Depressed entitlement and the reproduction of the gender pay gap in an experiment with couples

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Abstract: We investigate whether depressed entitlement – the phenomenon that women expect lower wages than man due to internalized gender stereotypes – also occurs within couples, where women and men presumably know each other best. We exploit data from an experiment where spouses had to reveal their own wage demand and assess the wage demand of their partner for the same task. We find that the variance in expected wage differences between spouses is related to opportunity costs and actual gender role behavior, even though on average spouses do not differ in their actual or expected wage demands. This seems to confirm depressed entitlement through the stereotypical reproduction of gendered wage beliefs.

Keywords: Gender wage gap, depressed entitlement, gender stereotypes, pay equity

JEL-Klassifikation: J31, J16

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1. Introduction

In Germany, women receive a 22.3 percent lower wage per hour than men on average (Eurostat 2016). Beyond the common explanations of gender differences in education, occupations, employment interruptions or discriminatory barriers, some studies make the case that women may be more modest, expecting to be paid less for the same work and therefore satisfied with a lower wage (see, for example, Hogue & Yoder 2003). Depressed entitlement, as this phenomenon is referenced in the psychology literature, expresses the internalization of societal gender roles and stereotypes when making behavioral decisions, independent of observed human capital endowments or other wage-related characteristics. In this paper we examine whether we find depressed entitlement also within couples, i.e. between women and men who are very familiar with each other and whose decisions interact on a daily basis.

Most of the existing literature on (perceived) wages focuses on what respondents, both in surveys and experiments, receive for a pay or what they consider as just. To our knowledge, only the gaps between women's and men's wages as groups have been investigated so far, while not so much is known about the differences within couples. Our paper will show that in-couple gender gaps in wage demands and expected wages differ greatly from gaps at the population average.

We contribute to the literature by studying the gender pay gap between spouses using experimental evidence. The advantage of our approach is manifold: the participants (i) are non-standard subjects (as opposed to student participants), (ii) are partners in real life (as opposed to randomly matched experimental partners), (iii) state wage demands for a simple real effort task to be fulfilled at the end of the experiment, (iv) report their expectation about their partners' wage demands, (v) fill in a questionnaire on socio-demographic and economic variables. We are thus able to observe and investigate the demanded and the expected gender pay gap within the couple while controlling for a wide set of possible determinants.

Participants in our experiment reproduce the commonly known gender pay gap in two respects: First, at the sample average, the participants seem to reproduce the gender pay gap observed in the German labor market. Second, the expected in-couple pay gap exhibits a large variance and its magnitude is related to the economic concept of work division

and re-production, i.e. the division of paid market work and unpaid housework. Our findings reveal that stereotypical beliefs about women's and men's wage demands are prevalent even between familiar spouses, while the participants' actual demands are much less gender-specific.

In the next section, we give an overview on the existing empirical literature. Section 3 introduces our experimental design and data, as well as the theoretical setting. We then discuss in two subsections the population average and in-couple gender pay differences and their determinants. Section 5 concludes.

2. Related empirical literature

Broadly speaking, the empirical investigations of gender differences in pay expectations can be divided into three branches. First, there are a number of studies analyzing differences in wages or income that are perceived as *just*. Second, numerous researchers address the issue of gender differences in wage *negotiation*. And third, another branch of the literature deals with the question which income women and men actually *expect* to earn – possibly related to negotiation willingness and skills.

Early experimental and survey research in psychology on the latter topic suggests that women on average *expect* a lower pay than men (Major & Konar 1984; Martin 1989; McFarlin et al. 1989; Jackson et al. 1992) and that they feel entitled to be paid less or intend to pay themselves less for the same tasks in lab experiments (Pelham & Hetts 2001; Hogue & Yoder 2003). This phenomenon is termed the "depressed entitlement effect".

More recent economic research supports this interpretation. Filippin & Ichino (2005) work with data from Italian business school graduates. Their analysis shows that without further controls female students on average expect a 9.7% lower wage one year after graduation than their male counterparts. Controlling for individual characteristics including the attended university program and performance at university, the gap still amounts to 8.2%. In a similar study, Hojat et al. (2000) observe students of a medical school in the US between 1970 and 1997. Among them, women expect on average 23 % lower "future peak annual income" than men.

Practice and outcome of *negotiation* offer potential explanations for the observed gender differences in wage expectations: Among others, Bowles & Babcock (2013) argue that negotiating high(er) wages bears social costs for women, because it does not match prescribed gendered behavior. Experimental and field studies have found that men indeed frequently negotiate higher starting salaries than women (Gerhart & Rynes 1991; Stevens et al. 1993), and that women are generally less likely to enter wage negotiations. Exley et al. (2017) provide a comprehensive overview of the research on this topic. In their experiment women avoid pay negotiation more often than men, but Exley and coauthors argue that they often do so rationally, since women are more likely to opt out of negotiation when their bargaining skills are low. Barron's (2003) combination of experimental and qualitative methods adds the insight that beliefs about the need to prove oneself and about one's monetary worth in the labor market play an important role in gender differences in salary negotiations.

Research on the *perceived justice* of pay suggests an additional source of gender differences. Women tend to perceive their income as less unjust than men, despite the fact that they earn less than comparable male employees on average (e.g. Sauer et al. 2016; Davison 2014). Several studies find support for the hypothesis that this evaluation of personal earnings is influenced by the reference group to which women compare their income. Apparently they perceive their income as more unjust when they live together with a male partner (Liebig et al. 2012) or when they work in occupations with higher shares of male co-workers (Valet 2018). Other studies reveal a gender pattern in the justice evaluation of fictitious employees' salaries. Here, respondents of both genders consider higher income for men as just (Jasso & Webster 1997) and are more likely to regard salaries as too low when reviewing the situation of male employees (Jann 2003). The latter effect appears to be even larger when the hypothetical person in the evaluated situation is married, thus reproducing the well-established marital wage premium for men (see, e.g. Barg and Beblo 2009). The evaluation of justice seems related to actual gender inequalities among the observed group. Both Sauer (2014) and Jasso & Webster (1999) (in a follow-up study on their 1997 paper cited above), do not find a "just" gender pay gap in factorial survey studies with students from social sciences. When Sauer (2014) performs the same study with two different samples of the general population, however, the vi-

gnette person's gender has a highly significant effect. He also finds that the just gender pay gap is higher when test subjects live in regions with a higher actual gender pay gap. This interpretation is also supported by the work of Auspurg et al. (2017) who exploit one of his population survey data sets in more detail. The just(ified) gender pay gap seems to be more pronounced when respondents experience gendered pay inequality in their own occupations. A similar, yet smaller, effect is found for the vignette person's occupation. Psychological research describes the phenomenon that people of both genders ascribe higher salaries for the same job to men than to women as the "salary estimation effect". When provided with a list of jobs to which male or female names were assigned randomly, test subjects estimate higher annual salaries for jobs associated with male names, even within the same occupation (Williams et al. 2010; Furnham & Wilson 2011).

Somewhat contradictory to the findings reported above are those of two more recent surveys in Germany: When being asked about gendered pay inequality in general, a huge majority of the respondents agree that this is a "shocking" phenomenon to exist today (Wippermann 2015: 28; Wippermann et al. 2010: 15). However, we suspect the answers on social acceptance to be led by the framing and wording of the question.[1]

In summary, several studies document the existence of a "depressed entitlement effect" for women: Compared to men, they expect a lower pay on average and more often anticipate gender gaps in wages. Furthermore, the empirical literature offers several potential explanations for this depressed entitlement. The first being gender differences in negotiation skills and practices that in turn seem to be related to the relatively higher social costs women bear when negotiating for higher pay and by different experiences and believes of women and men about their comparable worth in the workplace. In addition, women often perceive the fact that they receive lower wages then men as just. This perception can be influenced by the household context, the occupation and internalized gender stereotypes. Finally, even though in recent surveys gender pay inequality is increasingly being judged as unjust, both genders seem to

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[1] Both surveys are solely about pay inequality between women and men, and respondents are asked to answer several questions regarding their attitudes towards this issue. In most of these questions gendered pay inequality seems to be framed as socially undesirable.

consider higher wages for men in experiments as reasonable and assign higher salaries to men than to women, even within the same occupation. These evaluations seem to be influenced by observed inequalities in the labor market.

Our paper contributes to the understanding of these mechanisms by analyzing whether the described perceptions of female and male wages apply within the couple context as well. We ask whether female and male spouses demand different wages for the same task and whether they are aware of a potential in-couple pay gap or reproduce it themselves. Married or cohabiting spouses should know each other very well and have an idea of their partner's evaluation of time or monetary worth in the labor market. Together with the empirically established fact of positive assortative mating (e.g. Pencavel 1998, Schwartz & Mare 2005, Schwartz 2010 for the U.S.; Pestel 2017 for Germany), this leads us to expect smaller actual and expected gender wage gaps within couples than for the German population average. In addition, we investigate whether spouses' socio-economic characteristics or gendered division of work can help to explain potential in-couple differences in wage demands.

3. Experimental strategy

We exploit a dataset from an economic experiment with couples, run in Mannheim, a city located in South-West Germany, in 2010. The participants are 95 mixed-sex couples, i.e. 190 individuals, who had to be living together for at least one year at the time of the experiment. They were invited to perform several tasks concerning money and time use decisions, both separately (individual decision) and jointly (common couple decisions). The pool of participants is heterogeneous in terms of socio-demographic backgrounds, and represents quite well the Mannheim population, with respect to age, income level, and employment status. About half of the participating couples is married. Almost a quarter has common children. Average length of relationship is 12.4 years. The female participants are on average 40 years of age, the males 42. 40% of the participants have a university degree. Although this statistic deviates from the Mannheim population value (13%), education is sufficiently heterogeneous in our sample to control for a potential bias in the analyses

(More details on the participants sample and the structure of the experiment are provided in the appendix and in Beblo & Beninger 2016.).

Seven sessions were conducted with groups of 11 to 15 couples each. At the end, we asked the participants to fill in a questionnaire, which covered a wide range of socio-economic characteristics of the spouses.

The relevant experimental task exploited in this paper provides us with 180 valid observations[2]. In this task, the participants were asked to report the price for which they are willing to stay ten minutes longer at the end of the experiment to do easy office work (i.e. sort, (un)fold and check letters). They were not informed about the wage demands of the other participants (principle of sealed-bid auctions), but were told that in each session, only the person with the lowest wage demand (or willingness-to-accept – WTA) will perform the task, and be paid the second-lowest WTA (second price procurement auction or reverse Vickrey auction, see Vickrey 1961).

Formally, the participants maximise their expected utility by bidding their individual valuation of time and revealing the wage w_i for which they are accepting to fulfil the additional task:

$$(1) \qquad w_i = E(U_i).$$

The participant with the lowest wage demand performs the additional task, and is paid the second lowest wage among all participants. All other participants neither do the task, nor receive any additional payment (v_i)

$$(2) \qquad \begin{cases} v_i = w_2 & \text{if} \quad w_i = w_1 < w_2 < ... w_n \\ v_i = 0 & \text{else.} \end{cases}$$

As the dominant strategy in a Vickrey auction is to bid the true wage demand, theoretically we observe the wages for which the participants are just willing to work. Hence, we interpret the stated WTAs as the participants' revealed individual wage demands.[3]

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[2] Of the 95 participating couples, four couples did not participate in the task and one couple was coded as an extreme outlier as the spouses gave very implausible answers.

[3] One potential problem with the Vickrey procedure is that it can produce bids above the dominant price strategy for single-item auctions (e.g. Kagel et al. 1987; Kagel & Levin 1993). As we elicit the wage demands only once, we cannot test empirically whether WTAs would converge towards lower values with repetition.

For a better understanding of the procedure, the participants were given an illustrative example before answering the task. To control for a possible anchor effect induced by the numerical example, we used two different ones, either with a set of relatively high wages (5€, 4€, 7€) or with relatively low wages (0.50€, 0.40€, 0.70€) and accounted for the respective treatment in the analyses.

In addition to stating their WTAs, the participants were also asked to give their expectations on their partners' WTA for the same task. Therefore, we have full information on each participant's (i) own wage demand, (ii) partner's wage demand and (iii) expected wage demand of the partner[4].

4. Results and discussion

In the following we will analyze the gender differences in those wages participants actually demand, as well as in the expectations of both spouses about their partner's wage demand. First, average differences across the sample population will be discussed. In a second step, we will investigate the distribution of gaps within the couples.

4.1. Average gender differences

We first look at the female and male wage demands ($w_{i=f,m}$) across the whole sample. Figure 1 shows that the medians of the wage demands do not differ between female and male responses, but the male distribution has a wider spread with a standard deviation of 1.30, compared to 0.63 for women. Thus, men's and women's wage demands seem to follow distinctly different distributions.

However, since we observe outliers/extreme values in either direction (i.e. very high bids as well as bids close to zero), we are confident that our observed WTAs represent the respondents' true valuations of their time. In any case, as Bardsley et al. (2010: 273) note, even with this caveat the Vickrey auction represents the most effective mechanism for eliciting true WTAs.

4 Although the expected partner's wage demand was not pay-off relevant we received full response on this question.

Figure 1: Distribution of wage demands by gender
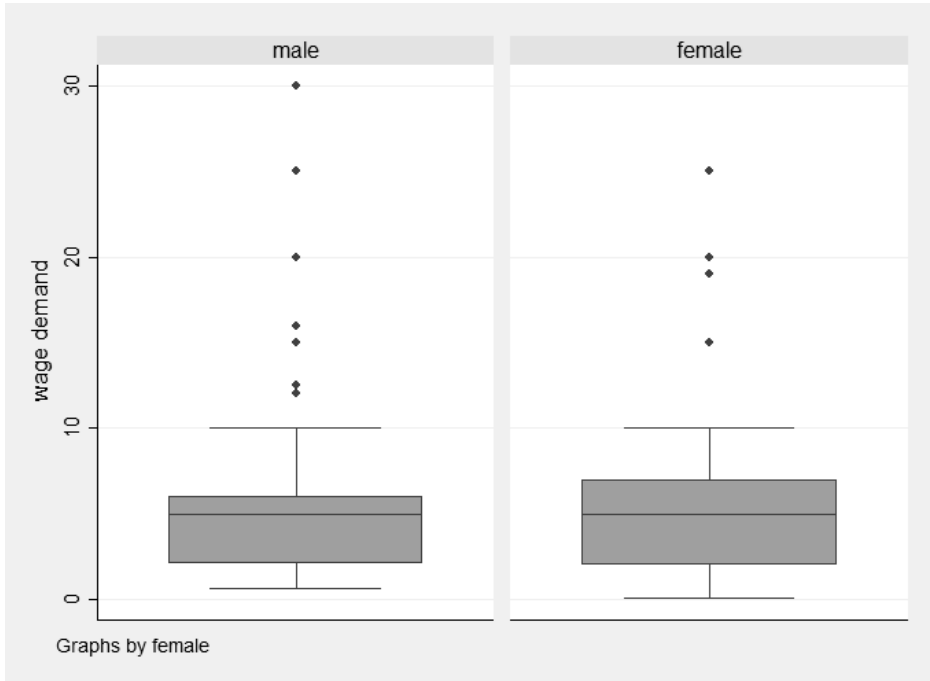
Not pictured: additional outliers at 35 (m), 40 (f), 50 (m), 100 (m)

Furthermore, and consistent with the literature, men demand higher wages on average than women (7.41€ compared to 6.02€). The relative wage gap between women and men is thus 18.76% on average, according to the equation:[5]

$$(3) \qquad rwg_{agg} = \left(\sum_{j=1,..N} w_m^j - \sum_{j=1,..N} w_f^j \right) \Big/ \sum_{j=1,..N} w_m^j,$$

Our experimental sample statistic is hence close to the actual gender wage gap measured for the German labor market (22% in 2014 as published by the Federal Office of Statistics 2016). However, due to the high variance in both female and male wage demands, the relative gap lacks statistical significance (a *t*-test yields a *p*-value of 0.336).

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[5] The male value is chosen as the reference value to be consistent with the conventional definition of the gender pay gap. With the female value as the reference the gap amounts to −23%, meaning that men on average demand a 23% higher wage than women in the sample.

Beyond the gender differences in wage demands, we are interested in the participants' expectations on the wage demand of their partner ($ew_{i=f,m}$), and whether these differ by gender as well. Figure 2 shows averages of the own wage demand and expected wage demand of the partner by gender for the two anchor groups separately.

Figure 2: Average wage demands and expected partners'
wage demand by gender in the two anchor groups, stars indicate
statistically significant differences (* p<0.1 ** p<0.05 *** p<0.01)
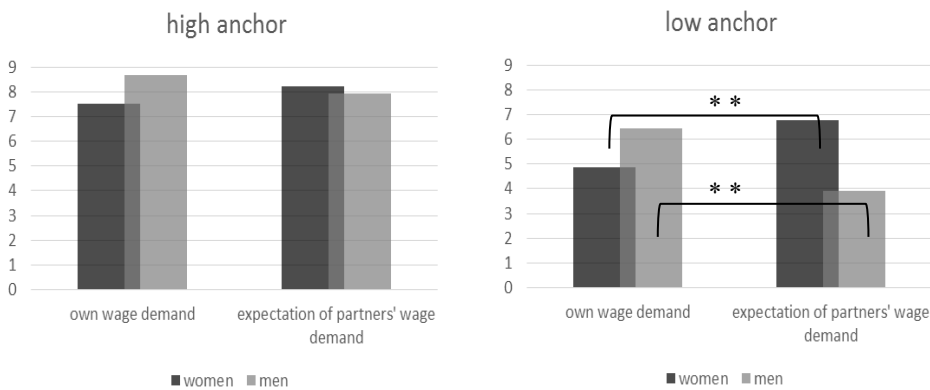
Besides the fact that men demand higher wages than women at both anchor levels, it becomes evident that on average men's expectations about their partners' wage demands are lower than their own wage demands. For women the opposite is true: On average they expect their partners to demand higher wages then they do themselves. This difference is visible in both anchor groups but it is statistically significant only in the group with the lower anchor.

In addition, Figure 2 reveals that, on average, men in the low anchor treatment underestimate women's wage demands while the women of this group overestimate the wage demands of their male partners. The underestimation of the men is considerably large with their average expectation for women's wage requests lying 19.34% below women's actual average wage demands. The average overestimation of male wages by the women in the sample is smaller (5.11%). In the high anchor group, those differences are reversed and not significant.

Figure 2 thus reveals that test subjects of both genders on average expect women to demand lower wages than men, which is in accordance with the literature. While our data does not allow us to dig deeper into the question why these differences are only visible in the low anchor group, we can exclude the possibility that this is caused by gender differences in the anchor effect, as shown in Beblo et al. (2017).

We define the (aggregate) expected gender gap in wage demands as

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(4) \quad
\begin{cases}
rewg_{f,agg} = \left(\sum_{j=1,..N} ew_m^j - \sum_{j=1,..N} w_f^j \right) \Big/ \sum_{j=1,..N} ew_m^j \\[3ex]
rewg_{m,agg} = \left(\sum_{j=1,..N} w_m^j - \sum_{j=1,..N} ew_f^j \right) \Big/ \sum_{j=1,..N} w_{m.}^j
\end{cases}
$$

The male value is thus regarded as the reference, i.e. $rewg_{m,agg}$ specifies the difference between the average male wage demand and the average expectation of males on their female spouse's wage request – relative to average male WTA, while $rewg_{f,agg}$ measures the difference between average female expectations about their partner's wage request and average female WTA in relation to their average expectations on their partner's wage demand. The results reveal that the participants of both genders on average expect a considerable gender gap in wage demands in favor of males, although the male expectation of the difference (23.62%) is higher than that of females (18.76%).

In conclusion, we find stereotypical gender differences in both, actual wage demands and expectations about own and partner's wage demands in the population average of our sample, although not all gender differences are statistically significant. In its magnitude the gender gap in male wage expectations matches the actual gender wage gap in the German labor market even better than that in wage demands. We will now continue by investigating within the couple, whether similar gender gaps exist between spouses as well, since this important facet has not yet been addressed in the existing literature at all.

4.2. In-couple gender differences

The relative in-couple wage gap *rwg* is defined as:

$$(5) \qquad rwg = \left(w_m - w_f \right) / w_m.$$

The median of the mean in-couple difference is exactly 0, meaning that there are as many couples in which the female spouse requests a higher wage than the male as there are couples where the opposite is true. The 90% confidence interval of the median only ranges from –0.002 to 0. However, the mean is –52.29%. This contra-intuitive result is driven by very few women who demand a much larger wage than their partners.

These findings suggest that the gender specific pattern in wage demands, which has been found for the sample average, only applies to some couples and that the wage gaps within the individual couples are more heterogeneous than the findings at the population average imply.

A similar picture arises for *wage expectations* of women and men at the couple level. Define *rewg* as the relative in-couple expected wage gap:

$$(6) \qquad \begin{cases} rewg_f = \left(ew_m - w_f \right) / ew_m \\ rewg_m = \left(w_m - ew_f \right) / w_m \end{cases}$$

Both variables are distributed very widely, meaning that some female and male participants expect their partners to demand higher wages than themselves, but there are also participants of both genders who expect the opposite. For females, the values range from –3.75 to 1, for males the variable takes values between –1.5 and 0.9. Both, the female and the male expected in-couple wage gaps have a median of 0 and a mean close to 0 as well, but the standard deviations are quite large (see also Table A2.1 in the Appendix).

To sum up, within the individual couples, average wage demands and expectations about wages are not as stereotypical as the gender gaps at the population average would suggest. In fact, the in-couple gender gaps, both in actual demands as well as in expected WTAs, are distributed quite symmetrically around zero.

In conclusion, we face a puzzle: Whereas the population averages in demanded and expected gender gaps are close to commonly observed

pay gaps in the real labor market (according to the means, not the medians), the in-couple picture is noticeably different. Despite significant standard deviations, both demanded and expected wage gaps are distributed around a median of zero. Therefore, although many of the participants of the experiment are not able to correctly assess the wage demands of their spouses, their misjudgment does not necessarily follow general stereotypical gender patterns. In the next section we attempt to explain the variance in the expected wage gap by regressing it on the participants' observed own and couple characteristics.

4.3. Explanatory factors of the expected wage gaps

To determine influential parameters, we conduct regression analyses with ordinary least squares (OLS) with the expected gender wage gaps of the female spouse and the male spouse as separate independent variables. Explanatory variables include information on the spouses' human capital endowment, their division of work and family setting. The regression results are displayed in the first two colums of Table 1.[6]

The female expected gap is solely related to the indicator variable on a traditional housework arrangement in the couple. This suggests that on average women expect a higher wage gap when they do most of the housework. This finding corresponds to Becker's (1965) theory of the allocation of time where he argues that the division of time spent on household work and market work in a couple is related to the spouses' relative wages.

The male expected gender wage gap in Column (2) seems much more driven by opportunity costs considerations. Men who were employed at the time of the interview expect a higher gender gap in wage demands. In addition, men expect a lower wage gap when there are children younger than 18 in the household. Both variables are related to alternative time uses. Employment increases the opportunity costs to perform the additional task in the experiment for the men themselves and leads to a higher wage demand resulting in a larger expected pay gap. The presence of children (assuming traditional division of work) may increase the oppor-

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[6] The results are robust to using log-transformations, which suggests that our findings are not driven by outliers.

tunity costs of their female spouses and therefore raise expectations about their wage demands which would lead to a smaller expected wage gap. Both findings follow the economic rationale of an optimal allocation of time – though the optimization is considered individually, not by the household. Female employment is unrelated to the expected wage gap, though.

Table 1: OLS regression results for the in-couple gaps in expected and actually demanded wages

	(1)	(2)	(3)
	Female expected gap	Male expected gap	Demanded gap
Age difference	0.00981	0.0154	-0.00346
	(0.0182)	(0.0127)	(0.0485)
Married	0.0272	0.151	0.0124
	(0.157)	(0.109)	(0.421)
Children < 18	0.205	-0.434**	0.163
	(0.228)	(0.168)	(0.610)
Woman employed	0.00569	-0.123	-0.714*
	(0.154)	(0.109)	(0.410)
Man employed	0.0549	0.377***	0.576
	(0.165)	(0.117)	(0.440)
Traditional division of household work	0.343**	0.184	0.272
	(0.165)	(0.127)	(0.440)
Constant	-0.238	-0.256*	-0.571
	(0.179)	(0.129)	(0.480)
Observations	90	90	90
R^2	0.073	0.180	0.055

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

When we compare these results with the demanded wage gap in Column (3), we see that only the variable capturing female employment has a significant coefficient (at the 10% level). Not surprisingly, when the woman is employed, she demands a higher wage to perform the task at the end of the experiment, which results in a smaller gender wage gap. This concurs with both, the individual and the household time allocation models.[7]

In conclusion, the expected, but not the actual, gender gap in wage demands appears to be affected by gender stereotypes. While men on average seem to assign the responsibility for child care to their wives, women's expectations are directly driven by traditional work division. Thus, both genders seem to base their expectations about their spouse's wage demand relative to their own request on stereotypes about gendered role behavior.

In reality though, the gender gap in the couples' wage demands does not follow stereotypical patterns. Neither the presence of children nor traditional household arrangements have an influence on its magnitude. The results are robust to alternative calculations of the expected and demanded gender wage gaps. Since household arrangements from their everyday lives seem to influence the expected wage gap of both women and men, we want to check whether real-life wage inequality has an influence (as the results of Sauer et al. 2014 suggest). We calculate the wage gap the couple experiences in the labor market as a function of the partners' real salaries for the double-earner couples.

In the questionnaire, the participants are asked to report their average monthly gross income in five categories. We transform these categories into a continuous income variable by first calculating the mean value of every category. Individual hourly wages are then determined by dividing the income value by the average weekly working hours times 4.3. Among the 44 double earner couples, i.e. 88 individual observations, male participants have a mean hourly wage of 18.31€. Females earn on average 13.10€ per hour. The resulting sample average gender gap in actual wages is 28.45%. The in-couple gender gap in actual wages ranges between −179% and 90%. The mean is −2.8% with the 90% confidence interval ranging from −13.8% to 8.1%. We observe the same discrepancy be-

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[7] All results reported in this section are robust to controlling for the anchor level in the regression.

tween the gap at the aggregate level and the gaps within couples as with the expected gender wage gap.

To analyze whether the actual wage gaps within couples are related to the expected ones we calculate correlation coefficients. The correlation coefficient between the actual wage gap and the male expected wage gap is 0.24 with a p-value of 0.11. For the female expected wage gap the correlation is much weaker at 0.08 ($p = 0.6$). One explanation for this may be that women are less aware of the true level of their own gross wage income due to tax deductions resulting from higher marginal tax rates applied to the second earner in married couples in Germany, which leaves them with substantially lower net wages. As we only asked for gross monthly incomes, we do not know the net wage gaps within the couples.

Summing up, we find that, in terms of magnitude, women's and men's in-couple expectations about the gender gap in wage demands is influenced by stereotypical household arrangements. Women's expectations depend on the division of work in the couple, while men's expectations are mainly influenced by alternative time use considerations, which they seem to base on traditional gender roles as well. Additionally, the male but not the female expected gender gap seems related to actual pay inequalities in the couple. In contrast to this, gender stereotypes do not appear to play any role for the actual difference between men's and women's wages.

4. Conclusions

Our experimental data provide novel insights into demanded and perceived wages and wage gaps at the couple level. At first glance, it seems to simply reproduce the findings of the literature – that women demand lower wages than men. At a second view, it reveals that this stereotypical pattern, if any, tends to apply only to the population average, not to the couple level. Instead, the in-couple magnitudes show large variations in demanded and expected wage gaps between spouses.

A regression analysis reveals the expected in-couple gaps to be clearly related to the spouses' work division and the resulting opportunity costs. We conclude that even within couples, i.e. individuals who are familiar with and presumably well-informed about each other, gendered wage

expectations result from gender stereotypes, and wives are even more prone to adhere to these ascriptions than men are. We interpret this evidence as an indirect depressed entitlement at the couple level, since in their expectations both genders are influenced by stereotypical beliefs about women's and men's roles as well as wages. Our paper conveys an important insight into the working of the depressed entitlement phenomenon, as it reveals the reversal influence of gendered division of work on women's and men's evaluation of time. The relationship between this gender-biased (self-)evaluation of monetary worth and the gender pay gap provides an important policy implication, since women's tendency to demand lower wages does not seem to resolve as long as they are (committed to) occupying gender stereotypical roles in the household.

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Appendix A1: Overview of the experimental design

1. Participants

Table A1.1: Comparison of the experimental sample with population census data

	Participants	Mannheim population
Age group (in %)		
29 or younger	37.37	31.55
30-39	16.84	13.62
40-49	13.16	17.15
50-59	12.63	13.07
60+	20.00	24.60
Income (in €)		
monthly gross income/person	2,088	2,497
monthly available income/person	1,219	1,484
Employment status (in %)		
employed	68.42	70.20
unemployed	3.16	6.30
inactive	28.42	21.20
Educational level (in %)		
completed apprenticeship	36.56	55.70
(university) graduates	40.45	13.40
N	190	311,969

Sources for Mannheim population: Statistisches Landesamt Baden-Württemberg 2009, 2010.

2. Structure of the experiment

Each experimental session was divided into four parts, as summarized in Table A1.2. For part I, the spouses were seated apart and asked to make individual decisions without communicating with each other or observing

the choices of their partner or any other participant. Both spouses made independent decisions about money and time allocation between their partners and themselves, and made a consumption decision by choosing vouchers. They were then incentivized to reveal their individual wage rates in a second-price auction. In part II, the spouses sat together and decided jointly on money allocation, time allocation, and voucher selection.

Table A1.2: Structure of the whole experimental session

I Individual experimental tasks for each spouse (sitting separately), including:
1) Decisions on money allocation between partner and oneself;
2) Decisions on time allocation between partner and oneself;
3) Consumption decision (choice of vouchers); and
4) Revelation of individual wage rate in a second-price auction.

II Joint experimental tasks for couples (sitting together), including:
5) Decisions on money allocation between them;
6) Decisions on time allocation between them; and
7) Consumption decisions (choice of vouchers).

III Post-experimental questionnaire

IV Labor task: sort, (un)fold, and check letters (time length depending on decisions made in parts I and II, by oneself and by partner)

After the joint experimental part, we asked the couples to separate again, take their original seats, and fill in a questionnaire (part III). After completing the questionnaire, the participants received a note with their individual working time based on their responses. In part IV of the experimental session, the participants had to stay in the room and perform office work for as many minutes as indicated on their notes. As soon as their labor time ended they were allowed to leave the room and collect their compensation. Accordingly, the end of the session was defined individually for each participant.

Appendix A2: Summary statistics

Table A2.1: Summary statistics for wage demands and gender gaps in wage demands

	Range	Mean	St. dev.	75% conf. int. around mean	90% conf. int. around mean	Median
Female WTA	[0.1;40]	6.02	5.96	[5.29;6.74]	[4.97;7.06]	5
Male WTA	[0.6;100]	7.41	12.35	[5.90;8.92]	[5.25;9.57]	5
In-couple wage gap (m-f)	[-35;93]	1.39	13.19	[0.26;2.53]	[-0.23;3.02]	0
Relative in-couple wage gap ((m-f)/m)	[-9;0.98]	-0.52	1.76	[-0.67;-0.37]	[-0.74;-0.31]	0
Female relative expected in-couple wage gap	[-3.75;1]	0.03	0.50	[-0.12;0.04]	[-0.15;0.08]	0
Male relative expected in-couple wage gap	[-1.5;0.9]	-0.04	0.67	[-0.03;0.09]	[-0.06;0.12]	0