It's Not About the Money – Or Is It?
Leadership and the Gender Application Gap*

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Abstract

A key supply-side factor contributing to gender gaps in pay and representation in leadership is a gender gap in applications for those positions. With salaries becoming increasingly observable at the application stage, understanding the role of different salary levels in application behavior is important. Using a laboratory experiment, I i) study the role of different salary levels on the gender application gap, ii) examine underlying mechanisms and iii) test a potential solution to mitigate any salary-induced gender application gap. I find a substantial gender gap in the willingness to apply only for highly paid positions: women are 12% less willing to pay than men to acquire these roles despite performing equally well as leaders. While risk attitudes and confidence do not drive the application gap, I find that the gender difference can be explained by men's general higher willingness to claim the lead, which is salary-dependent and gets activated for high salary positions. Additionally, the high salary position is associated with a shift in the perceived stereotype about leadership from female-typed to male-typed, especially among men. Randomly assigning prior leadership experience, a potential solution, does on average not reduce the gender application gap.

Keywords: Gender, Leadership, Stereotypes, Behavioral Decision Making
JEL Codes: C91, D83, J16, M21, M51

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1 Introduction

The representation of women in the labor market has increased substantially over the past decades, accompanied by a narrowing gender earnings gap (Goldin, 2014). Recently, the rise in female representation is stalling or even going into reverse (The Economist, 2026). In fact, large disparities persist in leadership positions: In 2025, women held only 35% of board seats in S&P 500 firms and a similar share across the EU (Spencer Stuart, 2025; European Commission, 2025). These gaps sustain the inequality at the top of the wage distribution (Blau and Kahn, 2017) and emerge early in the career pipeline through the "broken rung", i.e. the sharp drop in the share of women advancing from entry-level roles to first-level management (McKinsey and LeanIn.Org, 2024; Azmat et al., 2024; Benson et al., 2026; Haegele, 2025; Bircan et al., 2026). This early loss of female talent reduces the pool of candidates for promotion[1] and reinforces gender gaps in leadership.

While much of the literature focuses on demand-side barriers and policies such as gender quotas to explain and reduce this gender gap in leadership (OECD, 2025; Bertrand et al., 2019; Azmat and Boring, 2021)[2], recent work highlights a critical supply-side margin: workers must first decide whether to apply before firm demand side policies can take effect. Research on the supply side observes that women are less likely to apply for leadership positions (Haegele, 2025; Hospido et al., 2022) and disproportionately target lower-paying jobs (Fluchtmann et al., 2024; Lepinteur and Nieto, 2025).[3] These application patterns may be particularly consequential for gender representation in leadership, especially in light of new pay transparency regulations which increasingly require employers to disclose salary ranges in job advertisements (European Parliament and Council of the European Union, 2023), making expected pay more observable at the moment of application.[4] Yet it remains unknown whether the salary level itself causes a gender application gap for leadership positions and through which mechanism.

This papers has three main goals: First, I aim to understand whether a higher salary associated with a leadership position causes gender differences in the willingness to apply for this position. Second, I investigate potential mechanisms underlying any salary induced gender differences in applications. In particular, I study the role of risk attitudes, self-confidence, the willingness to compete, gender stereotypes about leadership, and a general willingness to claim and grant the lead. Third, with the aim of finding a solution to mitigate the potential gender application gap, I causally study the effect of exogenous exposure to leadership experience on application behavior. Given that women tend to have lower self-confidence than men in professional settings (Exley and Kessler, 2022; Coffman et al., 2024b), they may be particularly hesitant to apply for leadership roles without prior experience, an aspect the solution targets. This random assignment of leadership experience also allows me to examine whether male and female leaders differ in their

[1] Maximizing the pool of qualified employees for leadership positions is crucial because already lower-level managers significantly impact subordinates' productivity (e.g. Lazear et al., 2015; Fenizia, 2022).

[2] For example, the introduction of gender quotas has been shown to have limited effects on overall female representation (Bertrand et al., 2019; Azmat and Boring, 2021).

[3] Women target jobs with on average 4.5% less pay than those targeted by men. The gender differences in applied-for jobs explain 72 percent of the residual gender gap in starting wages (Fluchtmann et al., 2024).

[4] Previous studies on the effects of these new policies mainly focus on gender pay gaps and salary (re)negotiations (e.g. Roussille, 2024; Brütt and Yuan, 2024; Baker et al., 2023; Cullen and Pakzad-Hurson, 2023; Cullen, 2024; Cullen et al., 2025) rather than comparing application decisions of men and women for positions with a low and high salary.

performance.

I study these questions in a three-stage experiment which is structured as follows: In Stage 1, participants are assigned to groups of three and play a standard public goods game. One participant in each group is randomly assigned as the team leader whose key task is to communicate with and coordinate the team via bilateral chat rooms. Leadership responsibilities in this stage are not additionally remunerated. In Stage 2, I elicit subjects' willingness to pay to attain a leadership role in Stage 3 using a second-price auction. Importantly, this leadership position comes with a large (50%) or small (10%) salary increase and subjects indicate their willingness to pay for both positions. By exploiting the random assignment of leadership roles in Stage 1, I can also analyze the causal effect of leadership experience on the willingness to pay to attain a leadership position by gender. The laboratory setting allows me to i) isolate the effects of different salaries on application behavior while holding all other task dimensions fixed and ii) circumvent the self-selection problem when studying experience effects.[5] In particular, I exogenously vary (i) whether a leadership role comes with a small or large salary increase and (ii) whether subjects have leadership experience at the application stage.

I find that women have a 12% lower willingness to pay to attain leadership positions compared to men when this position comes with a high salary. This gender gap is not observed for low-salary positions, where there is no sizable and significant gender difference in the willingness to pay.

To understand the underlying mechanism of the salary-dependent gender application gap – the second goal of this paper – I study the possibility that the salary level might shift perceptions about job characteristics although the task is held constant.[6] First, risk attitudes, self-confidence, and the willingness to compete may jointly affect application behavior differently across the two positions, for example if subjects perceive one position as riskier than the other. I find no evidence for this first set of mechanisms. Second, the high salary might trigger the gender stereotype that a typical and successful leader is male (Dean et al., 2025; Badura et al., 2018; Koenig et al., 2011), which may discourage women from applying and encourage men to apply.[7] I find that the mere shift in salaries changes the average perception of leadership roles from stereotypical female to stereotypical male. This shift is driven by women perceiving the low-paid position as more stereotypical female and by men viewing the high-paid role as more stereotypical male. For men, these beliefs relate to their application behavior: Those men who hold more stereotypical views about who is a suitable leader in terms of gender are also those who are more eager to become a highly-paid leader. These findings are consistent with labor market traits men are praised for (Dean et al., 2025) as well as social role theory in psychology (Badura et al., 2018; Eagly, 1987), which links men to "breadwinner and higher status roles" (Eagly and Karau, 2002, p. 574). The asymmetry in stereotypes suggest that salary-related stereotype changes increase men's willingness to become a leader rather than decreasing women's leader-

[5]For example, Haegele (2025) does not find a gender gap in applications for women who have leadership experience. The firm setting she uses, however, does not allow her to disentangle whether these women are more similar to men or whether the experience caused the disappearance of the application gap.

[6]Adrjan et al. (2026) for example show that higher wages in job ads cause applicants to believe that the job has a positive workplace culture but is also more stressful.

[7]Barker and Gil (2025) investigate how stereotyping can influence compensation for women in leadership positions: due to stereotypes about women's influence on performance, other than men, high-performing women did not earn more than lower performing women.

ship aspirations. As a third candidate mechanism, I study participants' preference to lead, independent of the specific position, and whether this willingness becomes more or less relevant to application behavior once a high salary is attached to the role. Using a survey-based measure for a general willingness to claim the lead (Giessner et al., 2022), I find that women express a lower willingness to lead than men. The gender application gap decreases substantially and becomes insignificant after controlling for subjects' general willingness to claim and grant the lead. In summary, the high salary shifts perceptions about the position to be more male-typed which partially explain the gender application gap. The main driver, however, seems to be that men have a stronger general willingness to lead, which is salary-dependent and activated for high-salary positions.

Gaining leadership experience through assignment to a leadership position – a potential solution to mitigate the salary-induced application gap – does not reduce the gender application gap for the high-salary role, as exogenous assignment to the leadership role in Stage 1 does not eliminate or significantly mitigate the gender gap in the willingness to pay for the leadership position. This is consistent with the gender application gap reflecting a leadership preference which might be hard to shift.

Finally, I examine subjects' leadership performance and behavior. While men and women differ in their communication styles, these differences do not translate into performance disparities as measured by team contributions. That is, women and men do not significantly differ in their capability to lead. Hence, the observed gender gap in applications might impede filling leadership positions with the best-performing leaders.[8]

This study contributes to several strands of the literature. First, I provide the first causal evidence on the effects of higher salaries (holding all other job features fixed) on the gender application gap for leadership positions. This adds to evidence based on data on Danish unemployment insurance recipients by Fluchtmann et al. (2024), who descriptively show that women apply to lower-paying jobs than men but cannot disentangle the effect of wages from correlated job characteristics such as flexibility or family-friendliness. By exogenously varying the salary levels, my experiment demonstrates that the salary level itself, independent of such amenities, can *causally* attract men more than women to apply for leadership roles. My study thereby also adds to work by Coffman et al. (2024b) who study application behavior for higher-return jobs in male-typed domains. In their work, however, the higher rewarding jobs also come with more challenging tasks. My experiment allows me to study the pure salary effect on application behavior by isolating the monetary incentive from task complexity. Furthermore, because demand-side factors such as employer bias in the hiring process (Carlsson and Eriksson, 2019; Bohnet et al., 2016) or structural inflexibilities (Goldin, 2014) are absent in the laboratory setting, the experimental design can establish whether wage incentives alone generate gendered selection into leadership positions.

Second, the controlled experimental environment allows me not only to causally identify the effect of leaders' salaries on gender application gaps but also to provide the first evidence on the underlying mechanisms. In particular, I can shed light on the relation between perceived gender fit and salary levels of leadership positions. The literature on leadership stereotypes has shown that leadership is often associated

[8]This is especially true given that there is evidence showing that leaders who express strong preferences to be a leader perform worse than randomly assigned leaders (Weidmann et al., 2026).

with men (Dean et al., 2025). Further, successful leaders are associated with agentic traits, such as dominance and assertiveness (Eagly and Karau, 2002; Koenig et al., 2011; Powell et al., 2002), traits which are typically associated with men (Badura et al., 2018; Eagly and Karau, 2002). My study complements this literature as it shows that a mere salary difference is already associated with these differences in perceptions (especially for men), making it even more important to counteract the instilled stereotypes. Moreover, I can rule out other mechanisms which are typically discussed in the literature on the supply-side, such as the lower self-promotion of skills by women (Exley and Kessler, 2022; Mancuso Tradenta et al., 2025), the lower willingness of women to enter competitive environments and their lower self-confidence compared to men (Niederle and Vesterlund, 2007; Niederle et al., 2013; Datta Gupta et al., 2013; Buser et al., 2021, 2022; Saccardo et al., 2018), and their lower social confidence, i.e. the willingness to publicly perform a task (Alan et al., 2020).

I further add to the literature on leading teams which has documented a lower willingness of women to lead teams (Haegele, 2025; Born et al., 2022; Weidmann et al., 2026). In my setting, leaders hold communication and coordination power. This part of leadership is crucial because effective leaders spend much of their time building trust and proactively engaging with team members (McKinsey and LeanIn.Org, 2023), with CEOs dedicating approximately 70% of their time to interpersonal interactions (Bandiera et al., 2020). My study thereby departs from the traditional 'leading by example' framework often employed in experiments, where leaders act primarily as first movers in public goods settings (e.g. Gächter et al., 2012; Güth et al., 2007; Arbak and Villeval, 2013; Gächter and Renner, 2018; Cappelen et al., 2016).[9] In line with previous literature, the results of my study show that men have a stronger general willingness to claim the lead than women. Notably, the design of the study allows me to show that this general willingness to lead is salary-dependent and gets particularly activated for high salary positions.

Forth, I contribute to the mostly correlational evidence on experience and leadership development (Day, 2000; Martin et al., 2021) and on the role of prior experience in shaping gender differences in career progression (Haegele, 2025; Bircan et al., 2026). In my setting, I can exogenously vary experience in a leadership position. Thereby, I circumvent the endogeneity problem of self-selection into leadership positions and I provide insights on the causal effects of experience on application behavior. Prior experience with being a leader did not causally reduce the gender gap in the willingness to invest to attain leadership positions in my setting. This is consistent with the finding that the gender gap is mainly driven by subject's general willingness to lead.

The remainder of this paper proceeds as follows. Section 2 introduces the experimental design and procedure. After presenting the main results in Section 3, mechanisms are discussed in Section 4. Section 5 deals with the potential solution and Section 6 lines out leadership behavior. Section 7 concludes.

[9] Eisenkopf (2014) investigates the impact of managers with communication power on competitive behavior of a group. Weber et al. (2001) and Antonakis et al. (2022) study the effect of leaders' speeches on a group's behavior. Weidmann et al. (2026) classify managers as those who need to communicate with their group members to delegate, monitor and motivate.

2 Experimental Design and Procedure

2.1 Design

As salary levels become more observable at the moment of application, it is important to understand the causal effect of salary levels on application behavior. The laboratory setting allows me to not only observe willingness to invest to attain a leadership position but also to randomly vary the salary level of a position holding every other job dimension fixed. The experiment is designed to speak to each of the three goals outlined above: i) the random variation in salary levels identifies the causal effect of pay on applications, ii) elicitation of a set of beliefs and preferences allows me to examine the mechanisms behind this effect; and iii) the random assignment of leadership experience enables a causal test of experience as a potential solution, free from the self-selection that would arise if participants chose whether to gain this experience themselves.

The structure of the experiment can be divided into three main stages. In the first stage, subjects are stratified by gender and assigned to the leader position or team member position. Each group hence consists of one team leader and two team members. In these groups of three, subjects play a standard public good game (PGG). The marginal per capita return is 0.5. Subjects are endowed with 3.50€. This yields the following payoff function:

$$x_i = 3.5 - c_i + 0.5 \cdot \sum_{k=1}^{3} c_k \tag{1}$$

with c_i being player i's contribution to the public good. Thus, subjects are confronted with a social dilemma situation: it is individually optimal to contribute nothing, i.e. to free-ride, because this will maximize the individual's payoff whereas it is socially optimal to contribute the entire endowment as this behavior maximizes the team's overall payoff. The PGG is adapted to the context of interest by adding a communication tool, i.e., a free-form chat that one player in the role of a leader can use to persuade others to contribute to the public good. The leaders can chat with *both* team members *simultaneously* in two *separate* chat rooms for three minutes before all subjects decide about their contribution levels. The team members can only chat with the team leader but not with the other team member of their group. This approach is similar to the experiment by Eisenkopf (2014) in which managers are also given communication power. The leader is thus the crucial player to achieve coordination and communication in the entire team. During the chat, team leaders have the possibility to persuade their team members to contribute their endowment. In this context, the leaders have an incentive to persuade the team members to contribute much to the public good independent of their own action. Subjects are not allowed to reveal their identity or gender when chatting. The chats close after three minutes and subjects make their contribution decision simultaneously. After the contribution decisions, subjects receive noisy information on the groups' overall contribution level adjusted by a randomly chosen integer between -2 and 2.[10]

In the second stage, I measure participants' willingness to pay for becoming a leader in Stage 3 of the experiment. Analogous to standard job search models (Cahuc et al., 2014) in which more effort increases

[10]These signals are capped to stay within an interval between 0€ and 10.50€. For 238 subjects (26%), the noise term had to be capped. 235 noise terms were capped at the maximum, three at the minimum contribution level.

the probability to get the job as well as to measure subjects' willingness to invest to attain a leadership position in an incentive-compatible way, applicants apply in the form of a second price sealed bid auction (Vickrey, 1961). To apply to the leader position in Stage 3, subjects are endowed with an extra budget of 3.50€ independent of the payoffs they have earned in Stage 1. Different to Stage 1, leaders in Stage 3 receive a salary. This salary is either low (0.35€, i.e., adds 10% to the endowment) or high (1.75€, i.e., adds 50% to the endowment).[11] I elicit subjects' bids for both positions on the same screen, i.e. within subject, which resembles actual job searches in which job seekers see multiple jobs with different salary levels. It is randomly determined which bid and position is relevant for the remainder of the experiment. Each subject competes against the two other subjects of their Stage-2 group. Groups are randomly re-mixed after the first stage but will stay the same in the subsequent Stage 3.

Stage 3 is almost equivalent to Stage 1 as it again consists of a PGG with chats and noisy feedback. However, team leaders are not randomly assigned to their roles but leader positions are filled according to the application outcome. That is, in each group, the participant with the highest bid in Stage 2 will be the leader of the group in Stage 3 and pays the second-highest bid submitted in the group.

In each stage, subjects receive the same endowment. It is randomly determined whether subjects' payment is based on Stages 1 and 2 or on Stages 2 and 3. At the beginning of the experiment, subjects' risk preferences are elicited using urn gambles. Furthermore, subjects are asked to state their relative persuasion ability compared to others, their confidence in leading a group, and their reasons for (not) applying (open text). In the end of the experiment, stereotypes connected to this role were elicited both in an incentivized and non-incentivized way and subjects express their willingness to claim or grant the lead (Giessner et al., 2022). To ensure understanding of the PGG and the auction format, subjects can only proceed to the PGG and submission of bids for application after having correctly answered multiple questions. Detailed instructions can be found in Appendix B.

Throughout the experiment, subjects do not know the gender of the other participants. Since the experiment was conducted online, participants were also unaware of the gender distribution in their session.[12]

2.2 Procedure

The experiment was preregistered at the AEA RCT registry (*AEARCTR-0011984*).[13] The software oTree (Chen et al., 2016) was used for programming the experiment. The experiment was run online via the Cologne Laboratory of Economic Research from September 2023 to February 2024. Subjects were invited using the recruitment system ORSEE (Greiner, 2015) and participated online. The number of participants in the final sample is 899 of which 300 subjects are assigned to the team leader position and 599 subjects are assigned to the team member position in Stage 1.[14] Sessions took on average 66 (median: 58) minutes and

[11] The salary cannot be used in the PGG.

[12] By not revealing the gender composition of the groups, the different effects on the willingness of men and women to lead are avoided (Born et al., 2022).

[13] The pre-registered main outcome as well as the preregistered gender effects are reported in Section 3. The preregistered treatment outcome (primary: assignment to experience; secondary: positive/negative experience) and its related preregistered main regression are reported and discussed in Section 5. Deviations from the preregistration are indicated as such.

[14] Following the preregistered exclusion criteria, two of the 901 participants who were in the final sample are excluded in the analysis because one of them has asked about the other participant's gender in their chat room in Stage 1.

the average participant earned 10.96€, including a show-up fee of 1€. The average participant is 28 years old. 51.5% of the subjects are female and 71% of the sample are students. Subjects were stratified by gender and randomly assigned to the leadership position to ensure a gender balance among team leaders in Stage 1. Table A1 in the Appendix shows that the Stage 1 team leaders and team members are balanced with respect to gender, age, and whether subjects are students or employees. There are some imbalances with respect to the field of study as well as the type of occupation. Further, the gender composition of the sessions varied so that the gender compositions of the groups in Stage 1 of the experiment differ. Subjects were not aware of the gender composition of their session or group.

3 Gender Application Gap

As a first step, in Stage 2 – the application phase – I measure men's and women's willingness to become a leader in Stage 3 of the experiment. As laid out in the above I elicited their willingness to pay for both a low and a high salary position.

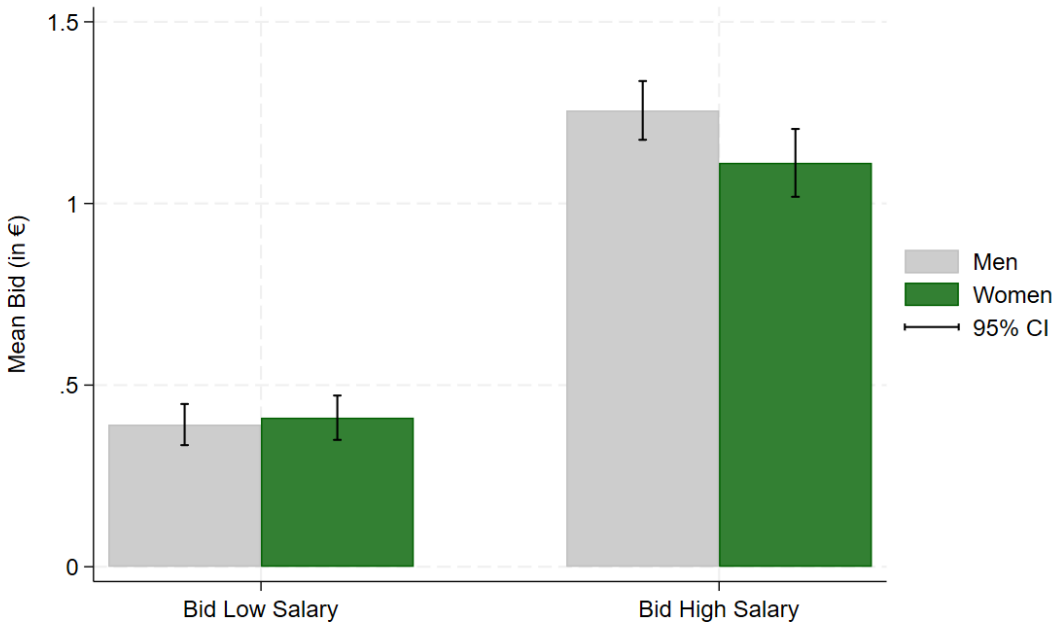

Figure 1: Mean Bids of Men and Women

Note: The bars represent the mean bids submitted for the low salary position (left panel) and the high salary position (right panel). Bids range between 0€ and 3.50€. Confidence bars represent the 95% confidence intervals.

Figure 1 depicts the unconditional mean bids of male and female subjects for the low (LHS) and high (RHS) salary position.[15] For the low salary position, women (0.41€) and men (0.39€) submit very similar bids. For the high salary position, women increase their bids on average by 0.70€ whereas men increase them by 0.87€. Thereby, women make 12% lower bids than men (1.11€ instead of 1.26€).[16] Both men

[15]Figure A1 in the Appendix shows the distribution of bids for the low and high salary position separately for men and women.

[16]The average bid for the low salary position (0.40€) exceeds the offered salary by 5 cents. The average bid (1.18€) for the high

and women are more willing to become a leader if it is linked to a high salary but men are more eager to take over this position than women.

To investigate this further, I run OLS regressions of the following form:

$$y_{iS} = \alpha + \beta\, Female_i + \gamma\, S + \delta\, Female_i \times S + \eta Leader_i + \theta X_i + \varepsilon \tag{2}$$

with *Female*$_i$ being a dummy indicating the gender of person *i*, S an indicator taking a value of 1 for the high salary position, and $Leader_i$ an indicator taking a value of 1 if the subject was assigned to the leader position in Stage 1. X_i is a vector of control variables. The dependent variable y_{iS} represents the submitted bids (ranging from 0 to the maximal bid of 3.5) of person i for salary level S. As preregistered, in each specification, standard errors are clustered at the Stage-1-group level to account for the correlation of the submitted bids within a cluster, i.e. a group in Stage 1.[17]

Table 1: Gender Application Gap

	(1) Bid	(2) Bid	(3) Bid
Female	0.0190	-0.00230	-0.00257
	(0.0438)	(0.0533)	(0.0528)
High Salary	0.865***	0.865***	0.865***
	(0.0357)	(0.0358)	(0.0358)
Female × High Salary	-0.163***	-0.163***	-0.163***
	(0.0514)	(0.0517)	(0.0517)
Constant	0.378***	0.596**	0.608**
	(0.0342)	(0.282)	(0.300)
Experience	x	x	x
Study & Occ.		x	x
Group Gender		x	x
Age			x
p-value: $\beta + \delta = 0$	0.0198	0.0160	0.0151
R-squared	0.193	0.204	0.204
Observations	1798	1798	1798
Subjects	899	899	899

Note: The table reports OLS regressions with the height of the submitted bids as outcome variables. Column (1) reports the pooled results controlling for having been the leader in Stage 1. Column (2) adds (seven) field of study dummies as well as (eight) occupation dummies, and controls for the gender composition of the groups. Column (3) adds age as a control variable. Clustered standard errors at the Stage-1-group level in parentheses. *p-value:* $\beta + \delta = 0$ shows the p-value for testing whether the sum of coefficients for *Female* and the interaction with *High Salary* is equal to zero. * for p < 0.10, ** for p < 0.05 and *** for p < 0.01.

salary position does not exceed the wage of 1.75€. One potential interpretation of the mean bid for the high salary position being much lower than the leader's salary might be that subjects perceive unobservable costs of being a leader with a high salary. This can be interpreted as a first suggestion that they only perceive the high salary position as a leadership position in which (costly) engagement (e.g. in form of taking on the responsibility of convincing the team members) is expected or required. The low salary position does not seem to be perceived as such as indicated by the average bid.

[17] Abadie et al. (2023) suggest that clustering at the individual level suffices because the randomization unit is the individual. Following their suggestion (see Appendix Table A2) does not change the significance of the results.

Column (1) in Table 1[18] shows the results for the main specification as defined in Equation (2) without any control variables.[19] Column (2) adds the control variables which were imbalanced (see Table A1) as well as the gender composition of the group and Column (3) includes the full set of control variables. All specifications show that there is no significant gender gap in bids for the low salary position. For the high salary position, both men and women increase their bids, but women do significantly less so than men, leading to a significant gender gap in bids for the high salary position. Hence, a mere change in salary level contributes to the emergence of a gender application gap for the highly paid position.

To summarize the main results, men are more eager than women to take over leadership positions that come with large salary increases while I do not find evidence for such a gender gap if the leader's salary is low. Hence, the mere change of the salary level associated with a position holding all other factors constant leads to the emergence of a gender application gap. In the following, I will investigate the underlying mechanisms which may explain why the salary increase causes a gender application gap for leadership positions.

4 Mechanisms

This section explores the potentially underlying reason for the change in the willingness to apply for a leadership position, following the preregistration of secondary outcomes. While the two leadership positions only differ in the level of the salary for the leader, the salary might change perceptions about the application competition or the position.[20] In particular, I test the following candidate channels: i) risk attitudes, confidence and the willingness to compete, ii) stereotypes as measured by beliefs about gender suitability and performance, and iii) subjects' general willingness to lead.

4.1 Risk Attitudes, Confidence, and the Willingness to Compete

Recent literature points out that – if correctly measured – the entire gender gap in entry for competition can be explained by risk attitudes and (over)confidence (Gillen et al., 2019; van Veldhuizen, 2022) rather than by gender differences in preferences for competition (e.g. Niederle and Vesterlund, 2007; Niederle et al., 2013; Saccardo et al., 2018). Therefore and following the preregistration, I measure and control for risk attitudes and confidence to study their role in the application competition.

In my setting, risk attitudes and prior confidence may differentially affect bidding behavior for the two leadership positions.[21] First, risk attitudes may affect application behavior differently across the two positions if subjects perceive one position or the auction outcome as more risky. For example, participants of

[18] 55.19% (51.46%) of female leaders (members) and 71.23% (63.79%) of male leaders (members) submitted a bid larger than zero for the low salary position. 75.97% (71.84%) of female leaders (members) and 86.99% (80.69%) of male leaders submitted a bid larger than zero for the high salary position. See Table A3 for results regarding this extensive margin.

[19] See Section 5 for a discussion of the effects of experience in Stage 1.

[20] Indeed, the word "salary" (*german: Vergütung*) is the word mentioned most often (by 18.70% (20.52%) of subjects who provide an answer) when subjects explain their decision to apply to the low- (high-) salary position in open-text fields.

[21] In a second-price auction, behavioral differences in risk perceptions by gender have been studied, see for example Lecocq et al. (2005); Onderstal (2020); Rutström (1998) for concrete objects. Chen et al. (2013) do not find gender differences in bidding behavior for abstract objects, and if the value of the auctioned object is unknown. The main results hold if I restrict the sample to those subjects who completed the 13 control questions on the auction in their first attempt (44.38%), see Appendix Table A4.

certain gender may expect others to over- or underbid, or may feel uncertain about the leadership quality of potential winners. Second, gender differences in self-confidence may translate into differences in application behavior, for example if the higher salary increases the perceived level of responsibility associated with the position. This section hence examines whether these factors help explain men's and women's application behavior.

Table 2: Risk and Confidence

	All		Men		Women	
	(1) Bid	(2) Bid	(3) Bid	(4) Bid	(5) Bid	(6) Bid
Female	-0.00230	-0.000894				
	(0.0529)	(0.0527)				
High Salary	0.865***	0.864***	0.869***	0.866***	0.706***	0.706***
	(0.0356)	(0.0358)	(0.0358)	(0.0361)	(0.0379)	(0.0375)
Female × High Salary	-0.163***	-0.161***				
	(0.0513)	(0.0519)				
Risk (Instr.)		0.0812*	0.0591	-0.0173	0.0867	0.104
		(0.0446)	(0.0642)	(0.0684)	(0.0665)	(0.0667)
Prior Confidence (Std.)		-0.00412	0.00419	0.00756	-0.00234	-0.0130
		(0.0181)	(0.0263)	(0.0247)	(0.0313)	(0.0270)
High Salary × Risk (Instr.)		-0.0521	-0.156*		0.0358	
		(0.0615)	(0.0804)		(0.0826)	
High Salary × Prior Confidence (Std.)		0.00754		-0.00322		0.0203
		(0.0273)		(0.0416)		(0.0360)
Constant	0.596**	0.597**	-0.00104	-0.0320	0.957***	0.965***
	(0.280)	(0.292)	(0.336)	(0.332)	(0.114)	(0.111)
Experience	x	x	x	x	x	x
Study & Occ.	x	x	x	x	x	x
Group Gender	x	x	x	x	x	x
Observations	1798	1798	872	872	926	926
Subjects	899	899	436	436	463	463

Note: The table reports IV regressions with the height of the submitted bids as outcome variables. Columns (1) and (2) report the pooled results. Columns (3) and (4) restrict the sample to men only, Columns (5) and (6) to women only. All specifications control for having been the leader in Stage 1, (seven) field of study dummies, (eight) occupation dummies, and the gender composition of the groups in Stage 1. The risk measures are instrumented by using the ORIV approach following Gillen et al. (2019). Clustered standard errors at the Stage-1-group level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

In order to measure risk attitudes, subjects go through two similar urn gambles in the beginning of the experiment.[22] These risk measures are standardized to ease comparability. To elicit prior confidence,

[22] I elicit certainty equivalents with two multiple price lists. Subjects could choose between a safe option and an urn game with 50% probability of winning. In one urn gamble, subjects could choose between a safe option ranging from 0€ to 1€ in increments of 10 cents and an urn gamble with 50% probability of winning 1€. In the other, the list covered safe options up to 1.50€ and subjects could win 1.50€ in the urn game. The order of lotteries was randomized. See Appendix B for details.

subjects answered four questions which in combination elicit how much subjects think they would be able to make a team member contribute more compared to a situation in which those were led by another team leader (ranging from -3.5 to 3.5).[23] Positive (negative) values represent individuals who believe they are able to convince others to contribute more (less) than with another leader. This self-confidence measure is standardized. Prior confidence was elicited before subjects have been assigned to their roles and is thus not affected by the treatment.[24]

To study whether risk attitudes and confidence are underlying mechanisms for the gender application gap, I include these measures as control variables in the regression and interact them with the indicator for the high salary position.[25] The two measures of risk attitudes allow me to employ the ORIV instrumentation technique developed by Gillen et al. (2019). This approach reduces the bias introduced by measurement error in the risk measures.[26]

Table 2 includes the confidence as well as the instrumented risk measures, following Gillen et al. (2019). When adding the two measures as control variables together with interacting them with the indicator for the high salary position (see Column (2)), the coefficient of confidence is insignificant, and the gender difference in application behavior for the high salary position does not change much compared to Column (1).[27] Therefore, risk attitudes or self-confidence in leadership skills are unlikely to be crucial drivers of the gender application gap for high salary positions.[28]

4.2 Stereotypes

Leadership positions, especially those with high salaries, are primarily occupied by men (McKinsey and LeanIn.Org, 2024) and might thereby be seen as male-typed domains by society (Dean et al., 2025; Eagly

[23] Subjects were asked to guess the average contribution of a groups' team member if 1) they themselves were the team leader and 1a) were able to chat or 1b) were not able to chat and 2) someone else was the team leader who 2a) was able to chat or 2b) was not able chat with the team members. See Appendix B for details.

[24] I did not elicit prior confidence twice before treatment assignment because there was no reasonable way of implementing a second measure without anticipating anchoring bias which is advised to avoid by Gillen et al. (2019).

[25] The average female participant in my study is 0.0.2 to 0.08 standard deviations more risk averse and 0.09 standard deviations more confident in their ability to persuade their team members compared to another participant in a leader position than the male but the mean difference is not significant at any conventional level (see Table A5 in the Appendix.)

[26] As I have two risk measures, I can instrument the first risk measure with the second and vice versa. Taking the average estimate from the two instrumentation approaches reduces the attenuation bias caused by measurement error (Gillen et al., 2019). As this approach requires to duplicate each individual, the sample size doubles. Gillen et al. (2019) suggest using clustered standard errors at the participant level to receive consistent estimates of the asymptotic standard errors, which does not change the significance levels of the coefficients, see Table A6 in the Appendix. To stay consistent with the main specification, I cluster standard errors at the Stage-1-group level.

[27] More risk loving individuals bid more. For men, the increase in bids from the low to the high salary position is attenuated for more risk loving men, see Column (3).

[28] While I follow the suggested approaches in Gillen et al. (2019) to reduce measurement error, the elicited risk and confidence measures might not capture the willingness to compete fully. The residual gender differences in the willingness to compete might therefore influence application behavior beyond the measured risk attitudes and self-confidence. Niederle and Vesterlund (2007) measure willingness to compete by selection of competitive compensation, i.e. entry in competition. While this is harder to measure, I find some evidence against this channel. Table A3 in the Appendix shows a gender gap in competition entry (bid > 0) for both positions. However, this gap is (insignificantly) *smaller* for the high salary position than for the low salary position. Together with the results on risk and overconfidence using the approaches of Gillen et al. (2019), this suggests that the observed gender application gap is not driven by a gender gap in the willingness to compete. If the gender application gap for the high salary position was driven by a gender gap in the willingness to compete, i.e. competition entry, the gender competition entry gap should be *larger* for the high salary position than for the low salary position.

and Karau, 2002; Eagly, 1987; Badura et al., 2018; Koenig et al., 2011; Powell et al., 2002). Therefore, it is possible that the increase in financial incentive is associated with a change in subjects' perceptions of the leadership role, which in turn could be linked to their application behavior. To study this, I elicit subjects' perceptions at the end of the experiment similar to the approach in Coffman et al. (2024a): participants indicate on sliders whether the positions appear more suitable for men (1) or women (-1).

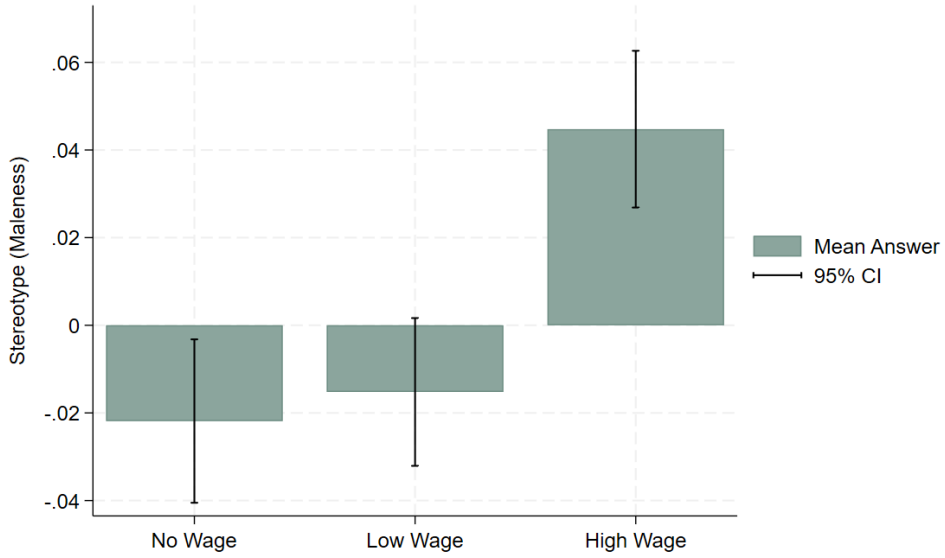

Figure 2: Stereotypical Thinking

Note: The bars represent the mean answers to the sliders asking about the suitability of men (1) and women (-1) for the different leader positions. Confidence bars represent the 95% confidence intervals.

As can be seen in Figure 2, participants on average state that the leadership position is more suitable for women if there is *no* (mean = -0.022, t-test against zero yields p=0.022) or a *low* (mean = -0.015, p=0.077) salary but more suitable for men if there is a *high* (mean = 0.045, p<0.01) salary. The stated suitability for the *no* as well as the *low* salary position differs from the *high* salary position at a 1% significance level, respectively.[29] It is noteworthy that these differences are small, ranging between $-/+0.05$. Also, a majority of 64% of participants perceive men and women as equally suitable for both the low and high salary position. Nevertheless, since salary was experimentally varied while the task itself was held constant, on average, the pattern is consistent with the salary increase causing a shift in perceived gender fit.

Are these changes in stereotypical perceptions an underlying mechanism contributing to the the gender application gap for the high salary position? To study this question, I investigate how the bidding behavior relates to the changes in perceived gender fit for the low and high salary position. I measure the perceived fit of the respective leadership position with an individual's own gender by taking the difference between the answer on the slider: for men, I subtract the answer referring to the low from the one referring to the high salary position ($\Delta Stereot. = SliderHighS. - SliderLowS.$) so that more positive values indicate a more

[29]Figure A2 in the Appendix shows that women's stereotypical beliefs align with their incentivized beliefs about performance while men's do not. Table A7 in the Appendix shows the average expressed performance beliefs (share of leaders who convince their team members to contribute the entire endowment) of women and men for each of the leader positions in Panels A and B, respectively, as well as the actual shares in Panel C.

stereotypical thinking, in which men are believed to be relatively more suitable for the high salary position as compared to women and the low salary position. For women, I take the difference between the slider answers concerning the low and high salary position ($\Delta Stereot. = SliderLowS. - SliderHighS$) so that more positive values indicate a counter-stereotypical thinking, in which women are believed to be relatively more suitable for the high salary position as compared to men and the low salary position.

Table 3: Relationship between Bid Difference and Stereotypes

	All		Men	Women
	(1)	(2)	(3)	(4)
	Bid	Bid	Bid	Bid
Female	-0.00230	-0.00846		
	(0.0533)	(0.0542)		
High Salary	0.865***	0.858***	0.859***	0.705***
	(0.0358)	(0.0366)	(0.0368)	(0.0388)
Female × High Salary	-0.163***	-0.153***		
	(0.0517)	(0.0524)		
Δ Stereot. (Std.)		-0.0496	-0.0365	-0.0611
		(0.0308)	(0.0389)	(0.0483)
High Salary × Δ Stereot. (Std.)		0.0387	0.0903*	-0.00870
		(0.0320)	(0.0537)	(0.0360)
Constant	0.596**	0.952***	1.162**	0.963***
	(0.282)	(0.129)	(0.508)	(0.121)
Experience	x	x	x	x
Study & Occ.	x	x	x	x
Group Gender	x	x	x	x
R-squared	0.204	0.204	0.270	0.168
Observations	1798	1738	834	904
Subjects	899	869	417	452

Note: The table reports OLS regressions with the height of the submitted bids as outcome variables. Columns (1) and (2) report the pooled results. Column (3) shows the analysis for men only, Column (4) for women. All specifications control for having been the leader in Stage 1, (seven) field of study dummies, (eight) occupation dummies, and the gender composition of the groups in Stage 1. Clustered standard errors at the Stage-1-group level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Regressing the bids on the difference in stereotypes (see Table 3, Column (2)) shows that the stereotypical perceptions are not significantly related to the bids. The gender application gap for the high salary position decreases but persists.[30] For men, see Table 3 Column (3), there is indeed a positive relationship between the standardized slider measure and the bids: those men who hold more stereotypical beliefs about the gender fit for a position are also those who are more willing to take over the high salary position. For women, I do not find a significant relationship between their belief about the gender fit (slider) and their bidding behavior (Column 4 in Table 3).[31]

[30]The sample size is reduced compared to the previous analyses because some subjects are included in the main sample whose group partners quit the experiment so that they were not able to proceed to these questions.

[31]Men and women do not differ significantly in the relationship between their bids and beliefs about gender fit, see Column (1)

To summarize, the low salary position is to a stronger extent perceived as stereotypical female and the high wage position as male stereotyped. This change is mostly driven by men's perceptions, whose stereotypical beliefs about gender fit for the positions do not align with their beliefs about performance (see Appendix Figure A2). Also, especially for men, the change in perceived gender fit is related to subjects' willingness to pay for the highly paid positions. This provides evidence that the gender application gap is partially associated with those men who hold very stereotypical beliefs about the suitability of men and women to perform leadership roles. This suggests that the shift in stereotypes which comes with high salary is associated with a higher motivation of men to pursue the leadership position rather than that it suppresses women's interest in becoming a leader.

4.3 General Willingness to Lead

Another potential mechanism to explain the gender application gap for high salary positions is men's and women's general preference to lead a team. To understand the role of this general preference to lead in explaining application behavior, this section examines how a general willingness to claim and grant the lead relates to the bidding behavior. I elicit subjects' preferences to claim or grant the lead at the end of the experiment with the scale of Giessner et al. (2022). A sample item for the willingness to claim the lead is "I am open to the position of leading someone" and grant the lead includes for example "I don't mind following someone's lead for what needs to get done".[32] The items are hence not specifically targeted to the position in the experiment but rather elicit a general preference for leading teams.

To investigate whether the willingness to lead is a relevant mechanism, i.e. changes the observed gender gap in applications, I control for the willingness to claim and grant the lead and interact them with the dummy for the high salary position. Table 4[33], Column (2) reveals that the gender application gap reduces substantially and turns insignificant when controlling for the willingness to claim and grant the lead. This suggests that the general willingness to claim and grant the lead explain the gender differences in application behavior.

The mechanism seems to work as follows: A one standard deviation stronger willingness to claim the lead is associated with higher bids for the low salary position of 0.12€. This relationship is significantly stronger for the high salary position. For the willingness to grant the lead, I observe the opposite pattern: while there is no significant relationship between the willingness to grant the lead and bids for the low salary position, a one standard deviation stronger willingness to grant the lead is negatively associated with bids for the high salary position.[34] These results are consistent with the willingness to claim and grant the lead

in Table A8 in the Appendix. This table also repeats the analysis including the Stage 1 and 3 leader information and an indicator for being in a low or high salary group in Stage 3. The results remain very similar.

[32]Female subjects report ceteris paribus a 0.28 standard deviations lower willingness to claim the lead than men while they do not differ significantly in their willingness to grant the lead (see Appendix Table A9). This gender difference in the preference to assume leadership positions has previously been shown by, for instance, Born et al. (2022) and Eckel et al. (2025).

[33]The sample size is reduced compared to the previous analyses because some subjects are included in the main sample whose group partners quit the experiment so that they were not able to proceed to these questions. Further, one session had technical issues so that the survey was not displayed to those 33 subjects.

[34]Appendix Table A10 provides and overview of the importance of all the tested mechanisms for the gender application gap. In this estimation, the general willingness to claim and grant the lead are among the tested mechanisms that significantly and most strongly relate to the bids.

Table 4: Bidding Behavior and the Willingness to Lead

	All		Men	Women
	(1) Bid	(2) Bid	(3) Bid	(4) Bid
Female	-0.00230	0.00746		
	(0.0533)	(0.0558)		
High Salary	0.865***	0.832***	0.836***	0.749***
	(0.0358)	(0.0372)	(0.0372)	(0.0412)
Female × High Salary	-0.163***	-0.0868		
	(0.0517)	(0.0550)		
Claim the Lead (Std.)		0.116***	0.0497	0.183***
		(0.0260)	(0.0357)	(0.0383)
High Salary × Claim the Lead (Std.)		0.155***	0.125***	0.184***
		(0.0247)	(0.0329)	(0.0357)
Grant the Lead (Std.)		-0.0258	-0.0344	-0.00734
		(0.0226)	(0.0267)	(0.0346)
High Salary × Grant the Lead (Std.)		-0.0582**	-0.0952***	-0.0212
		(0.0262)	(0.0305)	(0.0426)
Constant	0.596**	0.622***	1.100**	0.564***
	(0.282)	(0.131)	(0.523)	(0.121)
Experience	x	x	x	x
Study & Occ.	x	x	x	x
Group Gender	x	x	x	x
R-squared	0.204	0.267	0.302	0.267
Observations	1798	1672	814	858
Subjects	899	836	407	429

Note: The table reports OLS regressions with the height of the submitted bids as outcome variables. Columns (1) and (2) report the pooled results. Columns (3) and (4) show the analyses for men and women only. *Claim the Lead* and *Grant the Lead* are the mean index of answers to the survey on claiming the lead ($\alpha > 0.89$) and granting the lead ($\alpha > 0.82$). All specifications control for having been the leader in Stage 1, (seven) field of study dummies, (eight) occupation dummies, and the gender composition of the groups in Stage 1. Clustered standard errors at the Stage-1-group level in parentheses. * for p < 0.10, ** for p < 0.05 and *** for p < 0.01.

being salary-dependent such that they get activated (more strongly) for the high salary position.

To explain this pattern further, I explore the relationship between bids for the two positions and subject's general willingness to lead by gender.[35] To ease interpretation, I split the sample by gender, see Columns (3) and (4) of Table 4. Men's bids for the low salary position are not significantly related to their willingness to claim or grant the lead (Column (3)). For the high salary position, however, they are significantly related

[35]To do this, I include the triple interactions of *High Salary x Grant/Claim the Lead x Female* (see Appendix Table A11). The interaction coefficient regarding subjects willingness to claim the lead is positive with a p-value of $p = 0.216$. The estimation likely lacks power to precisely estimate this triple interaction. A minimum detectable effect calculation, based on the observed cluster-robust standard error (SE = .0475, G = 330 clusters, 80% power, 5% two-sided significance), indicates that an effect of at least 0.134 would be needed for reliable detection, roughly 2.3 times larger than the point estimate obtained (0.059).

to the bids, with the willingness to claim the lead increasing high-salary bids and the willingness to grant the lead reducing them. For women, there is already for the low salary position a positive relationship between the willingness to claim the lead and their bids. This relationship becomes significantly stronger for the high salary position, while their willingness to grant the lead is unrelated to bids at either salary level (Column (4)).

In summary, the gender application gap turns insignificant when controlling for subjects' general willingness to claim and grant the lead. This suggests that subjects' general willingness to lead is salary-dependent, gets activated in particular for the high salary position and thereby helps explain the gender application gap for high salary positions. This result is consistent with the possibility that especially for men only the high-salary position is perceived as a leadership position in which they execute their preference for leading a team.

5 Leadership Experience as a Solution?

The results show a gender application gap for the high salary position in which women are less willing to attain a leadership position than men. This gap is largely related to individuals' general willingness to claim the lead which is salary-dependent. A potential solution to mitigate the gender application gap might be experience in leading a team. Experience could be especially helpful for women as they tend to have lower self-confidence than men in professional settings (Exley and Kessler, 2022; Coffman et al., 2024b). Also, Haegele (2025) shows that experienced women do not differ in their application behavior for men in her setting, raising the question whether experience with leadership responsibility can causally increase the willingness to become a leader.

Table 5 shows the estimates of being a leader on application behavior as specified in the preregistration. Note that the *Leader Experience* dummy estimates the effect of having been assigned to the leader position in Stage 1. As this coefficient and the interaction with the *Female* dummy are insignificant and small there is neither evidence for the leadership experience to affect the bidding behavior and thus the willingness to become a leader on average nor evidence for gender differences in this effect. Exposing women and men to making the experience themselves hence did not causally reduce the gender application gap.

While the fact that a person has experienced being a leader does not close the gap on average, experience quality may matter more than experience per se. I next test whether this heterogeneity in experience relates to the observed bidding behavior. Leaders' experience is determined by their performance and resulting feedback. In particular, as leaders earn more when their teams are more successful, potential differences in leader performance might drive the gender gap in applications for the high salary position. In my setting, I define a leader's performance by their team members contributions.[36] Regardless of the leaders' own actions or their salary, higher contributions of the team members will also increase the leaders' own payoffs. I analyze leaders' submitted bids conditional on their performance, i.e. the sum of their two team members' contributions. While I acknowledge that this regression has no clean causal interpretation as team perfor-

[36] An alternative approach would be to study leaders' earnings. Table A12 in the Appendix shows that male and female leaders do not differ in their earnings received through the public good game. Also, participants do not know about their earnings until the end of the experiment. They only receive the noisy feedback about group contributions.

Table 5: Gender Application Gap

	All	High Salary	Low Salary
	(1)	(2)	(3)
	Bid	Bid	Bid
Female	-0.0172	-0.185**	-0.00322
	(0.0614)	(0.0858)	(0.0610)
High Salary	0.848***		
	(0.0453)		
Female × High	-0.153**		
Salary	(0.0649)		
Leader Experience	-0.00725	0.0468	-0.0101
	(0.0579)	(0.0878)	(0.0573)
Female ×	0.0440	0.0169	0.0421
Leader Experience	(0.0864)	(0.136)	(0.0856)
High Salary ×	0.0512		
Leader Experience	(0.0667)		
Female × High	-0.0291		
Salary × Leader Experience	(0.109)		
Constant	0.601**	1.471***	0.579*
	(0.282)	(0.284)	(0.306)
Experience	x	x	x
Study & Occ.	x	x	x
Group Gender	x	x	x
R-squared	0.204	0.0279	0.0151
Observations	1798	899	899
Subjects	899	899	899

Note: The table reports OLS regressions with the height of the submitted bids as outcome variables. Column (1) reports the pooled results, Column (2) shows the results for the bids to the high salary position only, Columns (3) for the bids to the low salary position only. All specifications control for having been the leader in Stage 1, (seven) field of study dummies as well as (eight) occupation dummies, and the gender composition of the groups in Stage 1. Clustered standard errors at the Stage-1-group level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

mance is endogenous, it is instructive whether the association between realized team performance in Stage 1 and bids for the leadership position in Stage 3 differ between men and women.[37]

Table 6 shows the regression results for the pooled specification of all Stage-1 leaders in Columns (1) and (2), for male and female leaders in Columns (3) and (4) and female leaders in Columns (5) and (6). An increase in the team members' contributions is not significantly associated with leaders' bids on average (see Column (2)) and does not change the gender application gap for the high salary position among these Stage-1-leaders much (see Column (1)). Splitting the sample into male and female leaders does not provide

[37]Due to an unexpectedly high number of groups who contributed the maximum amount of 10.50€ many noise terms had to be capped: For 238 subjects (26%), the noise term had to be capped. 235 noise terms were capped at the maximum, 3 at the minimum contribution level. In consequence, the feedback is not random anymore. The non-randomness of the noise term hinders its use as an instrumental variable and thereby also the preregistered causal interpretation.

Table 6: Gender Application Gap of Stage-1-Leaders conditional on Performance

	All Leaders		Male Leaders		Female Leaders	
	(1) Bid	(2) Bid	(3) Bid	(4) Bid	(5) Bid	(6) Bid
Female	0.0372	0.0394				
	(0.0718)	(0.0719)				
High Salary	0.899***	0.674***	0.899***	0.825***	0.716***	0.341
	(0.0528)	(0.161)	(0.0534)	(0.201)	(0.0710)	(0.227)
Female × High Salary	-0.183**	-0.177**				
	(0.0878)	(0.0882)				
Members' Contr.		0.0222		0.0119		0.0453
		(0.0181)		(0.0231)		(0.0295)
High Salary × Members' Contr.		0.0384		0.0126		0.0657
		(0.0252)		(0.0321)		(0.0400)
Constant	0.935***	0.736***	0.605***	0.516**	0.945***	0.569**
	(0.146)	(0.188)	(0.145)	(0.199)	(0.160)	(0.230)
Study & Occ.	x	x	x	x	x	x
Group Gender	x	x	x	x	x	x
R-squared	0.279	0.287	0.345	0.346	0.266	0.288
Observations	600	600	292	292	308	308
Subjects	300	300	146	146	154	154

Note: The table reports OLS regressions with the height of the submitted bids as outcome variables. The sample is restricted to Stage-1 leaders. Columns (1) and (2) report the pooled results, Columns (3) & (4) and (5) & (6) split the sample into men and women, respectively. All specifications control for (seven) field of study dummies as well as (eight) occupation dummies, and the gender of team members. Clustered standard errors at the Stage-1-group level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

evidence for the performance to differentially relate to bidding behavior for the two positions among male and female leaders.[38]

Experience alone hence does not seem to be enough to close the gender application gap in this setting, consistent with the gender application gap reflecting a comparatively stable general willingness to lead.

6 Leader Performance and Behavior

The results show that men are more than women willing to apply for highly paid leadership positions, and that this gap is mainly linked to men's and women's general willingness to lead. A remaining question is whether men and women perform differently as leaders, which might render the need to find a solution to close the gender application gap less relevant. This section addresses this question directly, using the random assignment of leaders in Stage 1 to compare men's and women's communication strategies and their teams'

[38] Note that female leaders increase their bids for the high salary position significantly, an effect which decreases in magnitude and becomes insignificant when it is controlled for the quality of experience as measured by their team member's contributions.

resulting performance without the confound of self-selection into the role.[39] In my setting, I define a leader's performance by their team members' contribution level (similar to e.g., Eisenkopf, 2020; Fischbacher et al., 2001; Fehr and Gächter, 2000; Gächter et al., 2012). Regardless of the leaders' own actions or their salary, higher contributions of the team members will also increase the leaders' own payoffs.

Table 7: Leadership Strategies

	(1) Announced TL Contribution	(2) TL Contribution	(3) #words
Female	-0.0146	0.222	-8.043***
	(0.0447)	(0.135)	(2.940)
Constant	3.475***	2.960***	48.06***
	(0.0763)	(0.224)	(4.771)
Study & Occ.	x	x	x
Group Gender	x	x	x
R-squared	0.0401	0.0416	0.0993
Observations	293	300	300
Subjects	293	300	300

Note: The table reports OLS regressions with the leader's actual contribution level as outcome variable in Column(1), the leader's announced contribution level in the chat rooms, if any, in Column (2), and a leader's total number of words sent in the chat rooms in Stage1 as outcome variable in Column (3). The sample is restricted to Stage-1 leaders. All specifications control for (seven) field of study dummies as well as (eight) occupation dummies, and the gender of team members. Clustered standard errors at the Stage-1-group level in parentheses. The leaders' announced contribution levels are taken from their two chat rooms and refers to the last amount they announce or agree on with their team member. If these two amounts differ (7 cases), the larger amount is considered. If the leader only does so in one of the two chat rooms (9 cases), this value is considered for that leader. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Leaders have two leadership strategies to improve their performance, i.e. increase their team members' contributions: i) (statements about) their own contribution and ii) their effort in communication and coordination. According to the chat protocols, 98% of leaders make use of the first strategy and share their planned contribution level with their team members. While these announcements are non-binding, they correlate significantly and strongly with the actual contributions, see Table A13 in the Appendix.[40] On average, leaders announce a contribution level of 3.40€ (median 3.50€, std.dev.= 0.37) and contribute on average 3.00€ (median 3.50€, std.dev.= 1.08) to the public good. Male and female leaders do not significantly differ in how much they promise to contribute, see Column (1), or in how much they actually contribute, see Column (2) of Table 7. I also find that leaders' contribution level does not differ significantly from their team members' (see Table A14 in the Appendix, Column (1)).

The second leadership strategy to increase performance is the exerted effort in communication. In each chat room in Stage 1 of the experiment, participants write on average five messages. The average participant writes 30 (median = 22, max = 156, std.dev.= 24) words in total.[41] Female leaders write eight words less

[39]This section is exploratory and was added in response to feedback. The preregistration specifies the chat protocols as a secondary outcome. As the chat messages of leaders are very similar, I decided to use the number of words as a proxy for communication effort and the discussed contribution levels. The team leaders' contribution levels have not been preregistered. The following analyses will focus on the Stage-1 leaders. All analyses on Stage 3 leaders can be found in the Appendix.

[40]Only 7 out of the 300 leaders (2%) do not share their own planned contribution level.

[41]In Stage 3, they also write on average five messages (both high and low salary). Participants in both low- and high-salary

than male leaders (see Table 7, Column (2)). In relative terms, male leaders write 16% more words than female leaders $((56-48)/48)$.[42] This difference is highly significant. In summary, male and female leaders differ in how many words they write but not significantly in the announced or actual contributions.[43]

Table 8: Leadership Strategies and Team Performance

	All Leaders		Male Leaders	Female Leaders
	(1) Members' Contr.	(2) Members' Contr.	(3) Members' Contr.	(4) Members' Contr.
Female	-0.119	-0.0610		
	(0.209)	(0.201)		
Announced TL Contribution		1.663***	1.453***	1.412***
		(0.203)	(0.355)	(0.305)
TL Contribution		0.0212	-0.145	0.439*
		(0.0956)	(0.0950)	(0.224)
#words		0.00709**	0.00413	0.00753
		(0.00348)	(0.00481)	(0.00541)
Constant	7.529***	1.579**	2.388*	1.000
	(0.369)	(0.786)	(1.299)	(0.829)
Study & Occ.	x	x	x	x
Group Gender	x	x	x	x
R-squared	0.0347	0.188	0.158	0.332
Observations	300	293	144	149
Subjects	300	293	144	149

Note: The table reports OLS regressions with the sum of the two team members' contributions as outcome variable. The sample is restricted to Stage-1 leaders. All specifications control for (seven) field of study dummies as well as (eight) occupation dummies and team members' gender. Clustered standard errors at the Stage-1-group level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Do the communication strategies of male and female leaders translate into gender differences in performance? To understand how beneficial the (different) leadership strategies of men and women in form of (their statements about) their own contribution and communication effort are for their final performance, I regress the sum of the two team members' contribution levels on the leaders' own contributions and the measure of communication effort. The results of this analysis, which is again restricted to the sample of Stage-1 leaders, can be found in Table 8.

Team members' contributions do not differ significantly by their team leader's gender, see Column (1)

groups write on average 30 (std.dev. =26 (low); st.dev. = 27 (high)) words in total, with no significant differences (messages: t-test, $p = 0.3137$; words: t-test, $p = 0.7112$).

[42]Table A14 in the Appendix shows that leaders write significantly more words than team members. To be precise, team leaders send on average almost three times as many words compared to their team members (raw means: leaders: 52.34 words, members: 18.40 words). The average team leader hence shows higher communication effort than an average team member, which also goes beyond the increased effort induced by the experimental design (having two chat rooms to deal with). This pattern is also observed for leaders in Stage 3, see Table A15 in the Appendix.

[43]This pattern also holds for leaders in Stage 3 who applied to become the leader, with the coefficient of the number of written words turning insignificant for low salary leaders. See Table A16 in the Appendix for these results.

in Table 8.[44] This gap remains insignificant when controlling for the leadership strategies. Men and women thus perform equally well as leaders, regardless of how they use the available leadership strategies. Turning to the leadership strategies more specifically: First, leaders use statements about their own contributions as a tool to convince their team members – a result similar to the leading-by-example literature in which leaders and followers contribute sequentially (see e.g., Fischbacher et al., 2001; Fehr and Gächter, 2000; Gächter et al., 2012). Notably, an increase in leaders' announced own contributions by 1€ is ceteris paribus related to an increase in their team members' contributions by 1.66€ (see Column (2) in Table 8). The strategy of discussing contributions seems to be especially beneficial for women (see Column (4) in Table 8): both the announced and actual contributions are positively and significantly related to the team members' contributions, likely driven by the stronger correlation of announced and actual contributions of women compared to men, see Table A13 in the Appendix. The second leadership strategy (communication effort) as measured by the number of sent words is only weakly related to team members' contributions.[45]

In summary, while female and male leaders differ in their communication strategies (#words), they do not differ in their performance in being a leader. Therefore, the gender application gap might impede filling the leadership positions with the best-performing leaders.

7 Conclusion

New pay transparency regulations require employers to disclose salary ranges in job advertisement (European Parliament and Council of the European Union, 2023), making the salary observable already at the moment of application. This study investigates how different salary levels affect the willingness to apply for leadership positions by gender. To answer this question, I run a laboratory experiment which allows me to examine mechanisms underlying the salary-induced gender application gap, and to study a potential solution – gaining leadership experience by being assigned to a leadership position.

The findings reveal that a gender application gap for leadership positions only emerges for positions that come with large salary increases. Women are less willing to apply compared to men for a highly paid leadership position although the leadership responsibility, task complexity, and other task dimensions remain the same. I furthermore find that the mere shift in salaries comes with a change of perceptions of leadership roles from stereotypical female to more male stereotyped. Especially men perceive the high salary position as stereotypical male and their bidding behavior is correlated with their stereotypical perceptions about leadership. This asymmetry suggests that the salary-related stereotype changes increase men's willingness to become a leader rather than they decrease women's leadership aspirations. Stereotypical beliefs alone do not explain the gender application gap.

Instead, individual's general willingness to lead (as measured by the *Claim the Lead* scale from Giess-

[44] See Figure A3 in the Appendix for an overview about distributions of the team members' contributions in a group led by a man or a woman in all three Stages. Kolmogorov–Smirnov tests could not reject equality of distributions between team members' contributions in male or female lead groups in Stage 1 ($p = 0.831$) or Stage 3 for the high salary position ($p = 0.811$) or the low-salary position ($p = 0.979$).

[45] For Stage 3 leaders, I observe a similar pattern with both the announced and actual contributions being positively related to team members' contributions and communication effort not being significantly related to group contributions. See Tables A17 and A18 in the Appendix.

ner et al. (2022)) turns the the gap smaller and insignificant. Men do not only exhibit a stronger general willingness to claim the lead but this general willingness to lead is also salary-dependent.

Do these findings imply that women should be paid less to bring them into leadership positions? Reducing pay for women would not only increase gender pay differences, but my results also suggest that such a policy is misguided: the gap reflects a persistent gender difference in the preference to claim leadership roles, which the high-salary framing appears to activate. Addressing this likely requires interventions that target how leadership roles are framed so that they activate both gender's leadership preferences, and potentially interventions that target men's and women's general willingness to lead, rather than pay itself. In addition, given the observed change in stereotypes, the results highlight the need for interventions that explicitly address and challenge the societal norm that equates leadership with masculinity, particularly for positions that are perceived as high-status or high-reward.

I, however, also find that the intuitively appealing policy suggestion of exposing men and women to the leadership positions does not seem to work on average in my setting. This result is consistent with the observation that the gap is mainly driven by preferences to lead under different salary schemes rather than by perceptions or beliefs which might be easier to shift.

Potential interventions discussed in the literature include for instance the work of Delfino (2024) who has recently shown that providing information about past performances of other employees might be a helpful tool to attract men in a female-dominated sector. It remains to be tested whether providing performance signals about women in highly paid leadership positions encourages women to apply. My study suggests that it might be promising as women seem to rationalize their stereotypical perceptions of leadership with an expected worse performance compared to men, as I show in Section 4.2 and Appendix Figure A2. At the same time, my study suggests that these performance signals might not be helpful to nudge men to adapt their stereotypical beliefs about leadership as they express these stereotypical views unrelated to their performance expectations.

From a practical standpoint, this study underscores the importance of rethinking how leadership roles are communicated. Emphasizing the collaborative and communicative aspects of leadership, rather than its stereotypically male-typed characteristics, could potentially help reduce the gender gap in leadership aspirations as those are not the aspects deterring women from pursuing the leadership positions. The work of Fuchs et al. (2026) and Opitz (2026), for instance, shows that highlighting aspects of work which are appreciated in particular by women (such as working from home options or job flexibility) can increase their application rates. Stressing the communication aspect may also be used to reduce ambiguity about the job which has been shown to motivate women to apply in male-dominated fields (Coffman et al., 2024b). Another approach which has been discussed in the literature is to directly encourage women to enter male-dominated fields (Del Carpio and Guadalupe, 2022). It remains an empirical question whether these approaches also help to overcome stereotypes about leadership.

Future research should build on these findings to explore more effective interventions that target how leadership roles are framed so that they activate the leadership preferences of both genders and potentially also help converge men's and women's general willingness to lead under different salary levels. The results of this study highlight that such efforts are critical for achieving gender balance in leadership positions.

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A Appendix - Figures and Tables

Table A1: Balance Table

Variable	(1) Pooled Sample	(2) Team Members	(3) Team Leaders	(4) Difference (3)-(2)
Female	0.515	0.516	0.513	-0.003
	(0.500)	(0.500)	(0.501)	(0.036)
Age	27.899	28.053	27.590	-0.463
	(7.343)	(7.458)	(7.109)	(0.504)
Student	0.711	0.708	0.717	0.009
	(0.454)	(0.455)	(0.451)	(0.031)
Employee	0.166	0.167	0.163	-0.004
	(0.372)	(0.373)	(0.370)	(0.024)
Civil Servant	0.073	0.068	0.083	0.015
	(0.261)	(0.253)	(0.277)	(0.018)
Trainee	0.007	0.007	0.007	-0.000
	(0.081)	(0.082)	(0.082)	(0.006)
Self-Employed	0.019	0.018	0.020	0.002
	(0.136)	(0.134)	(0.140)	(0.010)
Unemployed	0.019	0.027	0.003	-0.023***
	(0.136)	(0.161)	(0.058)	(0.007)
Retired	0.003	0.003	0.003	-0.000
	(0.058)	(0.058)	(0.058)	(0.004)
No Answer	0.002	0.002	0.003	0.002
(Occupation)	(0.047)	(0.041)	(0.058)	(0.004)
Human Sciences	0.085	0.072	0.110	0.038*
	(0.278)	(0.258)	(0.313)	(0.021)
Mathematics &	0.085	0.097	0.060	-0.037*
Natural Sciences	(0.278)	(0.296)	(0.238)	(0.019)
Medicine	0.039	0.047	0.023	-0.023*
	(0.194)	(0.211)	(0.151)	(0.012)
Arts and Humanities	0.069	0.070	0.067	-0.003
	(0.254)	(0.256)	(0.250)	(0.017)
Law	0.055	0.065	0.033	-0.032**
	(0.227)	(0.247)	(0.180)	(0.015)
Management, Economics	0.306	0.285	0.347	0.061*
& Social Sciences	(0.461)	(0.452)	(0.477)	(0.033)
Other Faculty	0.096	0.100	0.087	-0.014
	(0.294)	(0.300)	(0.282)	(0.021)
Observations	899	599	300	899

Note: Values in parentheses indicate standard deviations (Columns (1)-(3)) and standard errors (Column (4)). Standard errors are clustered at the Stage-1-group level. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Figure A1: Distribution of Bids

Table A2: Gender Application Gap (Individual Clustered Standard Errors)

	(1) Bid	(2) Bid	(3) Bid
Female	0.0190	-0.00230	-0.00257
	(0.0425)	(0.0523)	(0.0519)
High Salary	0.865***	0.865***	0.865***
	(0.0339)	(0.0340)	(0.0340)
Female × High Salary	-0.163***	-0.163***	-0.163***
	(0.0508)	(0.0510)	(0.0510)
Constant	0.378***	0.596**	0.608**
	(0.0342)	(0.281)	(0.300)
Experience	x	x	x
Study & Occ.		x	x
Group Gender		x	x
Age			x
R-squared	0.193	0.204	0.204
Observations	1798	1798	1798
Subjects	899	899	899

Note: The table reports OLS regressions with the height of the submitted bids as outcome variables. Column (1) reports the pooled results controlling for having been the leader in Stage 1. Column (2) adds (seven) field of study dummies as well as (eight) occupation dummies, and controls for the gender composition of the groups. Column (3) adds age as a control variable. Clustered standard errors at the participant level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A3: Gender Gaps at the Extensive Margin

	(1) Apply	(2) Apply	(3) Apply
Female	-0.136***	-0.133***	-0.135***
	(0.0321)	(0.0366)	(0.0365)
High Salary	0.165***	0.165***	0.165***
	(0.0182)	(0.0183)	(0.0183)
Female × High Salary	0.0400	0.0400	0.0400
	(0.0266)	(0.0267)	(0.0268)
Leader Experience	0.0536*	0.0514*	0.0505*
	(0.0275)	(0.0280)	(0.0281)
Constant	0.645***	0.739***	0.820***
	(0.0255)	(0.167)	(0.181)
Experience	x	x	x
Study & Occ.		x	x
Group Gender		x	x
Age			x
R-squared	0.0590	0.0736	0.0747
Observations	1798	1798	1798
Subjects	899	899	899

Note: The table reports OLS regressions with a dummy for non-zero bids as outcome variables. Column (1) reports the pooled results, Columns (2) and (3) split the sample into bids for the high and low salary positions, respectively. All specifications control for having been the leader in Stage 1, (seven) field of study dummies, (eight) occupation dummies, and the gender composition of the groups in Stage 1. Clustered standard errors at the Stage-1-group level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A4: Gender Application Gap (0 False Answers Auction)

	(1) Bid	(2) Bid	(3) Bid
Female	-0.0261	0.00687	0.00592
	(0.0514)	(0.0698)	(0.0696)
High Salary	0.975***	0.975***	0.975***
	(0.0438)	(0.0443)	(0.0443)
Female × High Salary	-0.286***	-0.286***	-0.286***
	(0.0656)	(0.0663)	(0.0663)
Constant	0.328***	0.805***	0.882***
	(0.0390)	(0.173)	(0.210)
Experience	x	x	x
Study & Occ.		x	x
Group Gender		x	x
Age			x
R-squared	0.291	0.300	0.301
Observations	798	798	798
Subjects	399	399	399

Note: The sample is restricted to those who have answered all question on the auction in the first attempt correctly. The table reports OLS regressions with the height of the submitted bids as outcome variables. Column (1) reports the pooled results controlling for having been the leader in Stage 1. Column (2) adds (seven) field of study dummies as well as (eight) occupation dummies, and controls for the gender composition of the groups. Column (3) adds age as a control variable. Clustered standard errors at the Stage-1-group level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A5: Gender Differences in Risk and Confidence

	(1) Risk1 (Std.)	(2) Risk2 (Std.)	(3) Prior Confidence (Std.)
Female	-0.0210	-0.0802	-0.0939
	(0.0671)	(0.0657)	(0.0715)
Constant	-0.145	0.541***	-0.0496
	(0.366)	(0.121)	(0.134)
Study & Occ.	x	x	x
R-squared	0.0103	0.0281	0.0114
Observations	899	899	899
Subjects	899	899	899

Note: The table reports OLS regressions with the two standardized risk measures in Columns (1) and (2) and the standardized measure of prior confidence in Column (3). All specifications control for (seven) field of study dummies as well as (eight) occupation dummies. Robust standard errors in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A6: Risk and Confidence (Ind. Clustered Standard Errors)

	All		Men		Women	
	(1) Bid	(2) Bid	(3) Bid	(4) Bid	(5) Bid	(6) Bid
Female	-0.00230	-0.000894				
	(0.0520)	(0.0518)				
High Salary	0.865***	0.864***	0.869***	0.866***	0.706***	0.706***
	(0.0338)	(0.0339)	(0.0339)	(0.0341)	(0.0381)	(0.0378)
Female × High Salary	-0.163***	-0.161***				
	(0.0507)	(0.0511)				
Risk (Instr.)		0.0812*	0.0591	-0.0173	0.0867	0.104
		(0.0464)	(0.0645)	(0.0661)	(0.0679)	(0.0700)
Prior Confidence (Std.)		-0.00412	0.00419	0.00756	-0.00234	-0.0130
		(0.0184)	(0.0276)	(0.0248)	(0.0323)	(0.0274)
High Salary × Risk (Instr.)		-0.0521	-0.156*		0.0358	
		(0.0582)	(0.0799)		(0.0800)	
High Salary × Prior Confidence (Std.)		0.00754		-0.00322		0.0203
		(0.0276)		(0.0418)		(0.0357)
Constant	0.596**	0.597**	-0.00104	-0.0320	0.957***	0.965***
	(0.279)	(0.290)	(0.344)	(0.340)	(0.112)	(0.110)
Experience	x	x	x	x	x	x
Study & Occ.	x	x	x	x	x	x
Group Gender	x	x	x	x	x	x
Observations	1798	1798	872	872	926	926
Subjects	899	899	436	436	463	463

Note: The table reports IV regressions with the height of the submitted bids as outcome variables. Columns (1) and (2) report the pooled results. Columns (3) and (4) restrict the sample to men only, Columns (5) and (6) to women only. All specifications control for having been the leader in Stage 1, (seven) field of study dummies, (eight) occupation dummies, and the gender composition of the groups in Stage 1. The risk measures are instrumented by using the ORIV approach following Gillen et al. (2019). Clustered standard errors at the participant level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

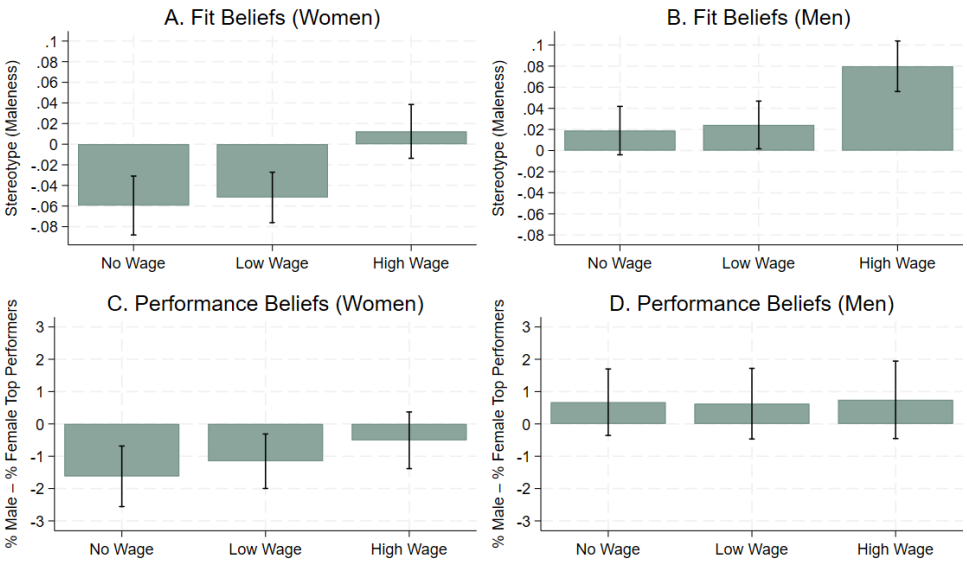

Figure A2: Beliefs about Gender Fit and Performance

Note: The bars in panels A & B represent the mean answers to the sliders asking about the suitability of men (1) and women (-1) for the different leader positions. Confidence bars represent the 95% confidence intervals. Women perceive the no wage (mean $= -0.059$, $p < 0.01$) and the low wage (mean $= -0.052$, $p < 0.01$) condition as clearly female-typed while the high salary position is only insignificantly associated with men (mean $= 0.012$, $p = 0.351$). Men's answers differ significantly from women's (see Table A19 in the Appendix) in that they state that all positions are more suitable for them: They perceive the no wage condition (mean $= 0.019$, $p = 0.107$) as only insignificantly more suitable for their own gender. The low wage condition (mean $= 0.024$, p $= 0.035$) is perceived as male-typed to a similar degree. Especially the high wage condition (mean $= 0.080$, $p < 0.01$) is clearly perceived as male-typed. The bars in panels C & D represent the mean difference in beliefs about top performers. Example Stage 1: "What percentage of the male team leaders in Stage 1, in which the team leaders did not receive any remuneration, managed to convince the team members to contribute their entire endowment, i.e. €3.50 per team member?". Positive values indicate the belief that male leaders performed better than women in the respective position and vice versa. Subjects received an additional payment of 0,10€ per answer if the answer did not deviate more than 3 percentage points from the true share. Confidence bars represent the 95% confidence intervals.

Table A7: Beliefs about Top Performers

Panel A: Women's Beliefs about Top Performers			
	(1)	(2)	t-test
	% of female leaders	% of male leaders	$\Delta((2)-(1))=0$
Stage 1	71.92%	70.30%	$p<0.01$
Low Salary	70.99%	69.84%	$p<0.01$
High Salary	71.70%	71.19%	$p=0.2568$

Panel B: Men's Beliefs about Top Performers			
	(1)	(2)	t-test
	% of female leaders	% of male leaders	$\Delta((2)-(1))=0$
Stage 1	63.92%	64.59%	$p=0.2002$
Low Salary	63.26%	63.88%	$p=0.2608$
High Salary	64.81%	65.55%	$p=0.2220$

Panel C: Actual Shares			
	(1)	(2)	t-test
	% of female leaders	% of male leaders	$\Delta((2)-(1))=0$
Stage 1	56.49%	63.70%	$p=0.2042$
Low Salary	51.81%	50%	$p=0.8178$
High Salary	59.38%	58.33%	$p=0.9072$

Note: The table reports average beliefs about the gender share of top performers in Stage 1 and Stage 3. Top performers are defined as leaders whose team members contribute the maximum amount of 3.50€ each. Panel A shows the beliefs of female participants, panel B the beliefs of male participants. Panel C shows the share of female and male leaders across all sessions who achieved maximum contributions of their team members. Column (3) reports p-values of a paired t-test.

Figure A3: Team Members' Contributions (All Stages)

Table A8: Relationship Bid Differences and Stereotypes

	All			Men	Women
	(1) Bid	(2) Bid	(3) Bid	(4) Bid	(5) Bid
Female	-0.00912	-0.0592	-0.0623		
	(0.0540)	(0.0530)	(0.0539)		
High Salary	0.859***	0.865***	0.858***	0.859***	0.705***
	(0.0366)	(0.0341)	(0.0348)	(0.0348)	(0.0384)
Female × High Salary	-0.155***	-0.163***	-0.153***		
	(0.0524)	(0.0511)	(0.0518)		
Δ Stereot. (Std.)	-0.0356		-0.0305	-0.0289	-0.0186
	(0.0384)		(0.0295)	(0.0395)	(0.0432)
Female × Δ Stereot. (Std.)	-0.0271				
	(0.0610)				
High Salary × Δ Stereot. (Std.)	0.0903*		0.0387	0.0903*	-0.00870
	(0.0534)		(0.0314)	(0.0539)	(0.0350)
Female × High Salary × Δ Stereot. (Std.)	-0.0990				
	(0.0637)				
Constant	0.966***	0.372***	0.365**	0.403	0.132
	(0.130)	(0.137)	(0.149)	(0.512)	(0.137)
Experience	x	x	x	x	x
Leader Stage 3		x	x	x	x
Study & Occ.	x	x	x	x	x
Group Gender (Stage 1)	x	x	x	x	x
Group Gender (Stage 3)		x	x	x	x
Leader Salary (Stage 3)		x	x	x	x
R-squared	0.207	0.370	0.375	0.391	0.386
Observations	1738	1798	1738	834	904
Subjects	869	899	869	417	452

Note: The table reports OLS regressions with the height of the submitted bids as outcome variables. Columns (1) – (3) report the pooled results. Column (4) shows the analysis for men only, Column (5) for women. All specifications control for having been the leader in Stages 1 (*Experience*) and 3 (*Leader Stage 3*), (seven) field of study dummies, (eight) occupation dummies, and the gender composition of the groups in Stages 1 and 3. Clustered standard errors at the participant level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A9: Willingness to Claim & Grant the Lead

	(1) Claim the Lead (Std.)	(2) Grant the Lead (Std.)
Female	-0.280***	0.0492
	(0.0693)	(0.0704)
Constant	1.763***	-1.212***
	(0.0693)	(0.0704)
Study & Occ.	x	x
R-squared	0.0445	0.0184
Observations	836	836
Subjects	836	836

Note: The table reports OLS regressions with the standardized mean index of answers to the survey on claiming the lead ($\alpha > 0.89$) in Column (1) and granting the lead ($\alpha > 0.82$) in Column (2). Clustered standard errors at the participant level in parentheses. All specifications control for (seven) field of study dummies as well as (eight) occupation dummies. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A10: Combination of Mechanisms

	All		Men	Women
	(1) Bid	(2) Bid	(3) Bid	(4) Bid
Female	-0.00230	0.00756		
	(0.0529)	(0.0547)		
High Salary	0.865***	0.830***	0.840***	0.754***
	(0.0356)	(0.0371)	(0.0370)	(0.0401)
Female × High Salary	-0.163***	-0.0843		
	(0.0513)	(0.0548)		
Risk (Instr.)		0.0880*	0.0665	0.0934
		(0.0477)	(0.0708)	(0.0688)
Prior Confidence (Std.)		-0.00473	-0.000328	-0.00161
		(0.0194)	(0.0255)	(0.0276)
High Salary × Risk (Instr.)		-0.0682	-0.145*	-0.0148
		(0.0641)	(0.0873)	(0.0865)
High Salary × Prior Confidence (Std.)		0.00693	-0.0239	0.0403
		(0.0262)	(0.0399)	(0.0345)
Δ Stereot. (Std.)		-0.0503	-0.0429	-0.0622
		(0.0314)	(0.0392)	(0.0496)
High Salary × Δ Stereot. (Std.)		0.0478	0.0898*	0.00947
		(0.0315)	(0.0536)	(0.0339)
Claim the Lead (Std.)		0.114***	0.0528	0.177***
		(0.0260)	(0.0364)	(0.0393)
High Salary × Claim the Lead (Std.)		0.156***	0.122***	0.190***
		(0.0246)	(0.0339)	(0.0361)
Grant the Lead (Std.)		-0.0253	-0.0412	0.000328
		(0.0218)	(0.0260)	(0.0340)
High Salary × Grant the Lead (Std.)		-0.0598**	-0.0838***	-0.0326
		(0.0259)	(0.0318)	(0.0421)
Constant	0.596**	0.653***	0.903*	0.608***
	(0.280)	(0.131)	(0.487)	(0.124)
Experience	x	x	x	x
Study & Occ.	x	x	x	x
Group Gender	x	x	x	x
Observations	1798	1672	814	858
Subjects	899	836	407	429

Note: The table reports IV regressions with the height of the submitted bids as outcome variables. Columns (1) and (2) report the pooled results. Columns (3) and (4) restrict the sample to men and women only. All specifications control for having been the leader in Stage 1, (seven) field of study dummies, (eight) occupation dummies, and the gender composition of the groups in Stage 1. The risk measures are instrumented by using the ORIV approach following Gillen et al. (2019). Clustered standard errors at the Stage-1-group level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A11: Bidding Behavior and the Willingness to Lead

	(1) Bid
Female	0.00834
	(0.0554)
High Salary	0.836***
	(0.0370)
Female × High Salary	-0.0870
	(0.0548)
Claim the Lead (Std.)	0.0527
	(0.0352)
Female × Claim the Lead (Std.)	0.119**
	(0.0511)
High Salary × Claim the Lead (Std.)	0.125***
	(0.0327)
Female × High Salary × Claim the Lead (Std.)	0.0589
	(0.0475)
Grant the Lead (Std.)	-0.0360
	(0.0266)
Female × Grant the Lead (Std.)	0.0237
	(0.0424)
High Salary × Grant the Lead (Std.)	-0.0952***
	(0.0304)
Female × High Salary × Grant the Lead (Std.)	0.0740
	(0.0523)
Constant	0.553***
	(0.133)
Experience	x
Study & Occ.	x
Group Gender	x
R-squared	0.274
Observations	1672
Subjects	836

Note: The table reports OLS regressions with the height of the submitted bids as outcome variables. All columns report the pooled results. *Claim the Lead* and *Grant the Lead* are the mean index of answers to the survey on claiming the lead ($\alpha > 0.89$) and granting the lead ($\alpha > 0.82$). All specifications control for having been the leader in Stage 1, (seven) field of study dummies, (eight) occupation dummies, and the gender composition of the groups in Stage 1. Clustered standard errors at the Stage-1-group level in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A12: Leaders' Payoffs

	Stage 1	High Salary	Low Salary
	(1)	(2)	(3)
	Payoff Stage 1	Payoff Stage 3	Payoff Stage 3
Female	-0.170	-0.182	-0.219
	(0.114)	(0.159)	(0.190)
Constant	5.784***	3.500***	5.972***
	(0.193)	(0.255)	(0.348)
Study & Occ.	x	x	x
Group Gender (Stage 1)	x		
Group Gender (Stage 3)		x	x
R-squared	0.0565	0.143	0.0869
Observations	300	124	165
Subjects	300	124	165

Note: The table reports OLS regressions with the team leaders' payoffs (without salary) as outcome variables. Column (1) refers to Stage 1 leaders, Column (2) to leaders in the high salary position and Column (3) to leaders in the low salary position. All regressions control for (seven) field of study dummies, (eight) occupation dummies and the gender of the team members. Robust standard errors in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A13: Correlation Announced vs Actual Contributions of Leaders

	All Leaders			Male Leaders	Female Leaders
	(1)	(2)	(3)	(4)	(5)
	TL Contr.	TL Contr.	TL Contr.	TL Contr.	TL Contr.
Announced TL	0.795***	0.802***	0.621***	0.653***	0.959***
Contribution	(0.0802)	(0.0829)	(0.105)	(0.134)	(0.0991)
Female		0.279**	-0.746*		
		(0.124)	(0.418)		
Female ×			0.302**		
Announced TL Contribution			(0.137)		
Constant	0.594*	0.266	0.867***	0.901*	-0.186
	(0.306)	(0.310)	(0.326)	(0.479)	(0.342)
Study & Occ.	x	x	x	x	x
Group Gender	x	x	x	x	x
R-squared	0.111	0.128	0.131	0.122	0.242
Observations	293	293	293	144	149
Subjects	293	293	293	144	149

Note: The table reports OLS regressions with the leader's contribution level as outcome variable. The sample is restricted to Stage-1 leaders. All specifications control for (seven) field of study dummies as well as (eight) occupation dummies, and the gender of team members. Clustered standard errors at the Stage-1-group level in parentheses. The leaders' announced contribution levels are taken from their two chat rooms and refers to the last amount they announce or agree on with their team member. If these two amounts differ (7 cases), the larger amount is considered. If the leader only does so in one of the two chat rooms (9 cases), this value is considered for that leader. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A14: Leadership Strategies

	(1) Contribution	(2) #words
Female	0.352***	-2.898**
	(0.111)	(1.401)
Leader Experience	0.206	37.03***
	(0.130)	(2.267)
Female × Leader Experience	-0.131	-4.862
	(0.157)	(3.106)
Constant	3.145***	4.552
	(0.242)	(5.250)
Study & Occ.	x	x
Group Gender	x	x
R-squared	0.0418	0.463
Observations	899	890
Subjects	899	890

Note: The table reports OLS regressions with the individual's contribution level as outcome variable in Column (1) and an individual's total number of words sent in the chat rooms in Stage 1 as outcome variable in Column (2). All specifications control for (seven) field of study dummies, (eight) occupation dummies, and the gender composition of the groups. Clustered standard errors at the Stage-1 group level in Column (1) and chat room level Column (2) in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A15: Leadership Strategies Stage 3

	High Salary		Low Salary	
	(1) Contribution	(2) #words	(3) Contribution	(4) #words
Female	0.227	-3.682*	0.279*	1.750
	(0.169)	(2.188)	(0.154)	(1.870)
Stage 3 Leader	-0.0591	39.77***	0.231	36.63***
	(0.185)	(4.976)	(0.187)	(3.070)
Female ×	0.107	-5.746	-0.0504	-4.002
Stage 3 Leader	(0.230)	(5.892)	(0.232)	(4.767)
Constant	3.529***	-8.505	3.158***	-3.182
	(0.277)	(11.77)	(0.261)	(5.082)
Study & Occ.	x	x	x	x
Group Gender (Stage 3)	x	x	x	x
R-squared	0.0472	0.420	0.0913	0.425
Observations	378	375	495	492
Subjects	378	375	495	492

Note: The table reports OLS regressions with the individual's contribution level as outcome variable in Columns (1) and (3), an individual's total number of words sent in the chat rooms as outcome variable in Column (2) and Column (4). All specifications control for (seven) field of study dummies, (eight) occupation dummies, and the gender composition of the groups in Stage 3. Clustered standard errors at the Stage-3 group level (Columns (1) and (3)) / chat room level (Columns (2) and (4)) in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A16: Leadership Strategies Stage 3 (Only TL)

	High Salary			Low Salary		
	(1)	(2)	(3)	(4)	(5)	(6)
	Ann. TL Contr.	TL Contr.	#words	Ann. TL Contr.	TL Contr.	#words
Female	-0.0943	0.318	-9.968*	0.00682	0.339	-1.884
	(0.0875)	(0.203)	(5.792)	(0.0606)	(0.207)	(4.781)
Constant	3.495***	3.986***	31.70***	3.574***	3.098***	31.63***
	(0.0919)	(0.193)	(11.97)	(0.0856)	(0.349)	(8.017)
Study & Occ.	x	x	x	x	x	x
Group Gender (Stage 3)	x	x	x	x	x	x
R-squared	0.119	0.172	0.135	0.0681	0.107	0.0827
Observations	124	124	124	163	165	164
Subjects	124	124	124	163	165	164

Note: The sample is restricted to Stage 3 leaders, with Columns (1) to (3) showing leaders with high salary and Columns (4) to (6) showing leaders with low salary. The table reports OLS regressions with the leader's announced contribution levels in Columns (1) and (4), their actual contribution level as outcome variable in Columns (2) and (5) and a leader's total number of words sent in the chat rooms in Stage 3 as outcome variable in Columns (3) and (6). All specifications control for (seven) field of study dummies, (eight) occupation dummies, and the gender of team members in Stage 3. Robust standard errors in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A17: Leadership Strategies and Team Performance (Stage 3 - High Salary)

	All Leaders		Male Leaders	Female Leaders
	(1)	(2)	(3)	(4)
	Members' Contr.	Members' Contr.	Members' Contr.	Members' Contr.
Female	-0.0453	0.0177		
	(0.339)	(0.317)		
Ann. TL Contr.		1.455***	0.703	2.084***
		(0.487)	(0.762)	(0.500)
TL Contr.		0.301*	0.486**	-0.282
		(0.162)	(0.202)	(0.215)
#words		0.00216	0.00151	0.00756
		(0.00368)	(0.00619)	(0.00895)
Constant	3.985***	-2.365	-0.715	0.459
	(0.528)	(1.638)	(2.673)	(1.820)
Study & Occ.	x	x	x	x
Group Gender (Stage 3)	x	x	x	x
R-squared	0.0937	0.277	0.441	0.356
Observations	124	124	60	64
Subjects	124	124	60	64

Note: The table reports OLS regressions with the sum of the two team members' contribution levels as outcome variable. The sample is restricted to Stage-3 leaders with a high salary. All specifications control for (seven) field of study dummies, (eight) occupation dummies, and the gender of team members in Stage 3. Robust standard errors in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A18: Leadership Strategies and Team Performance (Stage 3 - Low Salary)

	All Leaders		Male Leaders	Female Leaders
	(1)	(2)	(3)	(4)
	Members' Contr.	Members' Contr.	Members' Contr.	Members' Contr.
Female	-0.0990	-0.116		
	(0.355)	(0.337)		
Ann. TL Contr.		1.548***	1.559***	2.080***
		(0.324)	(0.353)	(0.506)
TL Contr.		0.129	0.00459	0.462**
		(0.142)	(0.206)	(0.175)
#words		0.000166	0.00480	-0.00626
		(0.00532)	(0.0101)	(0.00662)
Constant	8.043***	2.096	-1.390	0.0706
	(0.657)	(1.307)	(2.605)	(2.024)
Study & Occ.	x	x	x	x
Group Gender (Stage 3)	x	x	x	x
R-squared	0.100	0.182	0.237	0.368
Observations	165	163	81	82
Subjects	165	163	81	82

Note: The table reports OLS regressions with the sum of the two team members' contribution levels as outcome variable. The sample is restricted to Stage-3 leaders with a low salary. All specifications control for (seven) field of study dummies, (eight) occupation dummies, and the gender of team members in Stage 3. Robust standard errors in parentheses. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

Table A19: Gender Differences Perceived Gender Fit

	(1)	(2)	(3)
	Maleness No Salary	Maleness Low Salary	Maleness High Salary
Female	-0.0777***	-0.0695***	-0.0630***
	(0.0192)	(0.0171)	(0.0182)
Constant	0.0777***	0.0695***	0.0630***
	(0.0192)	(0.0171)	(0.0182)
Study & Occ.	x	x	x
R-squared	0.0349	0.0354	0.0245
Observations	869	869	869
Subjects	869	869	869

Note: The table reports OLS regressions with the answer to the slider questions as outcome variables ranging from -1 (suitable for women) to 1 (suitable for men). Robust standard errors in parentheses. All specifications control for the field of study and the occupation. * for $p < 0.10$, ** for $p < 0.05$ and *** for $p < 0.01$.

B Appendix - Instructions

This chapter includes the translated instructions of the experiment. The original German instructions were formulated in a gender neutral language. Horizontal lines indicate new pages. Colors are only used to clarify text which was displayed to specific roles. For participants, the entire text was black.

Welcome!
Welcome, and thank you for participating in this experiment.

Participation Information:
Experiment Leader: Paula Thevißen, University of Cologne (paula.thevissen@wiso.uni-koeln.de)

Participant Rights:
Your participation is entirely voluntary, and you may withdraw from the experiment at any time without providing reasons. However, for your data to be used for research purposes, it is necessary for you to complete all parts of the experiment. Therefore, please only participate if you can remain attentive until the end of the experiment. This is crucial for this study. Additionally, inattentiveness can lead to reduced payouts not only for you but also for other participants and may compromise the quality of the scientific study.

Data Privacy:
All data collected in this experiment is anonymous and will be used for scientific purposes. This means that it is impossible to identify individual participants. Your payment data will be recorded and stored separately from your behavioral data. Please note that you must not reveal your identity to other participants during the experiment. You will also not receive information about the identities of other participants.

Procedure and Payments:
The experiment consists of several parts where you can earn money. The amount earned depends on your decisions and the decisions of other participants. Therefore, please read these instructions carefully. For arriving on time and completing the study, you will receive €1. However, if you withdraw from the study for any reason before its completion, you will not receive any payments, including the €1.
This experiment involves multiple participants simultaneously. To ensure a smooth and efficient process for all participants, you must respond within a specified time frame. If you exceed the time limit, you will not be able to continue the experiment and will not receive any payments.

Payment Terms:
Payments will be made via SEPA bank transfer. Other payment methods are not possible. It is your responsibility to complete the payment form accurately and truthfully after finishing the experiment and to note down the payment code for any follow-up inquiries. Otherwise, payment cannot be issued. You have 4 hours after the experiment ends to fill out the payment form. If the form is not completed within this time,

the payment claim will expire.

Do you agree to these terms and wish to participate in the study? *[yes, no]*

Urn Game

In the next task, you will evaluate the value of several games of chance. The games will involve virtual urns filled with red and black balls. You will receive information about the composition of each urn.

You may choose which color ball will award you a payout. If you choose to play the urn game, a ball will be drawn from the urn. If the ball drawn matches your chosen color, you will receive a reward. If it is the other color, you will receive nothing.

You will soon see a list of monetary amounts ranging from 0€ to 1€/0€ to 1.50€[46] in increments of 10 cents. For each amount, you must decide whether you prefer the fixed amount or the urn game. Once you select an option, the remaining options will automatically adjust logically (to save you time).

You should click through the options until each row reflects your preference. This is important because at the end of the study, a random row will be selected from the list, and you will receive the option you chose in that row. If you selected a fixed amount in that row, you will receive that amount. If you chose the urn game, a ball will be drawn, and you will be paid according to the outcome as described above.

In the next choice, the urn will contain 20 balls/30 balls, of which 10 are red and 10 are black/15 are red and 15 are black.

Which ball would you like to win 1€/1.50€ if it is drawn from the urn in the following questions? Please note that this means you will receive 0€ if the other color is drawn.

(a) red

(b) black

Urn with an Equal Number of Red and Black Balls

The urn from which a ball will be drawn consists of 10 red and 10 black balls / 15 red and 15 black balls.

If the ball drawn is [red/black], you will be paid 1€/ 1.50€.

What would you prefer? (Ensure that one option is selected in each row.)

[46] It was randomized which urn gamble was decided on first

Option A			Option B
Urnenspiel	○	○	**10Cent**
Urnenspiel	○	○	**20Cent**
Urnenspiel	○	○	**30Cent**
Urnenspiel	○	○	**40Cent**
Urnenspiel	○	○	**50Cent**
Urnenspiel	○	○	**60Cent**
Urnenspiel	○	○	**70Cent**
Urnenspiel	○	○	**80Cent**
Urnenspiel	○	○	**90Cent**

Figure A4: Screenshot Urn Game 1

Multiple price lists with "Urn Game" on the left and "X€" on the right, where X increments in steps of 10 cents from 0 to 1€/1.50€. The picture shows a screenshot of the version up to 1€.

Demographic Information

Before proceeding, please answer the following questions:

Please provide your age. *[Open text field]*

Please indicate your gender. *[Male, Female, Diverse]*

Please select your occupation. *[Student, Employed, Civil Servant, Trainee, Self-Employed, Unemployed, Retired, Other]*

If you selected Student in the previous question, please choose the faculty in which you study. *[Faculty of Humanities, Faculty of Mathematics and Natural Sciences, Faculty of Medicine, Faculty of Philosophy, Faculty of Law, Faculty of Economics and Social Sciences]*

Urn Game

In the next selection, the urn will contain 30 balls / 20 balls, of which 15 are red and 15 are black / 10 are red and 10 are black.

Which ball would you like to win 1.50€/1€ if it is drawn from the urn in the following questions? Please note that this means you will receive 0€ if the other color is drawn.

(a) red

(b) black

Urn with an Equal Number of Red and Black Balls

The urn from which a ball will be drawn consists of 15 red and 15 black balls / 10 red and 10 black balls.

If the ball drawn is [red/black], you will be paid 1.50€/1€.

What would you prefer? (Ensure that one option is selected in each row.)

Option A		Option B
Urnenspiel	○ ○	**10Cent**
Urnenspiel	○ ○	**20Cent**
Urnenspiel	○ ○	**30Cent**
Urnenspiel	○ ○	**40Cent**
Urnenspiel	○ ○	**50Cent**
Urnenspiel	○ ○	**60Cent**
Urnenspiel	○ ○	**70Cent**
Urnenspiel	○ ○	**80Cent**
Urnenspiel	○ ○	**90Cent**
Urnenspiel	○ ○	**100Cent**
Urnenspiel	○ ○	**110Cent**
Urnenspiel	○ ○	**120Cent**
Urnenspiel	○ ○	**130Cent**
Urnenspiel	○ ○	**140Cent**

Figure A5: Screenshot Urn Game 2

Multiple price lists with "Urn Game" on the left and "X€" on the right, where X increments in steps of 10 cents from 0 to 1€/1.50€. The picture shows a screenshot of the version up to 1.50€.

Detailed Information

Please note that the "Next" buttons will only appear after a set time to ensure all participants have sufficient time to read the instructions. Please do not refresh the pages!

The experiment consists of three main parts, during which you will receive further instructions at the beginning and throughout the experiment. Additionally, you will answer some questions. In the three main parts, you will act within a group of three participants. Please note that the groups will be reshuffled after the first part, and the groups will remain the same in the second and third parts. Therefore, your group in the first part may differ from the group you work with in the second and third parts.

In each of the three parts of the experiment, you will initially receive 3.50€ . In the first and final parts, this 3.50€ will be your endowment. You can decide how much of this endowment you would like to contribute to the group and how much you wish to keep for yourself.

A) **The money you keep:**
The money you keep will be paid to you one-to-one. For example, if you keep 3.50€ and contribute nothing to the group, your payout for the first part will be exactly 3.50€. If you keep €1.50, your payout for part A) of the first section will be €1.50. Only you and no one else will benefit from the money you keep.

B) **The money you contribute to the group:**
You may also contribute money to the group. All group members benefit equally from this contribution. The

money contributed to the group is multiplied by 0.5. The income from the group contribution is calculated for each group member as follows:

Income from part B) = 0.5 · sum of contributions from all group members (including your own)

For example, if the total contributions of all group members amount to 10.50€, you and all other members of your group will each earn $10.50€ \cdot 0.5 = 5.25€$. If the total contribution to the group is 2.50€, you and the other two group members will each receive $2.50€ \cdot 0.5 = 1.25€$.

Your total income:
Your total income is the sum of income from A) and B):
Your income = (3.50€ – your group contribution) + (0.5 · sum of contributions from all group members)

Examples
Here are some examples with an endowment of 3.50€:

- If all group members contribute their entire endowment to the group, your income and that of the other group members will be:
  Your income= $(3.50€ - 3.50€) + (0.5 \cdot (3.50€ + 3.50€ + 3.50€)) = 5.25€$
- If no group member contributes anything, your income and that of the other group members will be:
  Your income =$(3.50€ - €0) + (0.5 \cdot (0€ + 0€ + €0)) = 3.50€$
- If the other two group members together contribute 3.50€
  - and you contribute nothing, your income will be:
    Your income = $(3.50€ - €0) + 0.5 \cdot (0€ + 3.50€) = 5.25€$
  - If you contribute 2€, your income will be:
    Your income = $(3.50€ - 2€) + 0.5 \cdot (2€ + 3.50€) = 4.25€$
  - If you contribute 2.50€, your income will be:
    Your income = $(3.50€ - 2.50€) + 0.5 \cdot (2.50€ + 3.50€) = 4€$
- If you contribute 2€ and the others contribute 1.80€ in total, your income will be:
  Your income = $(3.50€ - 2€) + 0.5 \cdot (2€ + 1.80€) = 3.40€$
- If you contribute 2€ and the others contribute €3, your income will be:
  Your income = $(3.50€ - 2€) + 0.5 \cdot (2€ + 3€) = 4€$
- If you contribute 2€ and the others contribute 5.50€ in total, your income will be:
  Your income =$(3.50€ - 2€) + 0.5 \cdot (2€ + 5.50€) = 5.25€$

Other combinations are also possible.

Feedback

After all participants have made their decisions, you will receive feedback on the total amount contributed by the group. Please note that a random number will be added to or subtracted from this total.
The process is as follows: An urn contains 5 balls, each labeled with one of the following numbers:

-2, -1, 0, 1, 2

One ball is drawn from the urn, and the drawn number is added to the total amount actually contributed by the group. For example, if the total contribution amounts to 6€ and the randomly drawn number is -2, you will be informed that the total group contribution is 4€. Likewise, if the number 0 is drawn, the correct total of 6€ will be displayed.
Please note that the feedback will always fall between 0€ and 10.50€. The possible limits of contributions (everyone contributes nothing: 0€; everyone contributes everything, i.e., 3.50€: 10.50€) will not be exceeded.

Payments

In the first and third parts of this experiment, you will make the exact decision described above: How much of my endowment will I contribute to the group, and how much will I keep? Only one of these two parts, in which you act within the group, will be paid out. A random draw will determine whether you receive payments from the first or the last part. You will learn this at the end of the experiment. Payments from Part 2 of the experiment are guaranteed. Further details about this will be provided during the experiment.

Reminder: *Please note that the "Next" buttons will only appear after a certain amount of time. Do not refresh the pages during this time!*

Leadership Role

During the experiment, one person in each group will take on the leadership role ("team leader"). The team leader will have the opportunity to communicate with the two other team members in separate chat rooms simultaneously within a 3-minute time frame. All other members of the group can only chat with the team leader and not with each other. You are not allowed to disclose your identity during the chats or provide any hints about your background, gender, age, or other personal characteristics. After the chats are closed, both the team members and the team leader can make their decisions regarding group contributions.

Assigning the Leadership Role

In the first part of the experiment, you will be randomly assigned to groups of three. Then, the leader will be chosen randomly. On your screen, you will see whether you have been assigned as the team leader or as a team member.

Reminder: *Please note that the "Next" buttons will only appear after a certain amount of time. Do not refresh the pages during this time!*

Control Questions

To ensure that you have understood the instructions, please answer the following questions. The experiment will only continue once all questions have been answered correctly.

Reminder: Below is the payout formula once again:
Your income = (3.50€ – your group contribution) + (0.5 · sum of contributions from all group members)

- What is your payout if no group member contributes anything to the group? *[3.50, 4, 5, 5.25]*
- What is your payout if each group member contributes their entire endowment to the group? *[3.50, 4, 5, 5.25]*
- What is your payout if the other two group members contribute a total of 5€, and you contribute 2€? *[3.50, 4, 5, 5.25]*
- What is your payout if you contribute 2€ and the other two group members contribute a total of 3€? *[3.50, 4, 5, 5.25]*
- Who can the team leader chat with?
  - No one
  - Only one team member
  - Both team members in one chat
  - Both team members in two separate chats
- The group has contributed a total of 7€. What feedback will you receive?
  - Exactly 7€
  - Exactly 10€
  - Between 0€ and 5€
  - Between 5€ and 9€

Personal Assessment

- This question refers to the other groups in the experiment, not your own. The team members make decisions about their endowment after chatting with the team leader. How high do you estimate the average amount contributed by each of the two other participants in other groups? *[Fields capped at 3.50€]*
- This question refers to your own group. Imagine you are the team leader in your group. The two team members make decisions about their endowment after chatting with you as the team leader. How high do you estimate the average amount contributed by each of the two other participants in your group? *[Fields capped at 3.50€]*
- This question refers to your own group. Imagine you are the team leader in your group, but the team leader is not allowed to chat. The team members make decisions about their endowment without chatting with you as the team leader. How high do you estimate the average amount contributed by each of the two other participants in your group? *[Fields capped at 3.50€]*
- This question refers to the other groups in the experiment, not your own. Imagine the team leader is not allowed to chat. The team members make decisions about their endowment without chatting with a team leader. How high do you estimate the average amount contributed by each of the two other participants in other groups? *[Fields capped at 3.50€]*

Your Role

Your group consists of three people, one of whom is the team leader and the other two are team members.
Your position has been randomly determined. You are assigned the following position: Team Member / Team Leader

Chats

On the following page, the chat rooms will open. You will have 3 minutes to communicate.

[Team Member:] You can only chat with the team leader in your chat.

[Team Leader:] You will see two chat rooms: In the upper chat room, you will chat with Team Member 2, and in the lower chat room with Team Member 3. Please note that the chat rooms are separate. Each team member can only see the messages you send in the respective chat room and not the messages sent in the other chat.

After the time expires, the chat rooms will automatically close, and you will be directed to the next page, where you will make your decision about the use of the endowment.

Click "Next" to access the chats.

Reminder: *Please note that the "Next" buttons will only appear after a certain amount of time. Do not refresh the pages during this time!*

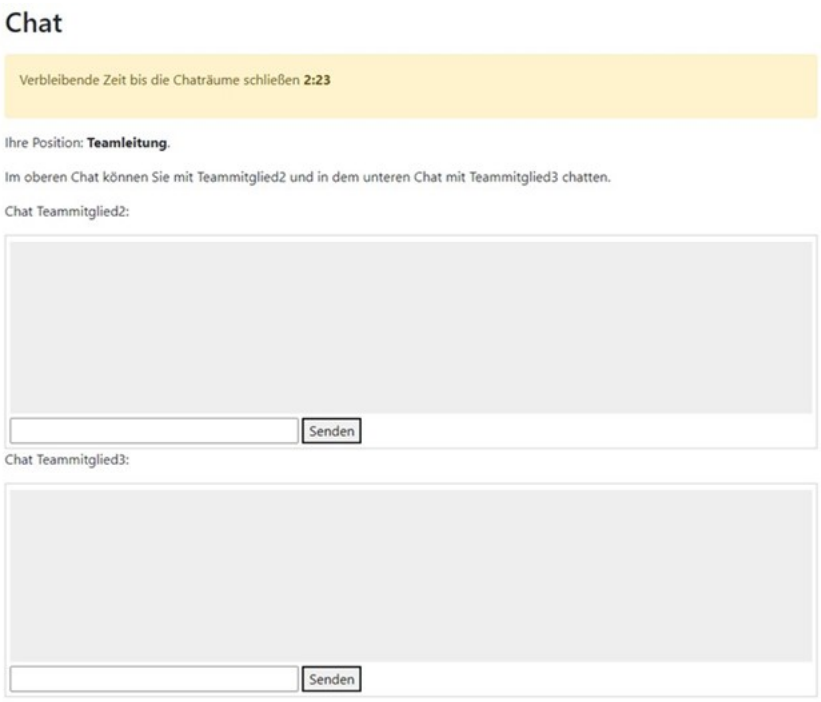

Figure A6: Screenshot of Team Leaders' Chat Interface

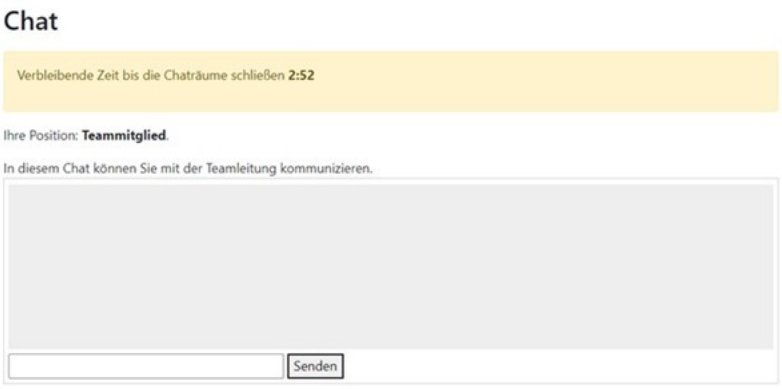

Figure A7: Screenshot of Team Members' Chat Interface

Decision About Group Contributions - Part 1
Your endowment is 3.50€. Please indicate how much of this endowment you wish to contribute to the group.
How much would you like to contribute to the group? *[Fields capped at a maximum of 3.50€]*

Personal Assessment I
This question refers to your own group:

- How much do you estimate the total contribution made by the other two participants in your group? *[Fields capped at a maximum of 7€]*
- How much would this total be if the team leader had not been able to chat? *[Fields capped at a maximum of 7€]*
- [Team Leader:] How much would this total be if another person in the group had been the team leader? *[Fields capped at a maximum of 7€]*
- [Team Member:] How much would this total be if you had been the team leader? *[Fields capped at a maximum of 7€]*

Personal Assessment II
How strongly do you agree with the following statement?

"I am good at leading a group and convincing them to make high contributions." *[5 point Likert scale: Strongly Disagree – Strongly Agree]*

Results Part 1
You contributed XX€ to the group.

The total contribution by the group is: XX€.

Reminder: A random number from the following list has been added to this amount: -2, -1, 0, 1, 2.

How much do you estimate the total contribution made by the other two participants in your group? *[Fields capped at a maximum of 7€]*

Part 2 - Application

General Information
Before you start the third part of the experiment, you will be randomly assigned to a group of three participants. This group may differ from your group in Part 1. Within this group, you will have the opportunity to apply for the team leader role. This means you and the other two participants in your group will submit an application for the team leader position. These three applications will be compared, and the team leader for Part 3 will be determined based on them.

Compensation for the Leadership Role
Unlike in Part 1 of the experiment, the team leader will receive compensation. Other than this, the leadership position is identical to the team leader role in Part 1. The compensation can take on one of two values:

- **Compensation A:** 0.35€
- **Compensation B:** 1.75€

A random draw will determine which of the two compensations will apply if you assume the leadership role in Part 3 and if Part 3 is selected as the payout-relevant part. You will submit one application for each compensation scenario.

Application
For your application, you will receive a budget of 3.50€. You can use this budget to bid for the team leader role. Your bid can only refer to this application budget, meaning you can bid a minimum of 0€ and a maximum of 3.50€.
All participants in your group will submit a bid for the leadership role simultaneously. No other participant will see your bid. The person with the highest bid in your group will become the team leader in Part 3.

If your bid is the highest in your group, you will not pay your own bid amount but rather the highest bid that did not win. If you do not win the team leader role, your application budget of 3.50€ will be fully refunded to you. If two or more participants submit the same highest bid, a random draw will determine which of these participants assumes the leadership role.

The Nobel laureate William Vickrey showed that it is optimal for you to bid exactly the amount that the leadership role is worth to you. You do not need to guess how much others are willing to bid, as this does not affect your optimal strategy in this context.

If you bid more than you are willing to pay, your chance of getting the leadership position increases. However, if you win the position, you risk paying more than the role is worth to you, which should be avoided. If you bid less than you are willing to pay, your chance of winning the leadership role decreases. In this case, another person might assume the role even though you were willing to pay more for it than they were. Therefore, the best approach is to bid exactly the amount you are willing to pay for the leadership position.

On the next page, you will see illustrative examples of bids. Click "Next" to proceed.

Reminder: *Please note that the "Next" buttons will only appear after a certain amount of time. Do not refresh the pages during this time!*

Example

The following table illustrates an example of bids:

Person	**Person 1**	**Person 2**	**Person 3**
Bid	0€	1€	3.50€

In this example, Person 3 submitted the highest bid. Person 3, therefore, assumes the leadership role. The highest bid that did not win is Person 2's bid of 1€. This is the amount Person 3 must pay for the leadership role.
Person 3 receives the leadership role and pays 1€. Their payout from the application phase is: 3.50€ - 1€ = 2.50€ (application budget - price for the leadership role).
The other participants receive their entire application budget of 3.50€ and will be team members in Part 3.
During the application phase, it is optimal to state your true preference for the leadership position. Do not bid less or more than you are truly willing to pay for this role.

After the Application Phase

In Part 3, you will first find out which application was relevant to you (Compensation A or B). You will also learn whether your application was successful and whether you will assume the leadership role.
After the application phase, the leader will have the opportunity to chat with the team members before all group members make their decisions about group contributions.
To ensure that you understand the application process, you will answer some questions on the next page. Click "Next" to proceed.

Reminder: *Please note that the "Next" buttons will only appear after a certain amount of time. Do not refresh the pages during this time!*

Control Questions

As a reminder, you can view an example here again:

Person	***Person 1***	***Person 2***	***Person 3***
Bid	*0€*	*1€*	*3.50€*

In this example, Person 3 placed the highest bid. Therefore, Person 3 will receive the leadership role. The highest bid that did not win comes from Person 2 at 1€. This is the price Person 3 will pay to receive the team leader role.
So, Person 3 receives the leadership role and pays 1€. After the application phase, Person 3 will have 3.50€ - 1€ = 2.50€ (Application budget - price for the leadership role). The other participants receive their entire application budget of 3.50€ and will be the team members in part 3.

Control Questions - Application

You will only be directed to the application phase once you answer all the questions correctly.

Example 1

Person	**Person 1**	**Person 2**	**Person 3**
Bid	€3	0€	1€

- What role does Person 1 have? *[Team Leader, Team Member]*
- What role does Person 2 have? *[Team Leader, Team Member]*
- What role does Person 3 have? *[Team Leader, Team Member]*
- How much must be paid for the leadership role? *[Correct: 1]*
- What is the payout for Person 2 from this application phase? *[Correct: 3.50]*
- What is the payout for Person 3 from this application phase? *[Correct: 3.50]*

Example 2

Person	**Person 1**	**Person 2**	**Person 3**
Bid	2.50€	0€	3.50€

- What role does Person 1 have? *[Team Leader, Team Member]*
- What role does Person 2 have? *[Team Leader, Team Member]*
- What role does Person 3 have? *[Team Leader, Team Member]*
- How much must be paid for the leadership role? *[Correct: 2.50]*
- What is the payout for Person 2 from this application phase? *[Correct: 3.50]*
- What is the payout for Person 3 from this application phase? *[Correct: 1]*

Control Question - Compensation
How much does the leader receive as compensation?

- No compensation
- Definitely 0.35€
- It will be drawn: either 0.35€ or 1.75€
- Definitely 1.75€

Application
To take on the role of team leader in the third part of this experiment, you can place a bid. You will use the application budget of 3.50€ provided for this part.

As described earlier, there are two different compensations. Therefore, you will place two bids (each bid can range from 0€ to 3.50€). It will be determined randomly which bid will count for you and your group. Consequently, it will also be randomly decided which compensation you would receive in the leadership role. Please submit your bid for both compensations.

Leadership position with Compensation A: 0.35€
You can bid between 0€ and 3.50€.
How much of your application budget would you like to bid? *[Field set to max 3.50€]*

Leadership position with Compensation B: 1.75€
You can bid between 0€ and 3.50€.
How much of your application budget would you like to bid?*[Field set to max 3.50€]*

Your Application Decision 1/2
Your bid for the leadership position with Compensation A (0.35€) was XX€. Please briefly explain why you did (or did not) apply for the leadership role.

Your Application Decision 2/2
Your bid for the leadership position with Compensation B (1.75€) was XX€. Please briefly explain why you did (or did not) apply for the leadership role.

Part 3 – Outcome of the Application
It was randomly determined that the application for the leadership position with compensation A/B of 0.35€/1.75€ is relevant for your group.

[Winner:]

Your application budget was 3.50€. You bid XX€ for this position.

[If the bid is the same as another bid:]
There is at least one other bid that is the same as yours. The draw decided that you will take the leadership role. Since your bid is as high as the highest bid that lost, you must pay your bid of XX€!

[Otherwise:]
Your bid is high enough that you will receive the leadership role. You must pay XX€!

Your payout from Part 2, the application phase, is therefore XX€.

Chats
Since you were successful and will take on a leadership role in the next round, you will have the opportunity to chat with the other two team members in your group.

You will see two chat rooms where you can communicate with the two team members. Please note that the chat rooms are separate from each other. Each team member can only see the messages you send in their respective chat, not the messages you send in the other chat to the other team member.

If Part 3 is the relevant part for your payment, you will also receive a compensation of XX€ for carrying out the leadership role.

[Loser:]

Your application budget was 3.50€. You bid XX€ for this position.

You will not be the team leader. Your payout from Part 2, the application phase, is therefore 3.50€.

Chats
Since you will take on the role of a team member in the next round of the experiment, you will have the opportunity to chat with the team leader, but not with the other team member.

After chatting with the team members / team leader, you will have the opportunity to make your decision regarding group contributions.
On the next page, the chat rooms will open. Please click "Next" to proceed.

Reminder: *Please note that the "Next" buttons will only appear after a certain amount of time. Do not refresh the pages during this time!*

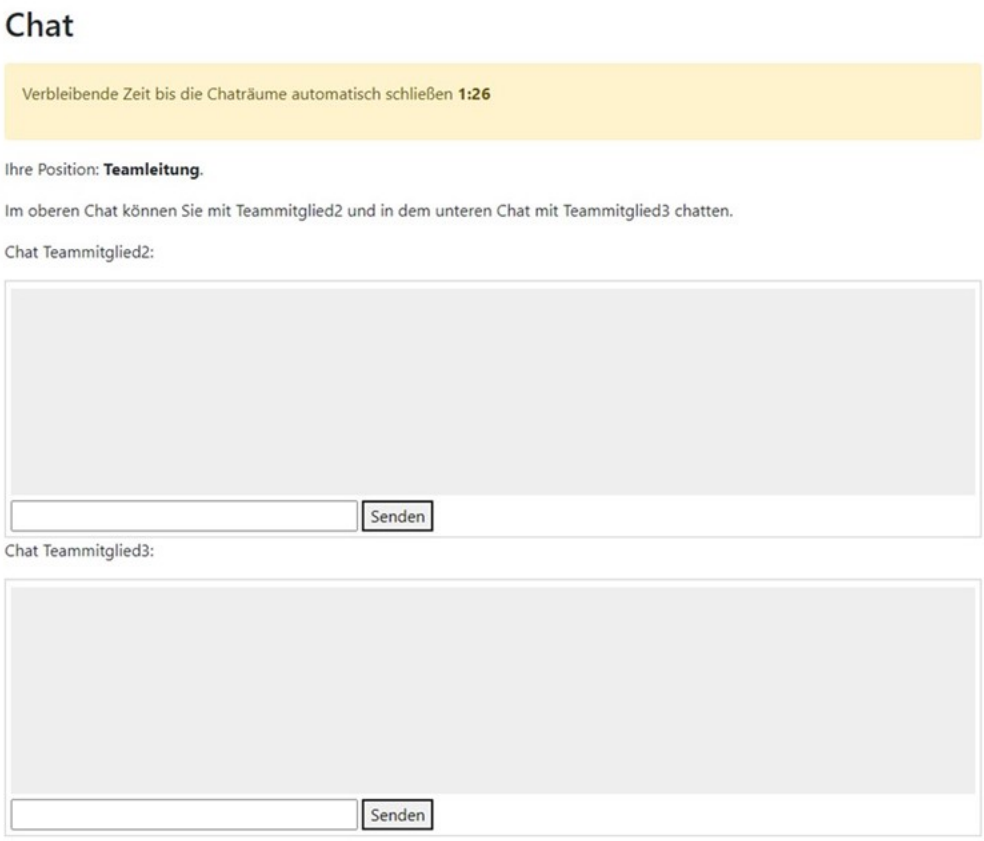

Figure A8: Screenshot of Team Leaders' Chat Interface

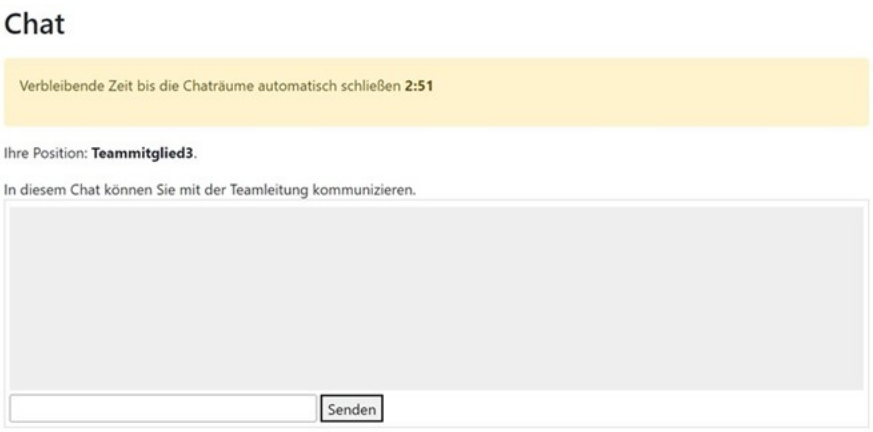

Figure A9: Screenshot of Team Members' Chat Interface

Decision on Group Contribution - Part 3
Your endowment is 3.50€. Please indicate how much of this endowment you would like to contribute to the group.

How much would you like to contribute to your group? *[Field set to max 3.50€]*

Result Part 3
You have contributed XX€ to your group.

The total group contribution is: XX€

Reminder: A random number has been added to this amount: -2, -1, 0, 1, or 2.

How much do you estimate the total contribution from the other two participants in your group to be? *[Field set to max 7]*

Questions *[Claim the Lead, 5-point Likert Scale, Strongly Disagree – Strongly Agree]*
These questions relate to your personal life. There are no right or wrong answers. To what extent do you agree with the following statements?
[Items see `https://osf.io/dpqfu/?view_only=a44a9c0f56d64ad59bb72ba0cd8b4ba2` – Giessner et al. (2022)]

Questions *[Grant the Lead, 5-point Likert Scale, Strongly Disagree – Strongly Agree]*
These questions relate to your personal life. There are no right or wrong answers. To what extent do you agree with the following statements?
[Items see `https://osf.io/dpqfu/?view_only=a44a9c0f56d64ad59bb72ba0cd8b4ba2` – Giessner et al. (2022)]

Your Opinion – Team Leadership Part 1

Do you think the role of team leader in Part 1, where team leaders did not receive any compensation, is more suitable for women or for men? Please indicate your answer on the slider below.
-1: The team leader position is more suitable for women
1: The team leader position is more suitable for men
Click on the blue bar to reveal the slider.

Figure A10: Sliders (initial and after choice)
Note: I use Max R. P. Grossmann's sliders, see `https://gitlab.com/gr0ssmann/otree_slider`

Your Estimation – Team Leadership Part 1
Please provide your own estimation. If your estimation differs by no more than 3 percentage points from the true answer, you will receive an additional 0.10€ for this answer.

What percentage of male team leaders in Part 1, where team leaders did not receive compensation, managed to convince their team members to contribute their entire base budget, i.e., 3.50€ per team member?

What percentage of female team leaders in Part 1, where team leaders did not receive compensation, managed to convince their team members to contribute their entire base budget, i.e., 3.50€ per team member?

Your Opinion – Team Leadership Compensation A (0.35€)
Do you think the role of team leader with a compensation of 0.35€ is more suitable for women or for men? Please indicate your answer on the slider below.
-1: The team leader position is more suitable for women
1: The team leader position is more suitable for men
Click on the blue bar to reveal the slider.

Figure A11: Sliders (initial and after choice)
Note: I use Max R. P. Grossmann's sliders, see `https://gitlab.com/gr0ssmann/otree_slider`

Your Estimation – Team Leadership Compensation A (0.35€)
Please provide your own estimation. If your estimation differs by no more than 3 percentage points from the true answer, you will receive an additional 0.10€ for this answer.

What percentage of male team leaders with a compensation of 0.35€ managed to convince their team members to contribute their entire base budget, i.e., 3.50€ per team member?

What percentage of female team leaders with a compensation of 0.35€ managed to convince their team members to contribute their entire base budget, i.e., 3.50€ per team member?

Your Opinion – Team Leadership Compensation B (1.75€)

Do you think the role of team leader with a compensation of 1.75€ is more suitable for women or for men? Please indicate your answer on the slider below.

-1: The team leader position is more suitable for women

1: The team leader position is more suitable for men

Click on the blue bar to reveal the slider.

Figure A12: Sliders (initial and after choice)

Note: I use Max R. P. Grossmann's sliders, see `https://gitlab.com/gr0ssmann/otree_slider`

Your Estimation – Team Leadership Compensation B (1.75€)

Please provide your own estimation. If your estimation differs by no more than 3 percentage points from the true answer, you will receive an additional 0.10€ for this answer.

What percentage of male team leaders with a compensation of 1.75€ managed to convince their team members to contribute their entire base budget, i.e., 3.50€ per team member?

What percentage of female team leaders with a compensation of 1.75€ managed to convince their team members to contribute their entire base budget, i.e., 3.50€ per team member?

Payment

It will now be randomly decided which parts of the experiment will be paid out. Please click "Next" to proceed.

Your Payment

Group Contributions and Applications

The draw has determined that, in addition to the payment from Part 2, the application phase, Parts 1 / 3 of the experiment will determine your payout.

> [If Part 1:]
> Part 1: Your group has contributed a total of XX€. Your payout is XX€.

Part 2: XX€

[If Part 3:]
Part 3: Your group has contributed a total of XX€. [If Leader:]Additionally, you will receive a compensation of XX€. Your payout is XX€.

Urn Games
From the urn games table, the row with a guaranteed payout of XX cents was selected for the first urn game:

You chose the guaranteed payout and will thus receive XX€. // You chose the urn game. The ball you selected (was/was not) drawn in the color red/black. You will receive XX€.

From the urn games table, the row with a guaranteed payout of XX cents was selected for the second urn game:

You chose the guaranteed payout and will thus receive XX€. // You chose the urn game. The ball you selected (was/was not) drawn in the color red/black. You will receive XX€.

Your Estimation of Team Leadership Performance:

Part 1: No compensation
XX percent of male team leaders in Part 1 managed to convince their team members to contribute their entire base budget.

[If correct:] Your answer differs by no more than 3 percentage points from the correct answer. Therefore, you will receive an additional 0.10€!

[If incorrect:] Your answer differs by more than 3 percentage points from the correct answer. Therefore, you will not receive any additional payment.

XX percent of female team leaders in Part 1 managed to convince their team members to contribute their entire base budget.

[If correct:] Your answer differs by no more than 3 percentage points from the correct answer. Therefore, you will receive an additional 0.10€!

[If incorrect:] Your answer differs by more than 3 percentage points from the correct answer. Therefore, you will not receive any additional payment.

Compensation A:
XX percent of male team leaders with a compensation of 0.35€ managed to convince their team members to contribute their entire base budget.

[If correct:] Your answer differs by no more than 3 percentage points from the correct answer. Therefore, you will receive an additional 0.10€!

[If incorrect:] Your answer differs by more than 3 percentage points from the correct answer. Therefore, you will not receive any additional payment.

XX percent of female team leaders with a compensation of 0.35€ managed to convince their team members to contribute their entire base budget.

[If correct:] Your answer differs by no more than 3 percentage points from the correct answer. Therefore, you will receive an additional 0.10€!

[If incorrect:] Your answer differs by more than 3 percentage points from the correct answer. Therefore, you will not receive any additional payment.

Compensation B:
XX percent of male team leaders with a compensation of 1.75€ managed to convince their team members to contribute their entire base budget.

[If correct:] Your answer differs by no more than 3 percentage points from the correct answer. Therefore, you will receive an additional 0.10€!

[If incorrect:] Your answer differs by more than 3 percentage points from the correct answer. Therefore, you will not receive any additional payment.

XX percent of female team leaders with a compensation of 1.75€ managed to convince their team members to contribute their entire base budget.

[If correct:] Your answer differs by no more than 3 percentage points from the correct answer. Therefore, you will receive an additional 0.10€!

[If incorrect:] Your answer differs by more than 3 percentage points from the correct answer. Therefore, you will not receive any additional payment.

Total Payment
In total, your payout is XX€.

Additionally, you will receive 1€ for showing up on time.

Your final payout is thus XX€.