, the following ordering holds for the relative change in reservation wages:* $\Delta \tilde{w}^*_{profit\text{-}X} > \Delta \tilde{w}^*_{meaning\text{-}X}$ *and* $\Delta \tilde{w}^*_{flexibility} < 0.$

Finally, we expect that fairness concerns matter for how respondents react to changes in work meaning. Proposition 1(i) and Proposition 2 imply that, all else equal, those respondents who have a relatively high UG-reservation wage are less willing to reduce their reservation wage in response to an increase in work meaning than respondents with a relatively low UG-reservation wage. Our last research hypothesis is therefore as follows:

[Hypothesis 3] *In any given meaning-X treatment, respondents with high fairness concerns (high UG-reservation wage) exhibit on average a lower willingness to pay for work meaning than respondents with low fairness concerns (low UG-reservation wage).*

4   Results

In this section, we present our results in four steps. In Subsection 4.1, we provide an overview of how the job variations affect the respondents' reservation wages in the different treatments. In Subsection 4.2, we examine the association between fairness concerns and the respondents' willingness to pay for the job variations. In Subsection 4.3, we study which factors explain the heterogeneity in the respondents' reaction to work meaning by comparing the relative changes in reservation between subgroups. In Subsection 4.4, we complement this analysis with a regression framework in which we take all potential explanatory variables into account.

4.1   Overview of Changes in Reservation Wages

Table 2 summarizes how the job variation in the different treatments affects the respondents' reservation wages. Column (1) shows the average reservation wage. Column (2) shows the absolute change and Column (3) the relative change in the reservation wage. We also indicate the results from a two-sided t-test of whether the changes are significantly different from zero. In Columns (4), (5), and (6), we report the share of subjects who reduce, keep constant, and increase, respectively, their reservation wage in response to the job variation.

Table 2: Changes in Reservation Wages

Country (Survey) Treatment	(1) w_t^* in k Euro	(2) Δw_t^* in k Euro	(3) $\Delta \tilde{w}_t^*$	(4) share $\Delta w_t^* < 0$	(5) share $\Delta w_t^* = 0$	(6) share $\Delta w_t^* > 0$
The Netherlands (LISS)						
Meaning-Neutral	2.546 (0.031)	-0.146*** (0.046)	-0.054*** (0.019)	0.441	0.337	0.222
Meaning-100	2.592 (0.032)	-0.164*** (0.050)	-0.062*** (0.021)	0.457	0.300	0.242
Meaning-1k	2.602 (0.030)	-0.071** (0.038)	-0.024 (0.016)	0.359	0.420	0.220
Meaning-10k	2.629 (0.032)	-0.123** (0.056)	-0.044** (0.023)	0.455	0.305	0.240
Meaning-100k	2.622 (0.031)	-0.222*** (0.043)	-0.089*** (0.018)	0.467	0.349	0.183
Meaning (all)	2.599 (0.014)	-0.146*** (0.021)	-0.055*** (0.009)	0.435	0.344	0.221
Germany (Bilendi)						
Meaning-Neutral	2.492 (0.040)	-0.135*** (0.044)	-0.045** (0.020)	0.419	0.370	0.211
Meaning-1k	2.466 (0.037)	-0.026 (0.041)	0.005 (0.018)	0.336	0.475	0.190
Meaning-10k	2.465 (0.036)	-0.071 (0.049)	-0.025 (0.021)	0.405	0.363	0.232
Meaning (all)	2.475 (0.022)	-0.077*** (0.026)	-0.023** (0.011)	0.388	0.401	0.211
Profit-Neutral	2.512 (0.037)	0.140*** (0.048)	0.055*** (0.021)	0.267	0.343	0.389
Profit-1k	2.568 (0.043)	0.046 (0.046)	0.025 (0.0)	0.254	0.431	0.315
Profit-10k	2.507 (0.037)	0.190*** (0.051)	0.088*** (0.019)	0.229	0.381	0.390
Profit (all)	2.529 (0.035)	0.124*** (0.028)	0.056*** (0.012)	0.250	0.386	0.364
Flexibility	2.392 (0.036)	-0.232*** (0.044)	-0.098*** (0.020)	0.427	0.370	0.203

Notes: Standard errors in brackets. Column (1) shows the average reservation wage. Columns (2) and (3) show the absolute and relative change in the reservation wage; two-sided t-tests of Δw_t^* and $\Delta \tilde{w}_t^*$ being mean zero. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$. Columns (4), (5), and (6) show the share of subjects who reduce, keep constant, and increase, respectively, their reservation wage in response to the job variation.

We find that both in the Netherlands and in Germany respondents on average are willing to give up wage for work meaning. In the meaning-neutral treatments – where we do not specify a monetary amount for the benefits – respondents are willing to give up 5.4 percent of their wage in the Netherlands, and 4.5 percent in Germany. Over the whole set of meaning treatments, respondents on average sacrifice 5.5 percent of their wage in the Netherlands, and 2.3 percent in Germany. These changes in reservation wages are significantly different from zero with a p-value 0.05 or lower.

In both countries and all meaning treatments, we find substantial heterogeneity in respondents' willingness to give up wage for work meaning. While on average respondents exhibit a positive willingness to pay for work meaning, less than 50 percent are actually willing to do so. Importantly, a substantial share of respondents – between 18 and 24 percent – requests a higher wage if their job generates additional benefits for others or society. A large fraction of respondents – between 30 and 47 percent – do not change their reservation wage in response to the meaning job variation. In line with Hypothesis 1, this shows that work meaning is not a pure job amenity for all workers (actually only for a minority of them).

Next, in all profit treatments, respondents on average significantly increase their reservation wage when their job generates additional gains for the owners of the organization or other interested parties. In the profit-neutral treatment, the average raise in the reservation wage is 5.5 percent, and over the whole set of profit treatments it is on average 5.6 percent (both changes in reservation wages are significant at the 1-percent level). In line with Hypothesis 2, the average willingness to pay for work meaning is larger than the willingness to pay for employer profits (one-sided t-test, p-value < 0.001).

There is again substantial heterogeneity in the respondents' reaction to the job variation in the profit treatments. Only between 31 and 39 percent of respondents actually increase their reservation wage. A significant fraction of respondents – between 23 and 27 percent – even indicate that they are willing to work for a lower wage if their employer earns a higher profit. Thus, a substantial minority of respondents treats employer profits as a job amenity. A potential explanation for this is that they associate job security or prestige to employer profits.

The flexibility treatment generates the largest drop in reservation wages. In line with Hypothesis 2, respondents reduce their reservation wage on average by 9.8 percent to obtain more flexibility[9] and 43 percent reduce their reservation wage in response to the flexibility job variation. This share is significantly larger than in the meaning treatments (t-test, p-value $= 0.075$). Moreover, we find that 20 percent of respondents in the flexibility treatment attach a nega-

---

[9]The distribution over the three options is as follows: 25.9 percent choose the option "20 minutes less commute daily (round trip)", 38.3 percent "one more optional day where I can work from home per week", and 35.8 percent "one more optional unpaid day off per month"; the corresponding reductions in the reservation wage are 14.6 percent (se = 0.047), 9.4 percent (se = 0.025), and 6.7 percent (se = 0.033), respectively.

tive value to flexibility and request a higher reservation wage when their job becomes more flexible.

How can we explain that some respondents increase their reservation wage in the flexibility treatment? One explanation is that some individuals treat flexibility and monetary compensation as complements. Indeed, in cross-sectional data, there is usually a positive correlation between job amenities and wages.[10] Therefore, respondents may associate more flexible jobs with higher pay and hence state a higher reservation wage. Alternatively, more flexibility may imply higher costs and commitments at home (need for an additional room to work, heating, coffee, etc.), which could also lead to higher reservation wages.

Before we examine different sources of heterogeneity, we briefly compare our results to those obtained in the previous literature. The labor supply reaction to work meaning in our setting is fairly close to that found in Maestas et al. (2023) and Kesternich et al. (2021). For a representative US sample, Maestas et al. (2023) estimate that having a job that offers "frequent opportunities to impact the community/society" instead of only "occasional opportunities" is worth on average 3.6 percent of the wage. Kesternich et al. (2021) find in an experimental setting with a representative sample of the employed population in Germany that respondents reduce their reservation wage by 3.0 percent when the their job becomes more meaningful (this value is not significantly different from zero though). In our case, the average reduction of the reservation wage in the meaning treatments is 5.5 percent in the Netherlands and 2.3 percent in Germany. Thus, our results further confirm that, on average, there is a small, but significant willingness to pay for work meaning.

There is a large literature on workers' willingness to pay for flexibility and work from home. The option to work from home is worth on average 8.0 percent of the wage according to Mas and Pallais (2017) and 4.2 percent according to Maestas et al. (2023). Similarly, Aksoy et al. (2022) find that the option to work two to three days per week from home is worth on average 5.7 percent of the wage in the US and 3.7 percent in Germany. Our flexibility option is valued slightly higher by our respondents – 9.8 percent – arguably because of the respondent-specific adjustment. Among those who choose one more optional day of work from home per week as the preferred option in Item 0, the average willingness to pay for it is 9.4 percent; this number is 14.6 percent for the 20 minutes reduction in commuting time, and 6.7 percent for the additional optional unpaid day off per month. Interestingly, Aksoy et al. (2022) also find that 16 percent of respondents request a higher wage when they obtain the option to work from home. We conclude that the respondents' reactions to the job variations in our experiment are roughly in line with those found in previous studies.

---

[10]See, for example, the discussion of the literature on compensating wage differentials in Bell (2022).

4.2 Fairness Concerns and Changes in Reservation Wages

In this section, we first provide an overview of the respondents' fairness concerns in our survey experiments and then examine the extent to which they are associated with the reservation wage changes. We measure fairness concerns in the hypothetical ultimatum game where respondents indicate for each received amount whether they would accept or reject the offer. Specifically, we define the degree of fairness concerns of a respondent by the number of offers she rejects. This number reflects the UG-reservation wage if a respondent is consistent, in the sense that if she accepts a certain offer, then she also accepts all offers that are more generous than that (96 percent our our respondents are consistent).

Table 3: Overview of Fairness Concerns

Ultimatum Game Behavioral Response	implied UG-reservation wage	*The Netherlands (LISS)*	*Germany (Bilendi)*
Share accept all offers	0	0.297	0.185
Share reject one offer	2	0.068	0.096
Share reject two offers	4	0.040	0.063
Share reject three offers	6	0.099	0.118
Share reject four offers	8	0.184	0.176
Share reject five offers	10	0.304	0.351
Share reject all offers	> 10	0.009	0.012

Table 3 shows the distribution over the number of rejected offers in the Netherlands and in Germany. We find that our respondents exhibit varying degrees of fairness concerns. On the one hand, a substantial share of respondents apparently does not care about fairness at all and indicates to accept all offers. This share is 29.7 percent in the Netherlands and 18.5 percent in Germany. On the other hand, a large fraction is very concerned with fairness and would reject almost all offers, 30.4 percent in the Netherlands and 35.1 percent in Germany. Overall, the behavioral patterns in our hypothetical ultimatum game are roughly consistent with those in experimental studies: The majority of very unfair offers is rejected, while the majority of almost fair offers is accepted. The 50:50 split is almost always accepted.[11]

Our third hypothesis was that, all else equal, respondents with high fairness concerns are less willing to pay for work meaning than respondents with low meaning concerns. We find this effect in both the Dutch and the German sample, see Figure 1 where we compare the willingness to pay for work meaning between respondents with high and low fairness concerns,

---

[11]See Cooper and Dutcher (2011) for a meta-study of ultimatum game experiments, in particular, the overview of responder behavior (in Chapter 4). Compared to the participants in the laboratory experiments, respondents in our survey are slightly less responsive to changes in the offered amount.

taking all meaning treatments together. In the Netherlands, respondents with high fairness concerns (according to the median split) are willing to give up 2.7 of their reservation wage for more work meaning, while respondents with low fairness concerns are willing to sacrifice 9.6 percent of their reservation wage. The difference of 6.9 percentage points is significant at the 1-percent level. Similarly, in Germany, respondents with high fairness concerns reduce their reservation wage by -1.2 percent when their job becomes more meaningful, while respondents with low fairness concerns would sacrifice on average 6.1 percent. Again, the difference of 7.3 percentage points is significant at the 1-percent level. The strength of these effects slightly varies between treatments, but the sign of the effect is the same in all meaning treatments. We conclude that Hypothesis 3 is confirmed by our data.
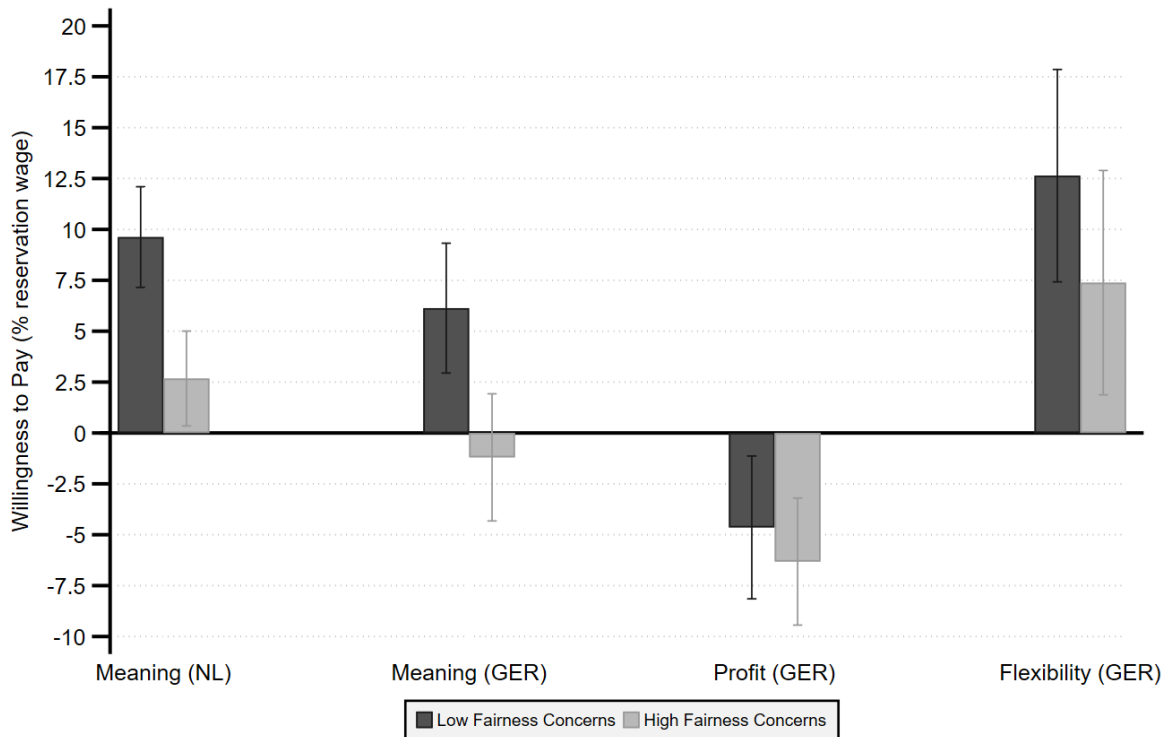
Figure 1: Willingness to Pay for Work Meaning by Fairness Concerns

For the other job variations – profit and flexibility treatments – we mostly do not find significant differences between respondents with low and high fairness concerns. Respondents with low fairness concerns indicate a somewhat higher willingness to pay for flexibility than respondents with high fairness concerns (12.6 percent and 7.4 percent, respectively). However, the difference is not statistically significant (p-value = 0.180). These results suggest that fairness concerns play a role in particular for individuals' willingness to pay for work meaning.

4.3 Preference Heterogeneity

We further examine on which dimensions respondents differ in their willingness to pay for work meaning.[12] To this end, we consider heterogeneity in preferences among three types of variables. First, demographic variables that are the main determinants of wages: gender, education, and age; second, job-related variables that may matter for one's willingness to trade work meaning for wages: a respondent's contributions to society in the current job and the reservation wage; third, social preferences for the German setting. For each characteristic (except gender), we define a binary outcome variable based on the median split. Then we compare the relative changes in the reservation wages between the subgroups with low and high values of this characteristic. Figure 2 provides an overview of the results. Each line indicates to what extent respondents are willing to sacrifice more wage for work meaning if the corresponding characteristic is high rather than low. The detailed results for each treatment are in Appendix A.7. In the following, we discuss the results for our two samples.
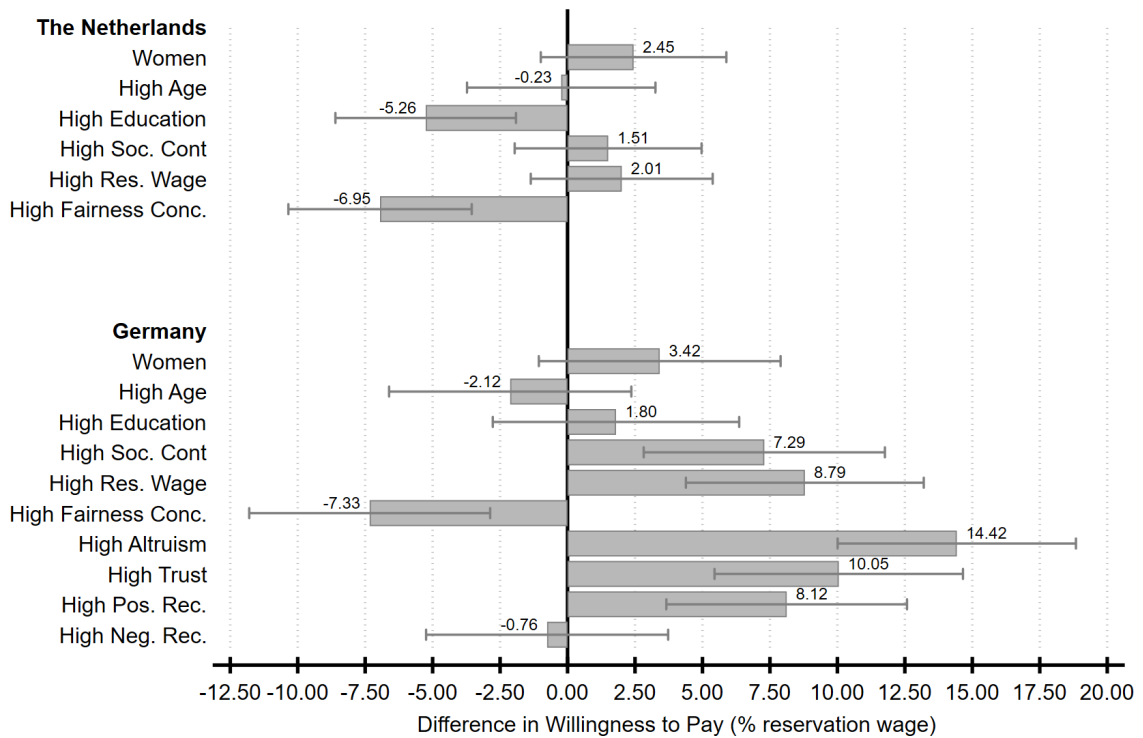
Figure 2: Heterogeneity in Willingness to Pay for Work Meaning (Percentage point difference in willingness to pay between subgroups)

---

[12]In this and the next subsection, we focus on work meaning. The corresponding analyses for the profit and flexibility treatments are in Appendix A.9.

Demographic Variables. Following Maestas et al. (2023), we first consider the main determinants of wages – gender, education, and age – as determinants of preference heterogeneity. With respect to gender, we find that women tend to sacrifice slightly more for work meaning than men. This effect is small – 2.5 percent and 3.4 percent of the reservation wage in the Netherlands and Germany, respectively – and it is not statistically significant and also not consistent among all meaning treatments. However, as we show below, this effect is statistically significant in some regression specifications. In the previous literature, Maestas et al. (2023) do not find gender differences with respect to workers' willingness to pay for work meaning, while Burbano et al. (2020) and De Schouwer and Kesternich (2023) find gender differences in the same direction as we do.

Next, we find a strong and significant positive effect of education on the respondents' labor supply in the Netherlands. Respondents with high education are more willing to pay for work meaning. This effect is on average 5.5 percent of the reservation wage, significant at the 1-percent level, and fairly consistent across the meaning treatments. We do not find the same effect in Germany though. With respect to age, we find mostly no statistically significant differences between young and old respondents. Thus, according to our data, it does not seem to be the case that work meaning is more important for young than for old individuals.

Job Variables. We consider two job variables that potentially have an effect on how the respondents react to a change in the work meaning of their job: societal contributions in the current job and the reservation wage.[13] Regarding societal contributions, it could be the case that respondents who already contribute a lot may be less willing to pay for additional meaning than respondents who contribute only a little. Alternatively, respondents who already contribute a lot may in general have a higher willingness to pay for additional work meaning than respondents who contribute only a little. Regarding reservation wages, one may expect that respondents who are going to earn more are willing to sacrifice a higher fraction of their reservation wage for work meaning than respondents who are going to earn less.

Overall, we find that respondents in jobs with high societal contributions are on average more willing to sacrifice wage for work meaning. In Germany, this effect is on average 7.3 percentage points; it is statistically significant and fairly consistent across all meaning treatments. In the Netherlands, this is effect is on average only 1.5 percentage points, not statistically significant, and also not consistent across the meaning treatments. For reservation wages, we find that those with higher reservation wages are also more willing to pay for work meaning. Again, this effect is strong and significant in Germany (8.8 percentage points), but small and

---

[13]Recall that, in order to elicit societal contributions in current job, we ask in the survey about the extent to which a respondent's job allows her to help others or to contribute to society on a regular basis (on a scale between 0 and 10).

insignificant in the Netherlands (1.9 percentage points).

Social Preferences. For the German setting, we find that social preferences matter for respondents' willingness to sacrifice wages for work meaning. The effect is particularly strong for altruism: Taking all meaning treatments into account, respondents with a high degree on altruism on average have a willingness to pay for work meaning of 9.7 percent of their reservation wage, while respondents with a low degree of altruism on average have willingness to pay for work meaning of -4.7 percent. Thus, the total effect is 14.4 percentage points and it is significant at the 1-percent level. We also observe significant effects for positive reciprocity (8.1 percentage points) and trust (10.1 percentage points). These effects are also remarkably consistent across the meaning treatments.

4.4 Regression Results

We investigate which characteristics predict responses to work meaning in a linear regression framework. The dependent variable is the relative change in the reservation wage in a meaning treatment. Table 4 shows the results for the Netherlands and Table 5 for Germany. In Column (1) of each table, we regress the relative change in the reservation wage on the demographic variables gender, education, and age. In Column (2), we add the job variables, contributions to society in the current job and reservation wage. In Column (3), we add fairness concerns and (for the case of Germany) social preferences. All specifications also contain treatment dummies. To compare effect sizes, we include all independent variables (except gender) as dummy variables based on the median split; they are equal to one if the value is above the median, and zero otherwise.

Results for the Netherlands. The regression results for the Netherlands largely confirm our findings from the previous subsection. Gender still has no significant effect on the respondents' willingness to pay for work meaning. The point estimate in the last specification indicates that women are willing to sacrifice 2.3 percentage points more than men for work meaning. However, the coefficient is not significantly different from zero. The age effect is small and insignificant. High education has a positive effect on the respondents' willingness to pay for work meaning. In the last specification, the effect is 4.1 percentage points; it is roughly the same in all specifications. Neither the level of societal contributions in the current job nor the reservation wage have a significant effect on the relative wage changes.

Table 4: Regression Results – Willingness to Pay for Work Meaning (The Netherlands)

	(1)	(2)	(3)
Demographic Variables			
Gender	-0.024	-0.024	-0.023
	(0.017)	(0.018)	(0.018)
High Age	0.000	0.002	0.003
	(0.017)	(0.018)	(0.019)
High Education	-0.052***	-0.049***	-0.041***
	(0.017)	(0.018)	(0.018)
Job Variables			
High Societal Contributions		-0.013	-0.016
		(0.018)	(0.018)
High Reservation Wage		-0.007	-0.008
		(0.019)	(0.019)
Fairness Concerns			
High Fairness Concerns			0.064***
			(0.017)
Treatments			
Meaning-100	-0.010	-0.009	-0.010
	(0.028)	(0.029)	(0.029)
Meaning-1k	0.026	0.027	0.025
	(0.025)	(0.025)	(0.025)
Meaning-10k	0.008	0.009	0.008
	(0.030)	(0.030)	(0.030)
Meaning-100k	-0.037	-0.036	-0.041*
	(0.030)	(0.026)	(0.026)
Constant	-0.016	-0.009	-0.049*
	(0.025)	(0.026)	(0.028)
Observations	2596	2596	2556
R^2	0.007	0.007	0.012

Notes: Results from OLS regressions. The dependent variable in all specifications is the relative change of the reservation wage $\Delta \tilde{w}_i^*$ in a meaning treatment. The gender dummy equals one if the respondent is a women and zero otherwise. All independent variables "High [...]" are dummy variables that equal one if the respondent's value in the corresponding category is above the median and zero otherwise. Standard errors are in parentheses. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table 5: Regression Results – Willingness to Pay for Work Meaning (Germany)

	(1)	(2)	(3)
Demographic Variables			
Gender	-0.032	-0.043*	-0.042*
	(0.023)	(0.023)	(0.022)
High Age	0.019	0.025	0.025
	(0.023)	(0.023)	(0.023)
High Education	0.022	0.065**	0.079***
	(0.027)	(0.029)	(0.028)
Job Variables			
High Societal Contributions		-0.072***	-0.041*
		(0.023)	(0.023)
High Reservation Wage		-0.108***	-0.098***
		(0.024)	(0.023)
Fairness Concerns and Social Preferences			
High Fairness Concerns			0.054**
			(0.023)
High Altruism			-0.110***
			(0.023)
High Positive Reciprocity			-0.048**
			(0.023)
High Negative Reciprocity			-0.009
			(0.023)
High Trust			-0.081***
			(0.023)
Treatments			
Meaning-1k	0.049*	0.050*	0.051*
	(0.027)	(0.027)	(0.026)
Meaning-10k	0.021	0.021	0.029
	(0.029)	(0.029)	(0.028)
Constant	-0.042*	0.032	0.090***
	(0.027)	(0.030)	(0.037)
Observations	1351	1351	1351
R^2	0.005	0.027	0.067

Notes: Results from OLS regressions. The dependent variable in all specifications is the relative change of the reservation wage $\Delta \tilde{w}_t^*$ in a meaning treatment. The gender dummy equals one if the respondent is a women and zero otherwise. All independent variables "High [...]" are dummy variables that equal one if the respondent's value in the corresponding category is above the median and zero otherwise. Standard errors are in parentheses. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Fairness concerns predict willingness to pay for work meaning fairly well. Respondents with high fairness concerns have on average a 6.4 percentage points lower willingness to pay for work meaning than respondents with low fairness concerns. Thus, Hypothesis 3 is confirmed for the Netherlands in a regression framework. The point estimates indicate that this effect is more than 30 percent larger than the effect of high education.

The treatment dummies are not significantly different from each other, with the exception for the dummy for the meaning-100k treatment in the last specification. The difference between the meaning-100k and the meaning-neutral treatment is statistically significant at the 10 percent level. The meaning-100k treatment dummy is also significantly different from the meaning-1k treatment dummy. Thus, our respondents in the Netherlands are significantly more willing to give up wages for work meaning when the associated contribution to society is large and communicated to respondents.

Results for Germany. Next, we consider the results from the German sample in Table 5. The gender effect is now statistically significant at the 10-percent level in most specifications. According to the last specification, women give up 4.2 percentage points more of their reservation wage than men when the meaning of their job increases. High education is associated with higher requested wages in response to work meaning, while high reservation wages are associated with lower wage requests (this arguably explains the zero effect of high education for Germany in the previous subsection). Those in jobs with high societal contributions indicate on average a higher willingness to pay for work meaning than those in jobs with low social contributions. The estimated effect in Column (2) is quite large with a point estimate of 7.2 percentage points. However, this effect can partly be explained by the correlation between societal contributions in the current job and fairness concerns as well as social preferences. We can see this from the fact that the point estimate for societal contributions in the current job decreases as soon as fairness concerns and social preferences are included.

Fairness concerns again predict the respondents' willingness to sacrifice wage for work meaning fairly well. For respondents with low fairness concerns the willingness to pay for work meaning is on average 5.4 percentage points larger than for respondents with high fairness concerns. This effect is significant at the 5-percent level. Thus, Hypothesis 3 is also confirmed for Germany in a regression framework.

Next, we find that social preferences are associated with the respondents' willingness to pay for work meaning. The effect is especially large for altruism. For respondents with high altruism the reduction in the reservation wage is 11.0 percentage points larger than for respondents with low altruism. According to the point estimates, the effect of altruism is three times larger than the effect of gender. Positive reciprocity and trust have smaller, but still significant effects in the same direction; the effect of positive reciprocity is 4.8 percentage points and the

effect of trust is 8.3 percentage points. Importantly, both fairness concerns and social preferences have significant effects on the respondents' reaction to work meaning when both of them are taken into account. This also implies that fairness concerns and social preferences have countervailing effects: fairness concerns reduce the respondents' willingness to pay for work meaning while social preferences (like altruism) have a positive effect.

Regarding our meaning treatments, we find that respondents are less willing to sacrifice wage for work meaning in the meaning-1k treatment. The effect is around 5 percentage points and fairly consistent across the different specifications. When the amount of benefits is large, the reaction to work meaning is not significantly different from when no amount is mentioned.

Robustness Checks. We conduct a number of robustness checks. The detailed results of these robustness checks can be found in Appendix A.8. First, we use for all variables (except education) the original measure instead of the dummy created by the sample split. Our results remain the same, see Table A9 for the Netherlands and Table A10 for Germany. The regressions indicate that for each additional offer rejected in the ultimatum game (our measure for fairness concerns), the respondents' willingness to pay for work meaning decreases by 1.5 percentage points in the Netherlands and by 1.4 percentage points in Germany.

Next, we examine which variables predict whether a respondent has a positive willingness to pay for work meaning. For this, we consider as dependent variable a dummy that equals one if a respondent reduces her reservation wage when her job offers more work meaning, and zero otherwise. Table A11 and Table A12 show the results for the Netherlands and Germany, respectively. Qualitatively, they are similar to those obtained when we have binary variables. However, we now obtain a significant gender effect in the Netherlands. Women are around 5 percentage points more likely than men to indicate a positive willingness to pay for work meaning. This effect is significant in all specifications at least on the 5-percent level.

Further, we study whether the observed effects are symmetric between sacrificing wage and demanding a higher wage by estimating a multinomial logit model. The dependent variable is the sign of the change in a respondent's reservation wage. A negative sign means that a respondent is willing to sacrifice wage for work meaning; a positive sign means that a respondent indicates a higher reservation wage if her job becomes more meaningful; no sign change means that a respondent does not change her reservation wage after the job variation. Table A13 and Table A14 show the results. We find that high fairness concerns have both a negative effect on the probability that a respondent lowers her reservation wage and a positive effect on the probability that she indicates a higher reservation wage. This holds both for the Netherlands and Germany. For Germany, we again find strong and consistent effects of social preferences on the probabilities of negative and positive changes in the reservation wage.

So far, the selection of variables was based on theoretical considerations and results from

the previous literature on non-wage attributes. What if, instead, we let the data speak? To select variables, we use a stepwise regression, which selects a regression model by starting from a complete model that includes all variables;[14] it then iteratively removes variables that are not significant and adds (or reintroduces) variables that are significant. We choose a conservative significance threshold at 15 percent to keep only the most important variables. The complete set of variables we start from is as follows. Demographics: age, gender, education, marital status, household size, city size, employment dummy; job variables: societal contributions, reservation wage, meaningful job, job satisfaction, computer use, company size, plant size; fairness concerns and social preferences: fairness concerns and (if available) altruism, positive reciprocity, negative reciprocity, trust; other variables: meaning treatments.

The results for both the Netherlands and Germany are shown in Table A15. For both countries, fairness concerns are selected into the regression model. Interestingly, also gender is selected in both countries. For Germany, also the social preferences altruism, positive reciprocity, and trust are kept in the regression model. In all cases, the effect sizes are roughly comparable to those in our main regression framework.

5   Sorting and Labor Supply Potentials

In this section, we study to what extent there is sorting on work meaning in the labor market (Rosen, 1986). Do individuals with a high willingness to pay for work meaning self-select into sectors that provide work-meaning? Since any given job also has many other attributes – wage and non-wage amenities like paid holidays, flexibility, or commuting times – both firms and workers have to make trade-offs what job attributes they wish to offer and to accept. Therefore, not every worker with a high willingness to pay for work meaning will accept a job in a sector that offers high work meaning.

To analyze the level of sorting based on work meaning, we first study the association between the respondents' willingness to pay for work meaning and the level of work meaning provided by the sector in which they are employed. Further, we examine the fraction of workers who exhibit a relatively high willingness to pay for work meaning *and* indicate relatively low societal contributions in the current job.

Sorting. To test for sorting, we define a variable that proxies how much work meaning a sector provides. We do not know how many direct or indirect benefits for others are generated by different sectors. However, for sorting it matters what workers believe about the benefits generated in different sectors. Therefore, we proxy the sector level of work meaning by the

---

[14]If we start from a model that only has an intercept, we obtain the same results.

perception of our respondents. For this, we first select the sectors for which we have at least 47 observations in a given country.[15] For each of these sectors, we then find the share of employees who indicate that they generate high societal contributions (according to the median split) in their current job. We take this share as a proxy for the level of work meaning in a sector.[16] In the Netherlands, it varies between 16.9 percent (production) and 63.9 percent (education); in Germany, the sector level of work meaning varies between 16.5 percent (production) and 77.7 percent (healthcare).[17]

Table 6: Regression Results – Sorting

	The Netherlands (LISS)		Germany (Bilendi)	
	(1)	(2)	(3)	(4)
$\Delta \tilde{w}_t^*$	-0.007***	-0.005**	-0.028***	-0.027***
	(0.001)	(0.001)	(0.000)	(0.001)
Gender		0.120***		0.054***
		(0.007)		(0.010)
Education		-0.001		0.021***
		(0.010)		(0.009)
Age		0.002***		0.000
		(0.000)		(0.000)
Constant	0.435***	0.301***	0.356***	0.324***
	(0.008)	(0.021)	(0.004)	(0.013)
Observations	2327	2327	1297	1297
R^2	0.014	0.082	0.527	0.549

Notes: Results from OLS regressions. The dependent variable in all specifications the level of work meaning of the sector in which the respondent works. The independent variable $\Delta \tilde{w}_t^*$ is the relative change in the reservation wage in a meaning treatment. The gender dummy equals one if the respondent is a women and zero otherwise. Standard errors are in parentheses. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Next, we regress sector work meaning on our respondents' willingness to pay for work meaning and the main demographic variables. Table 6 shows the results. In both the Netherlands and Germany, we find a significant association between a respondent's willingness to pay for work meaning and the level of work meaning provided by the sector of her occupation. This association remains significant at least at the 5-percent level even if we control for gender, education, and age. The coefficients are roughly the same in both specifications. Therefore, we obtain suggestive evidence that there is indeed sorting on (the perceived level of) work

---

[15]We have 47 observations in the smallest included sector and 37 observations in the largest excluded sector (and much fewer observations in the other excluded sectors).

[16]We obtain similar results if we use the average societal contributions as a proxy. The advantage of our proxy is that it is independent of the scale of measurement.

[17]Table 7 below provides an overview.

meaning in the labor market.

We also find that, according to our data, the association between willingness to pay for work meaning and sector level work meaning is substantially stronger in Germany than in the Netherlands. In Germany, a one-percent increase in the respondent's willingness to pay for work meaning increases the expected level of work meaning in her sector by 2.7 percent (according to the second specification), while in the Netherlands the same effect is only 0.5 percent. Further, for both countries, we obtain a significant gender effect: Women are more likely than men to enter sectors with high work meaning, even after controlling for the respondents' willingness to pay for work meaning.

To get a more detailed picture of sorting based on work meaning preferences, we consider for each sector the respondents' average willingness to pay for work meaning and sector level of work meaning. Table 7 lists those sectors for which we have at least 47 observations. It indicates in Column (1) the sector level of work meaning as defined above; sectors are ordered according to this value. In Column (2), it shows the average relative change in the reservation wage in a meaning treatment at the sector level. In Columns (3), (4), and (5), Table 7 displays the corresponding share of workers who reduce, keep constant, and increase, respectively, their reservation wage. Finally, in Column (6), it reports the share of workers from a given sector who both indicate a willingness to pay for work meaning in the top quartile and societal contributions in the current job in the bottom quartile.

For both countries we observe that sectors differ substantially in the workers' average willingness to pay for work meaning; this value ranges from around -10 percent to +10 percent. The respondents from healthcare and education exhibit a willingness to pay for work meaning that is significantly above the national averages. These two sectors also exhibit – as one may expect – relatively high levels of sector work meaning. However, the sectors that exhibit the highest and lowest average willingness to pay for work meaning are quite different in the two countries. For example, in the Netherlands, workers in the financial industry – a sector with relatively low work meaning, as perceived by its employees – exhibit one of the highest average values of willingness to pay for work meaning, while in Germany workers from the financial industry exhibit the lowest average willingness to pay for work meaning. This partially explains the weaker association between willingness to pay for work meaning and sector work meaning in the Netherlands.

Labor Supply Potentials. We further examine the degree of sorting in the labor market by considering the fraction of workers who think that their societal contributions in their current job are relatively low (that is, in the bottom quartile of the distribution of this statistic), but also exhibit a relatively high willingness to pay for work meaning (that is, in the top quartile of the distribution). Column (6) of Table 7 reports this value. To interpret this value note that

under perfect assortative matching on work meaning, this value would be zero; if there were no sorting on work meaning, it would be 12.5 percent; and under perfect negative assortative matching on work meaning, this value would be 25 percent.

Table 7: Changes in Reservation Wages, by Industry, and Labor Supply Potential

Country (Survey) Industry	(1) work meaning	(2) average Δw_t^* (se)	(3) share $\Delta w_t^* < 0$	(4) share $\Delta w_t^* = 0$	(5) share $\Delta w_t^* > 0$	(6) share Potential
The Netherlands (LISS)						
Education	0.639	-0.061 (0.029)	0.492	0.309	0.199	0.005
Healthcare	0.604	-0.062 (0.020)	0.388	0.369	0.243	0.004
Gov. Services	0.486	-0.075 (0.027)	0.464	0.381	0.155	0.033
Catering	0.345	-0.139 (0.064)	0.455	0.327	0.218	0.073
Transportation	0.315	0.092 (0.512)	0.306	0.351	0.342	0.018
Entertainment	0.265	-0.064 (0.066)	0.449	0.306	0.245	0.020
Business Services	0.243	-0.000 (0.029)	0.471	0.364	0.164	0.021
Retail	0.237	-0.029 (0.033)	0.401	0.356	0.243	0.046
Finance	0.216	-0.102 (0.040)	0.490	0.265	0.245	0.069
Construction	0.179	-0.085 (0.052)	0.423	0.321	0.256	0.064
Production	0.169	-0.091 (0.033)	0.435	0.362	0.203	0.079
All	0.471	-0.055 (0.009)	0.428	0.349	0.223	0.033
Germany (Bilendi)						
Healthcare	0.777	-0.099 (0.030)	0.447	0.398	0.155	0.005
Education	0.667	-0.079 (0.053)	0.350	0.467	0.183	0.016
Gov. Services	0.466	-0.005 (0.028)	0.404	0.356	0.240	0.013
Construction	0.455	-0.088 (0.034)	0.439	0.409	0.152	0.061
Transportation	0.357	-0.020 (0.038)	0.389	0.389	0.222	0.087
Finance	0.313	0.098 (0.060)	0.343	0.359	0.398	0.078
Retail	0.302	0.026 (0.035)	0.341	0.472	0.186	0.054
Catering	0.213	-0.053 (0.072)	0.511	0.277	0.213	0.128
Production	0.165	0.014 (0.029)	0.316	0.504	0.180	0.075
All	0.411	-0.023 (0.011)	0.388	0.401	0.211	0.053

Indeed, we find that 3.3 percent of respondents in the Netherlands and 5.3 percent of respondents in Germany indicate low societal contributions in the current job as well as high willingness to pay for work meaning. In the Netherlands, these are respondents with societal contributions of 4 or less (on a scale between 0 and 10), and willingness to pay for work meaning of 10.0 percent or more. In Germany, these are respondents with societal contributions of 5 or less, and willingness to pay for work meaning of 9.1 percent or more. In the Netherlands,

around 14 percent of those who evaluate their current job as having relatively low societal benefits would also be willing to sacrifice a substantial fraction of their wage to change that; in Germany, this value is around 21 percent. Taken together, these results show that, while there is sorting on work meaning in the labor market, there also exist potentials to increase labor supply through work meaning. Future research may consider job switches between sectors with different levels of work meaning to further examine this issue.

6   Conclusion

In this paper, we conducted survey experiments with representative samples of the working-age population from the Netherlands and Germany to study the extent to which workers are willing to sacrifice wage for work meaning, that is, whether they would reduce their reservation wage for a job if this job "directly or indirectly helps needy (sick or elderly or poor) people, children or the environment" (formulation from our experiment). Workers may have preferences for having a job that creates societal benefits. However, they may also demand a wage raise if they create additional benefits for others. Therefore, our elicitation method explicitly allowed participants to reduce or raise their reservation wage in response to the job variation.

In line with the previous literature, we found that respondents are on average willing to pay for work meaning. However, less than 50 percent of workers are in fact willing to reduce their reservation wage if their job becomes more meaningful, and around 20 percent of them actually increase their reservation wage. The respondents' average willingness to pay for work meaning is significantly lower than their willingness to pay for job flexibility, but also significantly higher than their willingness to pay for additional employer profits.

Further, we found that both fairness concerns and social preferences have a substantial and countervailing impact on the respondents' willingness to pay for work meaning. As predicted, fairness concerns are negatively correlated with the respondents' willingness to sacrifice wage for work meaning. In contrast, social preferences like altruism, positive reciprocity, and trust are positively associated to willingness to pay for work meaning. The effect sizes in both directions are large relative to those of the most important demographic variables (gender, education, and age). These results suggest that fairness concerns and social preferences are important determinants of labor supply.

A natural consequence of heterogeneity in willingness to pay for work meaning is sorting in the labor market. Indeed, we observe that those respondents with high willingness to pay for work meaning tend to work in sectors with a large share of employees who believe that their job generates high contributions to society. Nevertheless, we also find that sorting on willingness to pay for work meaning is not perfect. There exists a small, but significant frac-

tion of employees who both state a relatively high willingness to pay for work meaning and low societal contributions in the current job. This result indicates that there is a potential for increases in labor supply through work meaning.

What do these results imply for labor market policy? One implication is that more work meaning does not automatically generate more labor supply from all workers. It is an important job amenity (or a motivation to pick up a job) for a minority of employees, but for a substantial fraction of workers it is a reason to request higher wages. The proponents of a universal basic income often suggest that workers would provide labor for societal causes for free (or for a low wage) as long as a certain income is guaranteed. Our results indicate that this is most likely true only for a selected sample of individuals. A further implication is that satisfying demand in growing industries with high levels of work meaning – such as education and healthcare – will require higher wages. According to our data, employees in these industries indeed indicate that their job generates relatively high societal contributions. These employees also indicate relatively high willingness to pay for work meaning, which in turn implies that enlarging the pool of workers in these industries will render paying higher – and more fair – wages necessary.

References

Akerlof, George (1982) "Labor contracts as partial gift exchange," *Quarterly Journal of Economics*, 97 (4), 543–569. [2]

Akerlof, George and Janet Yellen (1990) "The fair wage-effort hypothesis and unemployment," *Quarterly Journal of Economics*, 105 (2), 255–283. [2]

Aksoy, Cevat Giray, Jose Maria Barrero, Nicholas Bloom, Steven Davis, Mathias Dolls, and Pablo Zarate (2022) "Working from home around the world," NBER Working Paper No. 30446, National Bureau of Economic Research. [1, 19]

Andreoni, James and John Miller (2002) "Giving according to GARP: An experimental test of the consistency of preferences for altruism," *Econometrica*, 70 (2), 737–753. [15]

Ariely, Dan, Emir Kamenica, and Dražen Prelec (2008) "Man's search for meaning: The case of Legos," *Journal of Economic Behavior and Organization*, 67 (3-4), 671–677. [1]

Autor, David (2021) "Good news: There's a labor shortage," *New York Times*, September 4. [1]

Bäker, Agnes and Mario Mechtel (2018) "The role of task meaning on output in groups: Experimental evidence," *Managerial and Decision Economics*, 39 (2), 131–141. [1]

Barfort, Sebastian, Nikolaj Harmon, Frederik Hjorth, and Asmus Leth Olsen (2019) "Sustaining honesty in public service: The role of selection," *American Economic Journal: Economic Policy*, 11 (4), 96–123. 5

Bell, Alex (2022) "Job amenities and earnings inequality," Working Paper, University of California Los Angeles. 19

Besley, Timothy and Maitreesh Ghatak (2005) "Competition and incentives with motivated agents," *American Economic Review*, 95 (3), 616–636. 5

Bewley, Truman (1999) *Why wages don't fall during a recession*: Harvard University Press. 5

Boushey, Heather, Lisa Barrow, and Kevin Rinz (2021) "Supporting labor supply in the American Jobs Plan and the American Families Plan," available from `https://www.whitehouse.gov`, The White House, Council of Economic Advisers. 1

Breza, Emily, Supreet Kaur, and Yogita Shamdasani (2018) "The morale effects of pay inequality," *Quarterly Journal of Economics*, 133 (2), 611–663. 2

Burbano, Vanessa (2016) "Social responsibility messages and worker wage requirements: Field experimental evidence from online labor marketplaces," *Organization Science*, 27 (4), 1010–1028. 1, 5

Burbano, Vanessa, Nicolas Padilla, and Stephan Meier (2020) "Gender differences in preferences for meaning at work," IZA Discussion Paper No. 13053, IZA Institute of Labor Economics. 1, 23

Caliendo, Marco, Wang-Sheng Lee, and Robert Mahlstedt (2017) "The gender wage gap and the role of reservation wages: New evidence for unemployed workers," *Journal of Economic Behavior and Organization*, 136, 161–173. 10

Cappelen, Alexander, Astri Drange Hole, Erik Sørensen, and Bertil Tungodden (2007) "The pluralism of fairness ideals: An experimental approach," *American Economic Review*, 97 (3), 818–827. 6, 40

Carpenter, Jeffrey and Erick Gong (2016) "Motivating Agents: How much does the mission matter?" *Journal of Labor Economics*, 34 (1), 211–236. 1

Cassar, Lea (2019) "Job mission as a substitute for monetary incentives: Benefits and limits," *Management Science*, 65 (2), 896–912. 1, 5

Cassar, Lea and Stephan Meier (2018) "Nonmonetary incentives and the implications of work as a source of meaning," *Journal of Economic Perspectives*, 32 (3), 215–238. 1, 6

——— (2021) "Intentions for doing good matter for doing well: The negative effects of prosocial incentives," *Economic Journal*, 131 (637), 1988–2017. 5

Causa, Orsetta, Michael Abendschein, Nhung Luu, Emilia Soldani, and Chiara Soriolo (2022) "The post-COVID-19 rise in labour shortages," OECD Economics Department Working Papers No. 1721, OECD. 1

Chadi, Adrian, Sabrina Jeworrek, and Vanessa Mertins (2017) "When the meaning of work has disappeared: Experimental evidence on employees' performance and emotions," *Management Science*, 63 (6), 1696–1707. 1

Chandler, Dana and Adam Kapelner (2013) "Breaking monotony with meaning: Motivation in crowdsourcing markets," *Journal of Economic Behavior and Organization*, 90, 123–133. 1

Cohn, Alain, Ernst Fehr, and Lorenz Goette (2015) "Fair wages and effort provision: Combining evidence from a choice experiment and a field experiment," *Management Science*, 61 (8), 1777–1794. 2, 5

Cohn, Alain, Ernst Fehr, Benedikt Herrmann, and Frédéric Schneider (2014) "Social comparison and effort provision: Evidence from a field experiment," *Journal of the European Economic Association*, 12 (4), 877–898. 2

Cooper, David and Glenn Dutcher (2011) "The dynamics of responder behavior in ultimatum games: a meta-study," *Experimental Economics*, 14, 519–546. 20

De Schouwer, Thimo and Iris Kesternich (2023) "Work meaning and the flexibility puzzle," Working Paper, KU Leuven. 3, 23

Delfgaauw, Josse and Robert Dur (2008) "Incentives and workers' motivation in the public sector," *Economic Journal*, 118 (525), 171–191. 5

DellaVigna, Stefano and Daniele Paserman (2005) "Job search and impatience," *Journal of Labor Economics*, 23 (3), 527–588. 3

Dur, Robert and Max van Lent (2019) "Socially useless jobs," *Industrial Relations*, 58 (1), 3–16. 1, 4

Eriksson, Tor and Nicolai Kristensen (2014) "Wages or fringes? Some evidence on trade-offs and sorting," *Journal of Labor Economics*, 32 (4), 899–928. 3

Falk, Armin, Anke Becker, Thomas Dohmen, Benjamin Enke, David Huffman, and Uwe Sunde (2018) "Global evidence on economic preferences," *Quarterly Journal of Economics*, 133 (4), 1645–1692. 4, 13, 43, 44, 45, 46, 47, 48

Fehr, Ernst, Georg Kirchsteiger, and Arno Riedl (1993) "Does fairness prevent market clearing? An experimental investigation," *Quarterly Journal of Economics*, 108 (2), 437–459. 2, 5

Fehrler, Sebastian and Michael Kosfeld (2014) "Pro-social missions and worker motivation: An experimental study," *Journal of Economic Behavior and Organization*, 100, 99–110. 1

Fisman, Raymond, Shachar Kariv, and Daniel Markovits (2007) "Individual preferences for giving," *American Economic Review*, 97 (5), 1858–1876. 15

Friebel, Guido, Michael Kosfeld, and Gerd Thielmann (2019) "Trust the police? Self-selection of motivated agents into the German police force," *American Economic Journal: Microeconomics*, 11 (4), 59–78. 5

Gerhards, Leonie (2015) "The incentive effects of missions – Evidence from experiments with NGO employees and students," *European Economic Review*, 79, 252–262. 1, 5

Gill, Andrej, Matthias Heinz, Heiner Schumacher, and Matthias Sutter (2023) "Social preferences of young professionals and the financial industry," *Management Science*, 69 (7), 3905–3919. 5

Gneezy, Uri and John List (2006) "Putting behavioral economics to work: Testing for gift exchange in labor markets using field experiments," *Econometrica*, 74 (5), 1365–1384. 2

Grant, Adam (2008) "The significance of task significance: Job performance effects, relational mechanisms, and boundary conditions," *Journal of Applied Psychology*, 93 (1), 108–124. 1

Hall, Robert and Andreas Mueller (2018) "Wage dispersion and search behavior: The importance of nonwage job values," *Journal of Political Economy*, 126 (4), 1594–1637. 3

Hanna, Rema and Shing-Yi Wang (2017) "Dishonesty and selection into public service: Evidence from India," *American Economic Journal: Economic Policy*, 9 (3), 262–290. 5

Heinz, Matthias, Sabrina Jeworrek, Vanessa Mertins, Heiner Schumacher, and Matthias Sutter (2020) "Measuring the indirect effects of adverse employer behaviour on worker productivity: A field experiment," *Economic Journal*, 130 (632), 2546–2568. 2, 5

Hu, Jing and Jacob Hirsh (2017) "Accepting lower salaries for meaningful work," *Frontiers in Psychology*, 8, 1649. 1

Imas, Alex (2014) "Working for the 'warm glow': On the benefits and limits of prosocial incentives," *Journal of Public Economics*, 114, 14–18. 1

Kesternich, Iris, Heiner Schumacher, Bettina Siflinger, and Stefan Schwarz (2021) "Money or meaning? Labor supply responses to work meaning of employed and unemployed individuals," *European Economic Review*, 137, 103786. 1, 2, 5, 6, 10, 15, 19

Kesternich, Iris, Heiner Schumacher, Bettina Siflinger, and Franziska Valder (2022) "Reservation wages and labor supply," *Journal of Economic Behavior and Organization*, 194, 583–607. 3, 10

Kosfeld, Michael, Susanne Neckermann, and Xiaolan Yang (2017) "The effects of financial and recognition incentives across work contexts: The role of meaning," *Economic Inquiry*, 55 (1), 237–247. 1

Kosfeld, Michael and Ferdinand von Siemens (2009) "Worker self-selection and the profits from cooperation," *Journal of the European Economic Association*, 7 (2-3), 573–582. 5

——— (2011) "Competition, cooperation, and corporate culture," *RAND Journal of Economics*, 42 (1), 23–43. 5

Krueger, Alan and Andreas Mueller (2016) "A contribution to the empirics of reservation wages," *American Economic Journal: Economic Policy*, 8 (1), 142–179. 3

Krueger, Miriam and Guido Friebel (2022) "A pay change and its long-term consequences," *Journal of Labor Economics*, 40 (3), 543–572. 2

Krueger, Philipp, Daniel Metzger, and Jiaxin Wu (2023) "The sustainability wage gap," Swedish House of Finance Research Paper No. 20-14, Swedish House of Finance. 1, 5

Kube, Sebastian, Michel André Maréchal, and Clemens Puppe (2013) "Do wage cuts damage work morale? Evidence from a natural field experiment," *Journal of the European Economic Association*, 11 (4), 853–870. 2

Le Barbanchon, Thomas, Roland Rathelot, and Alexandra Roulet (2019) "Unemployment insurance and reservation wages: Evidence from administrative data," *Journal of Public Economics*, 171, 1–17. 3

———— (2021) "Gender differences in job search: Trading off commute against wage," *Quarterly Journal of Economics*, 136 (1), 381–426. 1

Leete, Laura (2001) "Whither the nonprofit wage differential? Estimates from the 1990 census," *Journal of Labor Economics*, 19 (1), 136–170. 1, 5

Maestas, Nicole, Kathleen Mullen, David Powell, Till Von Wachter, and Jeffrey Wenger (2023) "The value of working conditions in the United States and implications for the structure of wages," *American Economic Review*, 113 (7), 2007–2047. 1, 2, 3, 5, 19, 23

Mas, Alexandre and Amanda Pallais (2017) "Valuing alternative work arrangements," *American Economic Review*, 107 (12), 3722–3759. 1, 3, 19

Non, Arjan, Ingrid Rohde, Andries de Grip, and Thomas Dohmen (2022) "Mission of the company, prosocial attitudes and job preferences: A discrete choice experiment," *Labor Economics*, 74, 102087. 1

Nyborg, Karine and Tao Zhang (2013) "Is corporate social responsibility associated with lower wages?" *Environmental and Resource Economics*, 55, 107–117. 1, 5

OECD (2021) "Designing active labour market policies for the recovery," OECD Publishing, Paris, OECD. 1

Rosen, Sherwin (1986) "The theory of equalizing differences," *Handbook of Labor Economics*, 1, 641–692. 29

Rosso, Brent, Kathryn Dekas, and Amy Wrzesniewski (2010) "On the meaning of work: A theoretical integration and review," *Research in Organizational Behavior*, 30, 91–127. 1

Schneider, Florian, Fanny Brun, and Roberto Weber (2020) "Sorting and wage premiums in immoral work," University of Zurich, Department of Economics, Working Paper No. 353, University of Zurich. 1

Steger, Michael, Bryan Dik, and Ryan Duffy (2012) "Measuring meaningful work: The work and meaning inventory (WAMI)," *Journal of Career Assessment*, 20 (3), 322–337. 1

Tonin, Mirco and Michael Vlassopoulos (2010) "Disentangling the sources of pro-socially motivated effort: A field experiment," *Journal of Public Economics*, 94 (11-12), 1086–1092. 1

———— (2015) "Corporate philanthropy and productivity: Evidence from an online real effort experiment," *Management Science*, 61 (8), 1795–1811. 1

A Appendix

A.1 Fairness Ideals

We assumed that the fair wage π^f strictly increases in the surplus π, which in turn increases in the productivity parameter x. We show that this assumption is satisfied if the worker adheres to one of the common fairness views. Cappelen et al. (2007) derive several fairness views from the philosophical literature on distributive justice. These can be integrated into our framework.

Let $\pi(e, e^o, x)$ be the surplus that is generated by the worker's organization at given x if she exerts effort e and the others' effort is e^o. If the organization is a charity, this surplus may include the benefits of the organization's customers. We assume that π takes on strictly positive values and is continuously differentiable and strictly increasing in all arguments. The other's effort can be the contributions of the employer or other stakeholders of the organization. In the context of charity, the others' effort may also capture the neediness of the organization's customers (with larger values of e^o indicating a higher degree of need).

An *egalitarian* fairness view would propose that income inequalities should be eliminated, regardless of their origin, so that we have

$$\pi^f(e, e^o, x) = \frac{1}{n} \, \pi(e, e^o, x), \tag{9}$$

where n is the number of stakeholders or individuals who contribute to its surplus. In the context of charity, this number may include the organization's customers, so that a larger number of needy individuals reduces the fair wage. A *meritocratic* fairness view would suggest that inequalities are justified only by differences in effort inputs, so that

$$\pi^f(e, e^o, x) = \frac{e}{e + e^o} \, \pi(e, e^o, x). \tag{10}$$

Finally, a *libertarian* fairness view proposes that, if possible, individuals should keep what they produce, which implies that

$$\pi^f(e, e^o, x) = \pi(e, e^o, x) - \pi(0, e^o, x). \tag{11}$$

Cappelen et al. (2007) demonstrate that all these fairness views are prevalent in the population. Since the surplus π strictly increases in x, the fair wage π^f also increases in x according to the egalitarian and meritocratic fairness principle. The same is true according to the libertarian fairness principle if $\pi_x(e, e^o, x) > \pi_x(0, e^o, x)$ holds globally. This is the case, for example, if the worker's effort and the factors that determine x are complements. Hence, the assumption that the fair wage increases in the surplus of the organization seems plausible.

A.2   Meaning Treatments, Dutch Version

[Item 1] *We zijn benieuwd naar wat u verwacht dat een realistisch netto maandsalaris zal zijn. Stel dat u volgende maand op zoek gaat naar een fulltime baan. Wat zou volgens u een realistisch netto maandsalaris zijn voor 38 uur werk per week, gezien uw kwalificaties en uw ervaring?*

[Item 2] *Hoeveel zou het netto maandloon minstens moeten zijn voor u om de baan te accepteren?*

[Item 3] *U hebt aangegeven dat u voor 38 werkuren een minimum netto maandloon van w^* euro wil verdienen. Stelt u zich nu voor dat de baan die u misschien wil accepteren direct of indirect behoeftige (zieke of oude of arme) mensen, kinderen of het milieu helpt. Voor de rest is deze baan hetzelfde als de vorige baan, maar via uw werkzaamheden zorgt u nu bijvoorbeeld voor directe of indirecte hulp aan anderen (bijvoorbeeld in termen van opleiding, gezondheid, of milieubescherming). Stel dat deze extra voordelen (aan zieke, arme of oude mensen, kinderen of het milieu) equivalent zijn aan X euro per maand. Kunt u zich voorstellen dat u deze baan aanneemt, zelfs als het loon lager is dan w^* euro?*

[Item 4, if "yes" in Item 3] *Hoe veel lager dan w^* Euro zou het netto maandloon mogen zijn zodat u deze baan met directe of indirecte voordelen voor behoeftige (zieke of oude of arme) mensen, kinderen of het milieu zou aannemen?*

[Item 4, if "no" in Item 3] *Geef aan wat voor u van toepassing is.* [Respondent chooses between "Ik zou deze baan aannemen tegen een loon van w^* Euro" and "Ik zou deze baan alleen aannemen als het loon hoger is dan w^* Euro"]

[Item 4a, if "Nee" in Item 3 and "...hoger..." in Item 4] *Hoe veel hoger dan w^* zou het netto maandloon moeten zijn zodat u deze baan met directe of indirecte voordelen voor behoeftige (zieke of oude of arme) mensen, kinderen of het milieu zou aannemen?*

[Item 5] *U gaf aan dat u een loon van $w^* - \Delta_l / w^* / w^* + \Delta_h$ Euro aan zou nemen voor een baan waarin u direct of indirect behoeftige (zieke of oude of arme) mensen, kinderen of het milieu helpt. Klopt dit?*

A.3   Meaning Treatments, German Version

[Item 1] *Uns interessiert, welche Summe Sie für ein realistisches monatliches Nettogehalt halten. Angenommen, Sie müssten sich im nächsten Monat eine Vollzeitstelle suchen. Was wäre Ihrer Meinung nach ein realistisches monatliches Nettogehalt für 38 Stunden Arbeit pro Woche, wenn man Ihre Qualifikationen und Ihre Erfahrung berücksichtigt?*

[Item 2] *Wie hoch müsste das monatliche Nettogehalt mindestens sein, damit Sie bereit wären die Vollzeitstelle anzunehmen?*

[Item 3] *Sie haben angegeben, dass das monatliche Nettogehalt, welches Sie für 38 Stunden Arbeit mindestens verdienen möchten, w^* Euro beträgt. Stellen Sie sich nun vor, dass die Arbeit, die Sie annehmen möchten, direkt oder indirekt bedürftigen (kranken oder alten oder armen) Menschen, Kindern oder der Umwelt nützt. Diese Arbeit ist dieselbe wie Ihre bisheriger, aber durch Ihre Arbeit helfen Sie nun direkt oder indirekt anderen Menschen oder der Umwelt (z.B. in Form von Bildung, Gesundheit oder Umweltschutz). Nehmen Sie an, dieser zusätzliche Nutzen (für kranke, arme oder alte Menschen, Kinder oder die Umwelt) entspricht in etwa X pro Monat. Können Sie sich vorstellen, diese Arbeit anzunehmen, auch wenn das Gehalt niedriger ist als w^* Euro?*

[Item 4, if "Yes" in Item 3] *Wie viel niedriger als w^* kann das monatliche Nettogehalt sein, damit Sie diese Arbeit annehmen, die direkt oder indirekt bedürftigen (kranken oder alten oder armen) Menschen, Kindern oder der Umwelt zugute kommt?*

[Item 4, if "No" in Item 3] *Bitte geben Sie an, was auf Sie zutrifft.* [Respondent chooses between "Ich würde diese Arbeit für ein Gehalt von w^* annehmen." and "Ich würde diese Arbeit nur annehmen, wenn das Gehalt höher ist als w^*."]

[Item 4a, if "No" in Item 3 and "...höher..." in Item 4] *Wie viel höher als w^* müsste das monatliche Nettogehalt sein, damit Sie diese Arbeit annehmen würden, die direkt oder indirekt bedürftigen (kranken oder alten oder armen) Menschen, Kindern oder der Umwelt zugute kommt?*

[Item 5] *Sie haben angegeben, dass Sie ein monatliches Nettogehalt von $w^* - \Delta_l / w^* / w^* + \Delta_h$ für eine Arbeitsstelle möchten, bei der Sie direkt oder indirekt bedürftigen (kranken oder alten oder armen) Menschen, Kindern oder der Umwelt helfen. Ist das richtig?*

A.4 Social Preferences: Survey Items, Aggregation, and Results

To measure social preferences, we use the items from the Global Preference Survey of Falk et al. (2018). We obtain a measure for each social preference – altruism, positive reciprocity, negative reciprocity, and trust – by standardizing the responses and calculating a z-score for each survey item. Then we aggregate the z-scores for each social preference according to the weights from Falk et al. (2018). In the following, we show for each social preference the survey items and aggregation weights.

A.4.1 Altruism

Altruism 1: Imagine the following situation: Today you unexpectedly received 1,000 EUR. How much of this amount would you donate to a good cause? Values between 0 and 1,000 EUR are allowed.

Altruism 2: How willing are you to give to good causes without expecting anything in return? [On a scale between 0 ("completely unwilling to do so") and 10 ("very willing to do so").]

The level of altruism is calculated according to the formula:

Altruism = 0.4649952 × (z-score Altruism 1) + 0.5350048 × (z-score Altruism 2).

A.4.2 Positive Reciprocity

Positive Reciprocity 1: When someone does me a favor, I am willing to return it. [On a scale between 0 ("does not describe me at all") and 10 ("describes me perfectly").]

Positive Reciprocity 2: You are in an area you are not familiar with, and you realize that you lost your way. You ask a stranger for directions. The stranger offers to take you to your destination. Helping you costs the stranger about EUR 20 in total. However, the stranger says he or she does not want any money from you. You have six presents with you. The cheapest present costs EUR 5, the most expensive one costs EUR 30. Do you give one of the presents to the stranger as a 'thank you' gift? [0, EUR 5, EUR 10, EUR 15, EUR 20, EUR 25, EUR 30]

The level of positive reciprocity is calculated according to the formula:

$$\text{Positive Reciprocity} = 0.4847038 \times (\text{z-score Positive Reciprocity 1})$$
$$+ 0.5152962 \times (\text{z-score Positive Reciprocity 2}).$$

A.4.3 Negative Reciprocity

Negative Reciprocity 1: If I am treated very unjustly, I will take revenge at the first occasion, even if there is a cost to do so. [On a scale between 0 ("does not describe me at all") and 10 ("describes me perfectly").]

Negative Reciprocity 2: How willing are you to punish someone who treats you unfairly, even if there may be costs for you? [On a scale between 0 ("completely unwilling to do so") and 10 ("very willing to do so").]

Negative Reciprocity 3: How willing are you to punish someone who treats others unfairly, even if there may be costs for you? [On a scale between 0 ("completely unwilling to do so") and 10 ("very willing to do so").]

The level of negative reciprocity is calculated according to the formula:

$$
\begin{aligned}
\text{Negative Reciprocity} \quad = \quad & 0.3738062 \times (\text{z-score Negative Reciprocity 1}) \\
& + \frac{0.5261938}{2} \times (\text{z-score Negative Reciprocity 2}) \\
& + \frac{0.5261938}{2} \times (\text{z-score Negative Reciprocity 3}).
\end{aligned}
$$

A.4.4 Trust

Trust 1: I assume that people have only the best intentions. [On a scale between 0 ("does not describe me at all") and 10 ("describes me perfectly").]

The level of trust is calculated according to the formula:

$$
\text{Trust} = (\text{z-score Trust 1}).
$$

A.4.5 Distribution of Social Preferences

For each social preference we show its distribution in the German sample of Falk et al. (2018) and in our German sample. The data from the Global Preference Survey can be obtained from https://www.briq-institute.org/global-preferences/downloads.
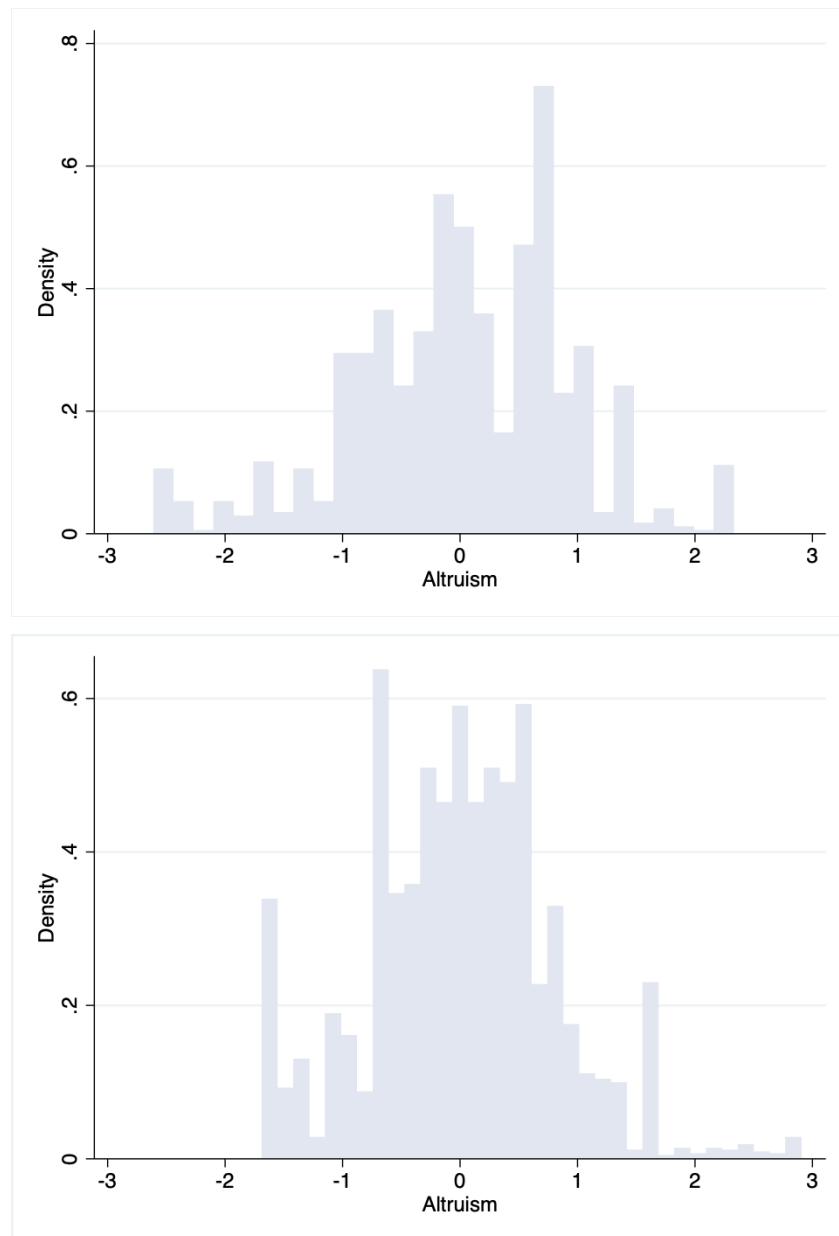
Figure 3: Distribution of altruism in the German sample of Falk et al. (2018) (upper graph) and distribution of altruism in our German sample (lower graph).
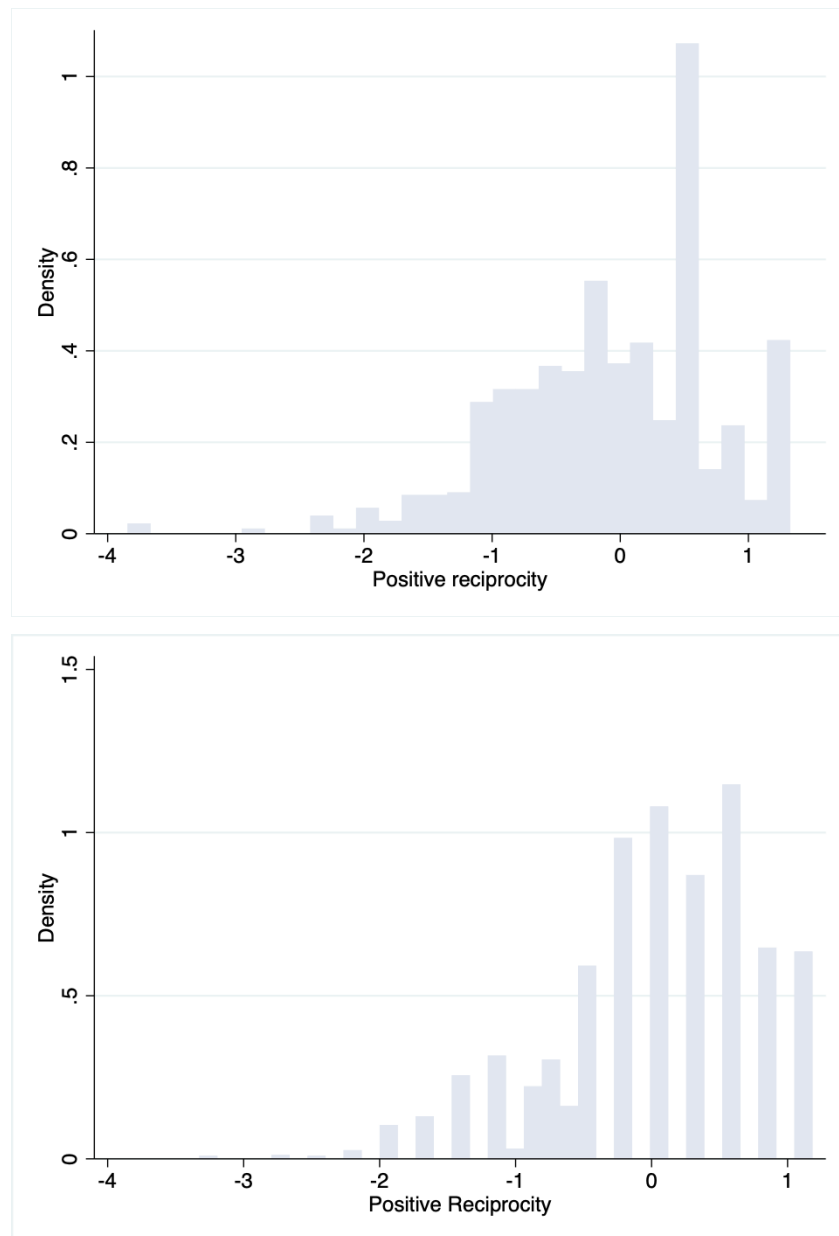
Figure 4: Distribution of positive reciprocity in the German sample of Falk et al. (2018) (upper graph) and distribution of positive reciprocity in our German sample (lower graph).
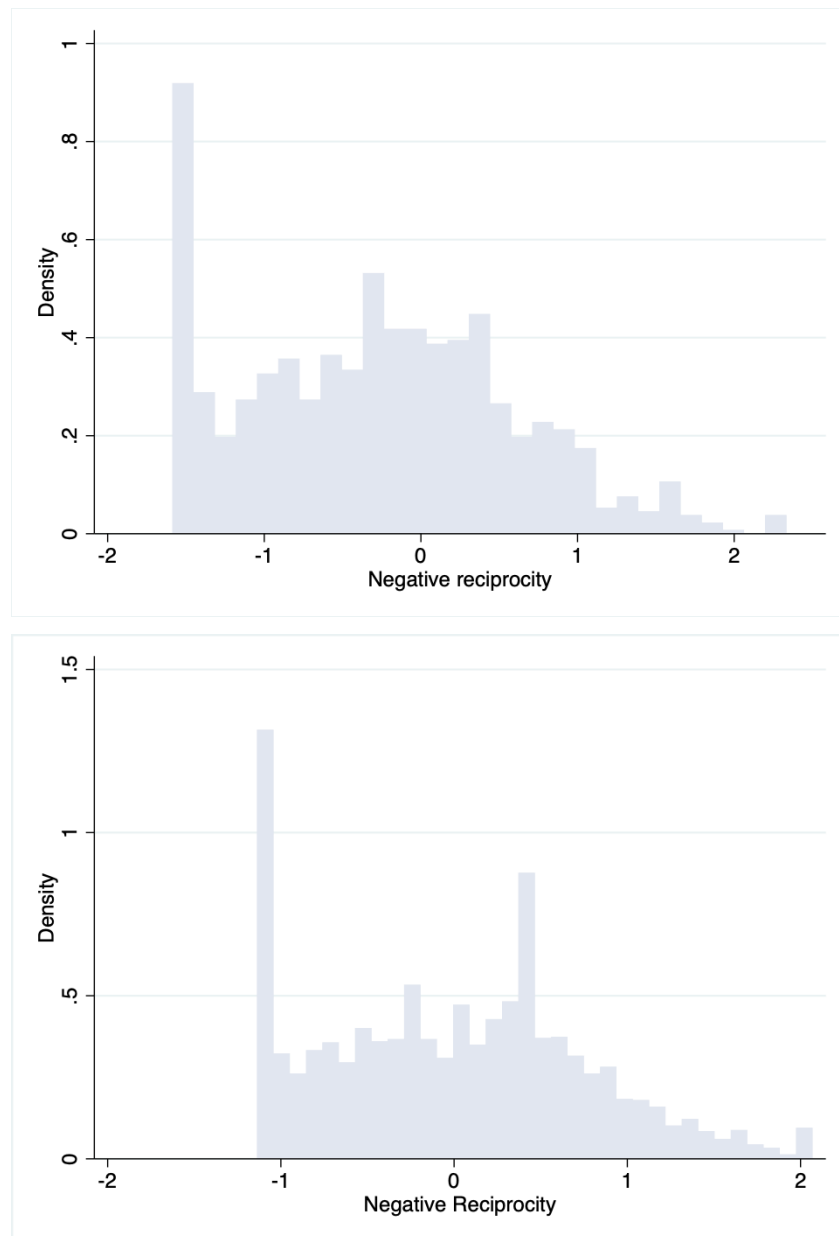
Figure 5: Distribution of negative reciprocity in the German sample of Falk et al. (2018) (upper graph) and distribution of negative reciprocity in our German sample (lower graph).
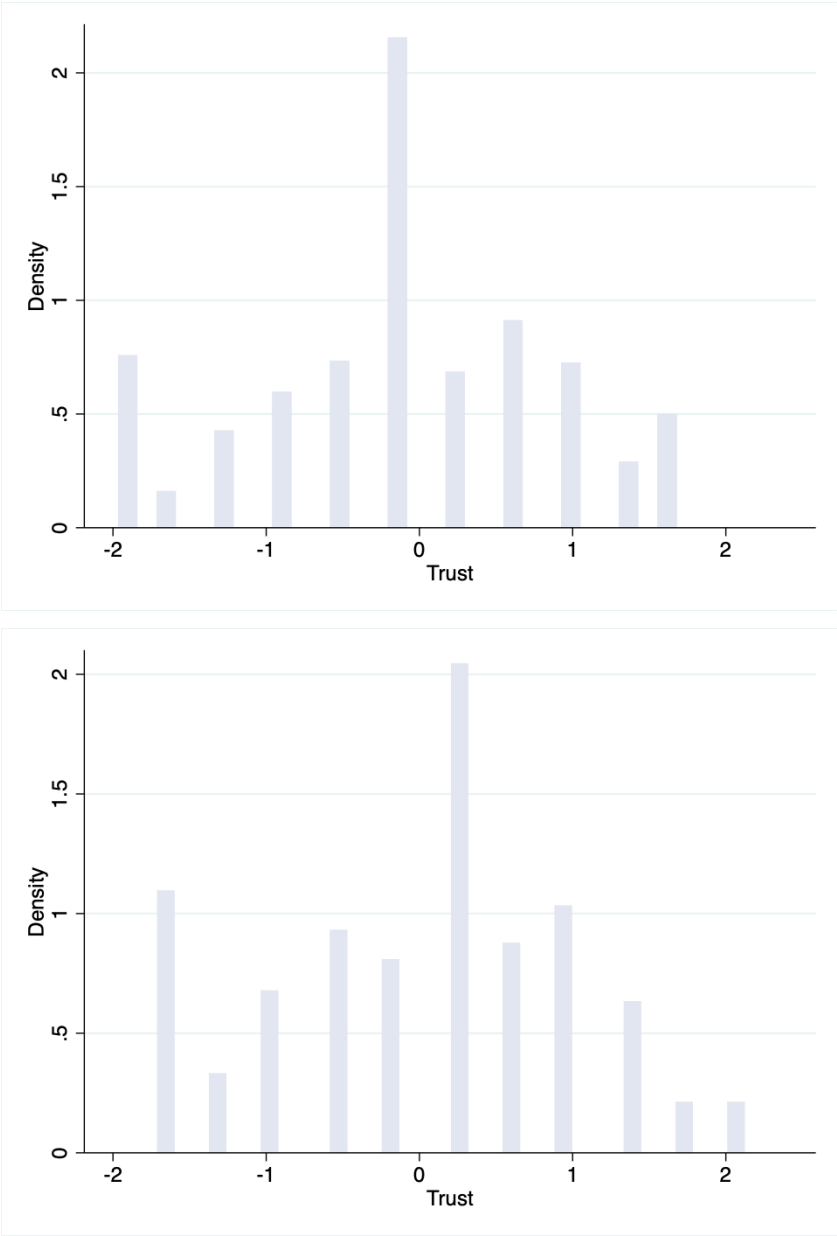
Figure 6: Distribution of trust in the German sample of Falk et al. (2018) (upper graph) and distribution of trust in our German sample (lower graph).

A.5 Survey Experiment Pre-test Results

In order to check whether our respondents understand the reservation wage elicitation proce-
dure and to evaluate their conception of work meaning, we conducted a pre-test of our survey
experiment with 305 participants from Germany. We recruited them through the services of
the survey company *Bilendi*.

The design of the pre-test was very close to that of the actual survey experiment. In the
pre-test, we engaged participants in a cognitive interview format to explore their general un-
derstanding of the reservation wage questions. After the first reservation wage item (Item 2),
we asked them two questions: First, we asked "How sure were you about your answer?";
the response had to be provided on a Likert scale from 1 (very unsure) to 4 (very sure). The
mean score is 3.10 (sd = 0.82), which suggests that respondents were quite certain about the
reservation wage they provided. Second, we asked "Was this question difficult?"; the response
had to be provided on a Likert scale from 1 (very difficult) to 4 (not difficult). Here the mean
score was 3.09 (sd = 0.80). Thus, on average, the respondents in the pre-test perceived the first
reservation wage item as relatively easy.

We asked the same two questions also after Item 3 where we examine whether respondents
are willing to sacrifice wage for work meaning or not. Regarding the respondents' certainty of
their answer, the mean score is 2.98 (sd = 0.75); with respect to the perceived difficulty of this
item, the mean score is 2.79 (sd = 0.90). Thus, in summary, the reservation wage elicitation
in our survey experiment exhibits a moderate degree of difficulty. Nevertheless, respondents
expressed a relatively high level of certainty in their responses.

Figure 7: Word cloud reservation wage

Additionally, we posed an open-ended question asking participants how they arrived at the
their reservation wage answer. The participants' responses indicate a range of factors: the cost

of living and financial security ("To cover all important costs") as well as job qualifications and responsibilities ("Because it corresponds to my performance and experience"). These responses are visually represented in a word cloud in Figure 7 (in German).

Figure 8: Word cloud work meaning

To explore the respondents' understanding of work meaning, we presented the following question: *We now encourage you to take a moment to contemplate meaningful and purposeful work. In your perspective, what factors do you consider important for meaningful work or a meaningful job? Could you describe what constitutes meaningful and purposeful work for you in a few sentences?* The answers highlight various factors deemed important for meaningful work. For instance, many respondents emphasize the significance of work that involves helping others ("Helping others directly in personal contact or through working on projects to improve their situation, well-being, or health"). Respondents also express a preference for work that has a positive impact on the environment ("Working towards environmental protection and climate neutrality") or work that avoids harm to others ("Work that does not harm others and is ethically valuable"). Finally, a common thread is also the desire for work that brings personal satisfaction and a sense of fulfilment ("A job that fulfils me and brings joy, where I can see the results of my efforts" or "Seeing tangible results of my work and feeling a sense of accomplishment"). The responses are illustrated in a word cloud in Figure 8 (in German).

A.6 Education Outcomes in the Netherlands and Germany

Table A1: Overview of Educational Achievements

The Netherlands (LISS)			Germany (Bilendi)		
degree	N	share	degree	N	share
no degree	28	1.07	no degree	23	0.74
basisonderwijs	37	1.42	Hauptschulabschluss	434	13.91
vmbo	325	12.51	Realabschluss	1,614	51.71
havo/vwo	257	9.89	Abitur	485	15.54
mbo	785	30.22	Hochschulabschluss	515	16.50
hbo	736	28.33	Promotion	50	1.60
wo	399	15.36			
anders	31	1.19			
Total	2,598	1.00	Total	3,121	1.00

Notes: In the Netherlands, high education comprises the categories "hbo" and "wo"; in Germany, high education comprises the categories "Abitur", "Hochschulabschluss", and "Promotion." The category "anders" comprises unofficial degrees or (non-academic) degrees that do not fit in any other category.

A.7 Changes in Reservation Wages by Subgroups

Table A2: Changes in Reservation Wages, by Gender

	(1)	(2)	(3)	(4)
Country (Survey)	Gender	Gender		t-test
Treatment	Male	Female	diff.	*p*-value
The Netherlands (LISS)				
Meaning-Neutral	-0.087	-0.022	-0.064	0.092
	(0.027)	(0.026)		
Meaning-100	-0.062	-0.061	-0.000	0.997
	(0.031)	(0.029)		
Meaning-1k	-0.018	-0.030	0.012	0.713
	(0.023)	(0.023)		
Meaning-10k	-0.008	-0.074	0.067	0.144
	(0.036)	(0.029)		
Meaning-100k	-0.033	-0.139	0.107	0.003
	(0.025)	(0.025)		
Meaning (all)	-0.041	-0.065	0.025	0.158
	(0.012)	(0.013)		
Germany (Bilendi)				
Meaning-Neutral	-0.025	-0.064	0.039	0.335
	(0.027)	(0.030)		
Meaning-1k	0.022	-0.011	0.032	0.373
	(0.025)	(0.026)		
Meaning-10k	-0.008	-0.040	0.032	0.450
	(0.030)	(0.029)		
Meaning (all)	-0.004	-0.039	0.034	0.137
	(0.016)	(0.016)		
Profit-Neutral	0.034	0.075	-0.041	0.322
	(0.024)	(0.032)		
Profit-1k	0.007	0.039	-0.032	0.409
	(0.025)	(0.029)		
Profit-10k	0.106	0.075	0.031	0.491
	(0.034)	(0.029)		
Profit (all)	0.046	0.063	-0.017	0.489
	(0.016)	(0.017)		
Flexibility	-0.103	-0.094	-0.008	0.834
	(0.028)	(0.028)		

Notes: Standard errors are in parenthesis.

Table A3: Changes in Reservation Wages, by Education

Country (Survey) Treatment	(1) Low Education	(2) High Education	(3) diff.	(4) t-test p-value
The Netherlands (LISS)				
Meaning-Neutral	-0.028 (0.024)	-0.085 (0.028)	0.056	0.140
Meaning-100	-0.036 (0.030)	-0.096 (0.029)	0.060	0.163
Meaning-1k	-0.069 (0.021)	0.006 (0.023)	0.075	0.025
Meaning-10k	-0.015 (0.034)	-0.081 (0.028)	0.066	0.147
Meaning-100k	-0.086 (0.026)	-0.092 (0.023)	0.007	0.849
Meaning (all)	-0.085 (0.011)	-0.032 (0.013)	0.055	0.003
Germany (Bilendi)				
Meaning-Neutral	-0.065 (0.026)	-0.004 (0.032)	-0.061	0.155
Meaning-1k	0.008 (0.022)	-0.002 (0.029)	0.010	0.786
Meaning-10k	-0.026 (0.027)	-0.024 (0.033)	-0.002	0.971
Meaning (all)	-0.029 (0.015)	-0.011 (0.018)	-0.018	0.458
Profit-Neutral	0.050 (0.026)	0.064 (0.033)	-0.014	0.747
Profit-1k	0.030 (0.025)	0.016 (0.030)	0.014	0.731
Profit-10k	0.073 (0.027)	0.116 (0.037)	-0.043	0.355
Profit (all)	0.051 (0.015)	0.065 (0.019)	-0.015	0.561
Flexibility	-0.103 (0.025)	-0.087 (0.029)	-0.016	0.704

Notes: Standard errors are in parenthesis.

Table A4: Changes in Reservation Wages, by Age

Country (Survey) Treatment	(1) Low Age	(2) High Age	(3) diff.	(4) t-test p-value
The Netherlands (LISS)				
Meaning-Neutral	-0.073	-0.040	-0.032	0.398
	(0.031)	(0.024)		
Meaning-100	-0.080	-0.049	-0.031	0.470
	(0.035)	(0.026)		
Meaning-1k	-0.013	-0.032	0.019	0.572
	(0.026)	(0.021)		
Meaning-10k	-0.045	-0.045	-0.000	0.996
	(0.032)	(0.031)		
Meaning-100k	-0.064	-0.106	0.042	0.251
	(0.028)	(0.023)		
Meaning (all)	-0.054	-0.055	0.001	0.972
	(0.014)	(0.011)		
Germany (Bilendi)				
Meaning-Neutral	-0.040	-0.050	0.010	0.808
	(0.029)	(0.028)		
Meaning-1k	0.022	-0.011	0.034	0.352
	(0.031)	(0.020)		
Meaning-10k	-0.075	0.026	-0.100	0.015
	(0.030)	(0.029)		
Meaning (all)	-0.033	-0.012	-0.021	0.353
	(0.017)	(0.015)		
Profit-Neutral	0.049	0.062	-0.012	0.767
	(0.029)	(0.028)		
Profit-1k	0.039	0.010	0.029	0.453
	(0.027)	(0.027)		
Profit-10k	0.081	0.094	-0.013	0.772
	(0.033)	(0.029)		
Profit (all)	0.056	0.055	0.002	0.943
	(0.017)	(0.016)		
Flexibility	-0.096	-0.100	0.004	0.916
	(0.028)	(0.026)		

Notes: Standard errors are in parenthesis.

Table A5: Changes in Reservation Wages, by Contributions to Society

Country (Survey) Treatment	(1) Low Soc. Cont.	(2) High Soc. Cont.	(3) diff.	(4) t-test *p*-value
The Netherlands (LISS)				
Meaning-Neutral	-0.072 (0.024)	-0.029 (0.030)	-0.043	0.259
Meaning-100	-0.039 (0.025)	-0.089 (0.036)	0.050	0.243
Meaning-1k	-0.014 (0.023)	-0.035 (0.024)	0.021	0.523
Meaning-10k	-0.056 (0.031)	-0.032 (0.033)	-0.024	0.603
Meaning-100k	-0.121 (0.025)	-0.056 (0.025)	0.066	0.065
Meaning (all)	-0.048 (0.011)	-0.063 (0.013)	0.015	0.394
Germany (Bilendi)				
Meaning-Neutral	-0.001 (0.027)	-0.109 (0.030)	0.108	0.008
Meaning-1k	0.034 (0.025)	-0.037 (0.024)	0.071	0.052
Meaning-10k	-0.009 (0.028)	-0.049 (0.032)	0.040	0.347
Meaning (all)	0.007 (0.053)	-0.065 (0.017)	0.073	0.002
Profit-Neutral	0.032 (0.028)	0.078 (0.030)	-0.046	0.259
Profit-1k	0.030 (0.027)	0.019 (0.028)	0.011	0.782
Profit-10k	0.120 (0.034)	0.055 (0.028)	0.065	0.139
Profit (all)	0.060 (0.017)	0.051 (0.017)	0.009	0.713
Flexibility	-0.104 (0.027)	-0.091 (0.029)	-0.013	0.745

Notes: Standard errors are in parenthesis.

Table A6: Changes in Reservation Wages, by Reservation Wage

Country (Survey) Treatment	(1) Low Res. Wage	(2) High Res. Wage	(3) diff.	(4) t-test p-value
The Netherlands (LISS)				
Meaning-Neutral	-0.040 (0.026)	-0.073 (0.028)	0.033	0.386
Meaning-100	-0.039 (0.031)	-0.090 (0.026)	0.051	0.237
Meaning-1k	-0.019 (0.025)	-0.032 (0.019)	0.013	0.689
Meaning-10k	-0.025 (0.033)	-0.068 (0.031)	0.043	0.349
Meaning-100k	-0.106 (0.026)	-0.068 (0.024)	-0.038	0.284
Meaning (all)	-0.046 (0.013)	-0.065 (0.011)	0.019	0.277
Germany (Bilendi)				
Meaning-Neutral	0.023 (0.030)	-0.122 (0.025)	0.144	0.000
Meaning-1k	0.046 (0.027)	-0.041 (0.023)	0.087	0.016
Meaning-10k	-0.010 (0.030)	-0.043 (0.028)	0.033	0.436
Meaning (all)	0.019 (0.017)	-0.069 (0.014)	0.088	0.000
Profit-Neutral	0.043 (0.031)	0.068 (0.026)	-0.025	0.536
Profit-1k	0.052 (0.028)	-0.003 (0.026)	0.055	0.154
Profit-10k	0.145 (0.035)	0.033 (0.027)	0.111	0.011
Profit (all)	0.079 (0.018)	0.033 (0.015)	0.046	0.052
Flexibility	-0.097 (0.027)	-0.099 (0.028)	0.002	0.961

Notes: Standard errors are in parenthesis.

Table A7: Changes in Reservation Wages, by Fairness Concerns

Country (Survey) Treatment	(1) Low Fair. Conc.	(2) High Fair. Conc.	(3) diff.	(4) t-test p-value
The Netherlands (LISS)				
Meaning-Neutral	-0.082	-0.031	-0.051	0.195
	(0.03)	(0.03)		
Meaning-100	-0.110	-0.026	-0.085	0.051
	(0.031)	(0.029)		
Meaning-1k	-0.031	-0.020	-0.010	0.758
	(0.025)	(0.022)		
Meaning-10k	-0.111	0.002	-0.113	0.015
	(0.032)	(0.031)		
Meaning-100k	-0.148	-0.056	-0.093	0.012
	(0.025)	(0.025)		
Meaning (all)	-0.096	-0.027	-0.069	0.000
	(0.013)	(0.012)		
Germany (Bilendi)				
Meaning-Neutral	-0.061	-0.031	-0.03	0.46
	(0.031)	(0.027)		
Meaning-1k	-0.031	0.040	-0.070	0.051
	(0.026)	(0.025)		
Meaning-10k	-0.093	0.033	-0.126	0.003
	(0.028)	(0.030)		
Meaning (all)	-0.061	0.012	-0.073	0.001
	(0.016)	(0.016)		
Profit-Neutral	0.049	0.060	-0.011	0.079
	(0.032)	(0.027)		
Profit-1k	-0.007	0.051	-0.058	0.136
	(0.027)	(0.027)		
Profit-10k	0.097	0.080	0.017	0.702
	(0.034)	(0.029)		
Profit (all)	0.046	0.063	-0.017	0.482
	(0.018)	(0.016)		
Flexibility	-0.126	-0.074	-0.053	0.180
	(0.027)	(0.028)		

Notes: Standard errors are in parenthesis.

Table A8: Changes in Reservation Wages, by Social Preferences (Germany)

Treatment	(1) Low Altruism	(2) High Altruism	(3) diff.	(4) t-test p-value	(5) Low Pos. Rec.	(6) High Pos. Rec.	(7) diff.	(8) t-test p-value
Meaning-Neutral	0.030	-0.129	0.159	0.000	0.001	-0.086	0.087	0.030
	(0.027)	(0.029)			(0.032)	(0.025)		
Meaning-1k	0.063	-0.063	0.125	0.001	0.048	-0.044	0.092	0.011
	(0.025)	(0.025)			(0.027)	(0.023)		
Meaning-10k	0.050	-0.097	0.147	0.000	0.004	-0.055	0.060	0.153
	(0.031)	(0.027)			(0.02)	(0.03)		
Meaning (all)	0.047	-0.097	0.144	0.000	0.018	-0.063	0.081	0.00.
	(0.016)	(0.016)			(0.018)	(0.014)		
Profit-Neutral	0.050	0.060	-0.009	0.818	0.072	0.038	0.034	0.41
	(0.028)	(0.030)			(0.031)	(0.027)		
Profit-1k	0.031	0.020	0.011	0.783	0.018	0.033	-0.014	0.707
	(0.029)	(0.026)			(0.028)	(0.026)		
Profit-10k	0.071	0.106	-0.035	0.431	0.021	0.152	-0.132	0.003
	(0.027)	(0.035)			(0.030)	(0.031)		
Profit (all)	0.051	0.060	-0.009	0.700	0.037	0.076	-0.039	0.100
	(0.016)	(0.018)			(0.017)	(0.016)		
Flexibility	-0.067	-0.130	0.062	0.111	-0.117	-0.079	-0.038	0.334
	(0.025)	(0.030)			(0.024)	(0.031)		
Treatment	Low Neg. Rec.	High Neg. Rec.	diff.	t-test p-value	Low Trust	High Trust	diff.	t-test p-value
Meaning-Neutral	-0.043	-0.047	0.004	0.918	-0.016	-0.102	0.086	0.045
	(0.030)	(0.028)			(0.024)	(0.035)		
Meaning-1k	-0.023	0.029	-0.052	0.149	0.038	-0.058	0.096	0.011
	(0.023)	(0.027)			(0.023)	(0.027)		
Meaning-10k	-0.013	-0.039	0.025	0.541	0.018	-0.102	0.121	0.005
	(0.027)	(0.032)			(0.026)	(0.034)		
Meaning (all)	-0.026	-0.019	-0.008	0.741	0.012	-0.088	0.101	0.000
	(0.016)	(0.017)			(0.014)	(0.019)		
Profit-Neutral	0.094	0.016	0.078	0.057	0.084	-0.002	0.086	0.049
	(0.032)	(0.026)			(0.025)	(0.036)		
Profit-1k	0.054	0.001	0.054	0.166	0.023	0.030	-0.007	0.863
	(0.023)	(0.029)			(0.024)	(0.034)		
Profit-10k	0.164	0.006	0.158	0.000	0.091	0.080	0.011	0.821
	(0.031)	(0.030)			(0.026)	(0.040)		
Profit (all)	0.106	0.007	0.099	0.000	0.066	0.035	0.031	0.223
	(0.017)	(0.016)			(0.014)	(0.021)		
Flexibility	-0.122	-0.070	-0.052	0.186	-0.079	-0.142	0.063	0.141
	(0.024)	(0.031)			(0.023)	(0.038)		

Notes: Standard errors are in parenthesis.

A.8 Omitted Tables from Robustness Checks

Table A9: Willingness to Pay for Work Meaning, Continuous Variables (The Netherlands)

	(1)	(2)	(3)
Demographic Variables			
Woman	-0.025	-0.010	-0.008
	(0.017)	(0.020)	(0.020)
Age	0.000	-0.000	-0.001
	(0.001)	(0.001)	(0.001)
High Education	-0.053***	-0.060***	-0.052***
	(0.017)	(0.021)	(0.021)
Job Variables			
Societal Contributions		-0.000	-0.001
		(0.004)	(0.004)
Reservation Wage		0.008	0.003
		(0.013)	(0.012)
Fairness Concerns			
Fairness Concerns			0.014***
			(0.005)
Treatments			
Meaning-100	-0.010	0.012	0.014
	(0.028)	(0.031)	(0.031)
Meaning-1k	0.026	0.043*	0.043*
	(0.025)	(0.027)	(0.027)
Meaning-10k	0.008	0.033	0.033
	(0.030)	(0.033)	(0.032)
Meaning-100k	-0.037	-0.012	-0.014
	(0.026)	(0.029)	(0.020)
Constant	-0.004	-0.027	-0.066
	(0.040)	(0.056)	(0.057)
Observations	2596	2596	2556
R^2	0.007	0.007	0.011

Notes: Results from OLS regressions. The dependent variable is the relative change of the reservation wage $\Delta \tilde{w}_t^*$ in a meaning treatment. The gender dummy equals one if the respondent is a women and zero otherwise. All other independent variables except education take on their original values (as entered in the survey experiment). Standard errors are in parentheses. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table A10: Willingness to Pay for Work Meaning, Continuous Variables (Germany)

	(1)	(2)	(3)
Demographic Variables			
Woman	-0.031	-0.041*	-0.030
	(0.023)	(0.023)	(0.023)
Age	0.001	0.001*	0.001*
	(0.001)	(0.023)	(0.0201)
High Education	0.022	0.063**	0.079***
	(0.027)	(0.029)	(0.029)
Job Variables			
Societal Contributions		-0.011***	-0.004
		(0.004)	(0.004)
Reservation Wage		-0.047***	-0.037***
		(0.012)	(0.012)
Fairness Concerns and Social Preferences			
Fairness Concerns			0.013**
			(0.006)
Altruism			-0.075***
			(0.015)
Positive Reciprocity			-0.044**
			(0.017)
Negative Reciprocity			-0.019
			(0.016)
Trust			-0.033***
			(0.012)
Treatments			
Meaning-1k	0.049*	0.048*	0.049*
	(0.027)	(0.027)	(0.026)
Meaning-10k	0.020	0.021	0.025
	(0.029)	(0.029)	(0.028)
Constant	-0.073*	-0.112*	0.008
	(0.043)	(0.059)	(0.045)
Observations	1351	1351	1351
R^2	0.005	0.019	0.070

Notes: Results from OLS regressions. The dependent variable is the relative change of the reservation wage $\Delta \tilde{w}_t^*$ in a meaning treatment. The gender dummy equals one if the respondent is a women and zero otherwise. All other independent variables except education take on their original values (as entered in the survey experiment). Standard errors are in parentheses. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table A11: Positive Willingness to Pay for Work Meaning (The Netherlands)

	(1)	(2)	(3)
Demographic Variables			
Gender	0.050***	0.051**	0.052**
	(0.019)	(0.020)	(0.020)
High Age	-0.014	-0.017	-0.016
	(0.020)	(0.020)	(0.020)
High Education	0.089***	0.083***	0.075***
	(0.020)	(0.021)	(0.021)
Job Variables			
High Societal Contributions		0.023	0.022
		(0.020)	(0.020)
High Reservation Wage		0.016	0.016
		(0.021)	(0.021)
Fairness Concerns			
High Fairness Concerns			-0.090***
			(0.020)
Treatments			
Meaning-100	0.019	0.018	0.018
	(0.032)	(0.032)	(0.032)
Meaning-1k	-0.076***	-0.078***	-0.077***
	(0.030)	(0.030)	(0.030)
Meaning-10k	0.016	0.014	0.016
	(0.031)	(0.031)	(0.031)
Meaning-100k	0.029	0.026	0.032
	(0.030)	(0.030)	(0.030)
Constant	0.377***	0.365***	0.417***
	(0.028)	(0.030)	(0.032)
Observations	2596	2596	2556
R^2	0.018	0.018	0.027

Notes: Results from OLS regressions. The dependent variable in all specifications is a dummy that equals one if the relative change of the reservation wage $\Delta \tilde{w}_t^*$ in a meaning treatment is negative and zero otherwise. All other details are the same as in Table 4. Standard errors are in parentheses. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table A12: Positive Willingness to Pay for Work Meaning (Germany)

	(1)	(2)	(3)
Demographic Variables			
Gender	0.024	0.024	0.020
	(0.027)	(0.027)	(0.027)
High Age	-0.013	-0.019	-0.020
	(0.027)	(0.027)	(0.026)
High Education	0.060*	0.031	0.014
	(0.035)	(0.036)	(0.035)
Job Variables			
High Societal Contributions		0.086***	0.035
		(0.027)	(0.027)
High Reservation Wage		0.056**	0.042*
		(0.028)	(0.027)
Fairness Concerns and Social Preferences			
High Fairness Concerns			-0.083***
			(0.026)
High Altruism			0.206***
			(0.027)
High Positive Reciprocity			0.069***
			(0.027)
High Negative Reciprocity			0.016
			(0.026)
High Trust			0.104***
			(0.028)
Treatments			
Meaning-1k	-0.087***	-0.088***	-0.088***
	(0.032)	(0.032)	(0.031)
Meaning-10k	-0.014	-0.015	-0.027
	(0.033)	(0.032)	(0.031)
Constant	0.403***	0.351***	0.253***
	(0.032)	(0.035)	(0.042)
Observations	1351	1351	1351
R^2	0.009	0.020	0.100

Notes: Results from OLS regressions. The dependent variable in all specifications is a dummy that equals one if the relative change of the reservation wage $\Delta \tilde{w}_t^*$ in a meaning treatment is negative and zero otherwise. All other details are the same as in Table 5. Standard errors are in parentheses. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table A13: Willingness to Pay for Work Meaning, Multinomial Logit (Netherlands)

	(1) Negative Sign	(2) Positive Sign
Demographic Variables		
Gender	0.176*	-0.111
	(0.094)	(0.113)
High Age	-0.057	0.019
	(0.093)	(0.111)
High Education	0.175*	-0.371***
	(0.099)	(0.124)
Job Variables		
High Societal Contributions	0.098	-0.010
	(0.093)	(0.111)
High Reservation Wage	-0.004	-0.189*
	(0.100)	(0.121)
Fairness and Social Preferences		
High Fairness Concerns	-0.183**	0.516***
	(0.092)	(0.117)
Treatments		
Meaning-100	0.148	0.185
	(0.150)	(0.176)
Meaning-1k	-0.417***	-0.251*
	(0.150)	(0.167)
Meaning-10k	0.140	0.175
	(0.146)	(0.172)
Meaning-100k	0.038	-0.261*
	(0.140)	(0.173)
Constant	0.157	-0.483***
	(0.150)	(0.182)
Observations	2556	

Notes: Results from multinomial logit regressions. The dependent variable is the sign of the change in the reservation wage in a meaning treatment. All other details are the same as in Table 4. Standard errors are in parentheses. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table A14: Willingness to Pay for Work Meaning, Multinomial Logit (Germany)

	(1) Negative Sign	(2) Positive Sign
Demographic Variables		
Gender	0.035	-0.190
	(0.135)	(0.153)
High Age	-0.169	-0.236*
	(0.131)	(0.155)
High Education	0.140	0.264
	(0.173)	(0.208)
Job Variables		
High Societal Contributions	0.165	0.002
	(0.132)	(0.157)
High Reservation Wage	0.107	-0.293*
	(0.135)	(0.161)
Fairness and Social Preferences		
High Fairness Concerns	-0.215*	0.532***
	(0.130)	(0.159)
High Altruism	0.820***	-0.302*
	(0.133)	(0.162)
High Negative Reciprocity	0.094	0.062
	(0.131)	(0.152)
High Positive Reciprocity	0.232*	-0.286*
	(0.132)	(0.157)
High Trust	0.449***	-0.073
	(0.135)	(0.167)
Treatments		
Meaning-1k	-0.514***	-0.332*
	(0.157)	(0.186)
Meaning-10k	-0.078	0.142
	(0.156)	(0.179)
Constant	-0.581*	-0.370*
	(0.214)	(0.245)
Observations		1351

Notes: Results from multinomial logit regressions. The dependent variable is the sign of the change in the reservation wage in a meaning treatment. All other details are the same as in Table 5. Standard errors are in parentheses. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table A15: Willingness to Pay for Work Meaning, Stepwise Regression

	(1) Germany	(2) The Netherlands
Demographic Variables		
Gender	-0.052**	-0.029*
	(0.023)	(0.020)
High Education	0.072***	×
	(0.028)	
Married	0.048**	×
	(0.023)	
Unemployed	-0.129*	-0.179***
	(0.077)	(0.065)
Job Variables		
High Reservation Wage	-0.110***	×
	(0.024)	
High Societal Contributions	-0.051**	×
	(0.023)	
High Job Satisfaction	×	0.054**
		(0.027)
Fairness and Social Preferences		
High Fairness Concerns	0.045***	0.085***
	(0.023)	(0.20)
High Altruism	-0.106***	NA
	(0.024)	
High Positive Reciprocity	-0.048**	NA
	(0.024)	
High Trust	-0.077***	NA
	(0.024)	
Treatments		
Meaning-1k	0.064**	0.044*
	(0.027)	(0.023)
Meaning-10k	0.43*	×
	(0.029)	
Meaning-100k	NA	-0.044*
		(0.025)
Constant	0.090**	-0.099***
	(0.035)	(0.021)

Notes: Results from stepwise regressions. The dependent variable in all specifications is the relative change of the reservation wage $\Delta \tilde{w}_t^*$ in a meaning treatment. Variables with a cross indicators were available but not selected. Variables with NA indicators were not available in the dataset. Standard errors are in parentheses. Significance at * $p < 0.15$, ** $p < 0.05$, and *** $p < 0.01$.

A.9 Preference Heterogeneity in the Profit and Flexibility Treatments

We examine which characteristics predict responses to a variation in employer profits and flexibility. For this, we consider the same regression framework as for the meaning treatments in Subsection 4.4. Table A16 shows the results for the profit treatments. None of the demographic variables has a statistically significant influence on the respondents' willingness to pay for employer profits. Respondents with a high reservation wage are slightly more willing to pay for employer profits (that is, their increase in the reservation wage in response to the job variation is less strong) than respondents with a low reservation wage. Fairness concerns and social preferences are mostly not correlated with willingness to pay for employer profits. However, respondents with high negative reciprocity exhibit a higher willingness to pay for employer profits than respondents with low negative reciprocity. The treatment coefficients are mostly not statistically significant.

Next, Table A17 shows the results for the flexibility treatment. None of the demographic variables is significantly correlated with willingness to pay for flexibility, even not gender. There is also no significant association between the job variables and the respondents' willingness to sacrifice wage for flexibility. Fairness concerns do not seem to matter as well. Nevertheless, the coefficients for altruism and positive reciprocity are significant at the 10-percent level. The effects of these two social preferences go in opposite directions, which makes them difficult to interpret. Thus, while we find that respondents are quite willing to pay for flexibility, there are few systematic differences between respondents along our main subject characteristics. Overall, we find that fairness concerns and social preferences substantially matter for the respondents' willingness to pay for work meaning, but not so much for their willingness to pay for employer profits or flexibility.

Table A16: Regression Results – Willingness to Pay for Profits (Germany)

	(1)	(2)	(3)
Demographic Variables			
Gender	0.015	0.009	-0.001
	(0.024)	(0.024)	(0.024)
High Age	-0.001	0.000	-0.007
	(0.024)	(0.024)	(0.024)
High Education	-0.012	0.003	0.005
	(0.030)	(0.0031)	(0.031)
Job Variables			
High Societal Contributions		-0.009	-0.016
		(0.024)	(0.024)
High Reservation Wage		-0.046*	-0.040*
		(0.025)	(0.025)
Fairness Concerns and Social Preferences			
High Fairness Concerns			0.027
			(0.024)
High Altruism			0.009
			(0.025)
High Positive Reciprocity			0.035
			(0.024)
High Negative Reciprocity			-0.095***
			(0.024)
High Trust			-0.027
			(0.026)
Treatments			
Profits-1k	-0.031*	-0.030	-0.024
	(0.028)	(0.028)	(0.028)
Profits-10k	0.032	0.033	0.032
	(0.030)	(0.030)	(0.030)
Constant	0.050*	0.077**	0.105***
	(0.026)	(0.031)	(0.040)
Observations	1311	1311	1311
R^2	0.004	0.007	0.022

Notes: Results from OLS regressions. The dependent variable in all specifications is the relative change of the reservation wage $\Delta \tilde{w}_t^*$ in a profit treatment. The gender dummy equals one if the respondent is a women and zero otherwise. All independent variables "High [...]" are dummy variables that equal one if the respondent's value in the corresponding category is above the median and zero otherwise. Standard errors are in parentheses. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.

Table A17: Regression Results – Willingness to Pay for Flexibility (Germany)

	(1)	(2)	(3)
Demographic Variables			
Gender	0.009	0.007	0.018
	(0.039)	(0.041)	(0.043)
High Age	-0.001	-0.001	-0.018
	(0.039)	(0.040)	(0.043)
High Education	0.018	0.018	0.019
	(0.048)	(0.049)	(0.048)
Job Variables			
High Societal Contributions		0.011	0.020
		(0.042)	(0.023)
High Reservation Wage		-0.003	-0.012
		(0.040)	(0.042)
Fairness Concerns and Social Preferences			
High Fairness Concerns			0.045
			(0.042)
High Altruism			-0.072*
			(0.042)
High Positive Reciprocity			0.066*
			(0.039)
High Negative Reciprocity			0.053
			(0.041)
High Trust			-0.057
			(0.047)
Constant	-0.106***	-0.108**	-0.136***
	(0.039)	(0.045)	(0.053)
Observations	454	454	454
R^2	0.000	0.001	0.023

Notes: Results from OLS regressions. The dependent variable in all specifications is the relative change of the reservation wage $\Delta\tilde{w}_t^*$ in the flexibility treatment. The gender dummy equals one if the respondent is a women and zero otherwise. All independent variables "High [...]" are dummy variables that equal one if the respondent's value in the corresponding category is above the median and zero otherwise. Standard errors are in parentheses. Significance at * $p < 0.1$, ** $p < 0.05$, and *** $p < 0.01$.