Preference Communication and Leader Selection in Group Decision-Making

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Abstract

We conduct a laboratory experiment to study the effects of preference communication and leader selection mechanisms in group decision-making. In a setting where all members of a group get the same payoff based on the group leader's decision of how much risk to take, we explore the effects of two treatment variables: (1) whether group members can communicate their preferences to the leader, (2) whether the leader is exogenously appointed or voluntarily self-selects into the position. We find that the leader selection mechanism crucially affects the integration of group preferences into the leader's decision: the communicated preferences have a significant effect on the actual group decision only when the leader is appointed. We also find that preference communication by non-leaders is frequently strategic.

Keywords: group decision-making, risk, leadership, delegation, advice, information, gender, experiments.

JEL Codes: C91, C92, D81, J16**.**

1. Introduction

In many situations, an individual is faced with the task of making a risky decision that will affect the payoffs of a group of people, including herself. Individuals in executive positions in organizations have the authority and responsibility to make risky and consequential decisions on a very frequent basis. In the finance domain, mutual fund managers make investment decisions that are payoff-relevant to a number of people. In a firm, a manager can make risky or safe hiring decisions that ultimately affect the whole department's payoff. Who ends up rising to the decision-making position in a group, team or organization is usually endogenously determined, with people who are more willing to take the responsibility being more likely to emerge as decision-makers. This is especially true when there is no formal hierarchical decision-making structure. Yet, cases where one is exogenously appointed to make binding decisions on behalf of others are not uncommon. For instance, an upper-level manager may assign a single employee the responsibility to make project-related decisions on behalf of a team of co-workers or subordinates. In perhaps a less consequential context, an employee could be asked to organize a business event and choose between a risky new venue and a tried-and-true one.

In this paper, we use a decision context where all members of a group earn the same payoff, based on a single member's ("leader") choice in a risky decision task, to model decision-making on behalf of a group.[2] Within this context, we explore two different dimensions of the institutional structure of group decision-making. The first one is whether group members can communicate their preferences to the leader. In many contexts, group members have differing preferences as to what the group decision should be, and leaders have the option to find out the preferences of, or get suggestions from group members about what to do. This is the case in many organizations with a hierarchical structure: for example, at universities deans have the responsibility and authority of making binding decisions that affect the whole college, and the organizational culture may be such that the dean collects information about the preferences of faculty members before making the final decision. In contrast, the decision-making process could be more "autocratic", in that the leader decides without much input from other group members. Autocratic and democratic/participative leadership are in fact two major leadership styles that have been long identified and highlighted in leadership research in psychology (Lewin et al. (1939)). The questions of what kind of recommendations are given by group members, whether the communication of preferences is strategic, and how much of the transmitted preferences or advice is taken into account by leaders are important for crafting policy implications about implementing communication/information-

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[2] We use the term "leader" throughout the paper as a shortcut for "decision-maker for the group".

gathering mechanisms in groups where decision-making is delegated to a single person. We therefore implement treatments with and without preference communication in our experiment. In the communication treatments, the non-leader group members are asked to individually communicate to the leader their preferences about how much risk should be taken, and the leader can view these preferences before he/she makes the group decision. We explore the effects of the availability of such information on: (1) the type of decisions made on behalf of the group by the leader, (2) the willingness of individuals to be in the leader position in the first place.

Another important dimension of the institutional structure is the process through which the leader is determined, that is, whether leadership is voluntary or assigned. Self-selection into leadership can affect leadership style and the decisions made on behalf of the group, because leadership willingness may be trait-dependent and these traits can also correlate with decisions. In addition, the mechanism that placed the leader into the decision-making position may have a direct effect on the leader's choices. In fact, research from psychology and sociology show that the leader's source of authority, dependent on whether the leader is "appointed" or "emergent", may influence the actions of the leader as well as the evaluation of the leader's actions by other members of the group (Read, 1974; Hollander et al., 1977; Hollander, 1992). In order to study the effects of the leadership mechanism on leaders' decisions and in particular their response to other group members' preferences, we use treatments that vary the source of leadership. In the treatments with *appointed leadership*, one group member is exogenously assigned to the leader position, whereas in the treatments with *voluntary leadership*, individuals are first asked to state whether they are willing to act as leaders, and a fair procedure (random draw) determines the leader from among willing group members.

Group decision-making and the difference between individual and group/team decisions have been important topics of study for economists (see, for example, Cooper and Kagel (2005), Charness and Sutter (2012)). Particularly relevant to the current paper is the literature that compares individual vs. group decisions in the context of risk-taking and studies so-called risky- or cautious- shifts in the group context (Shupp and Williams (2008), Masclet et al. (2009)). While decision-making in groups has long been of interest, the issues of leadership willingness, leader selection mechanisms and leadership styles are getting more recent attention. Within this literature, one set of studies focus on the determinants of the endogenous emergence of leaders in contexts where there may be benefits/costs to leadership. Arbak and Villeval (2013) and Rivas and Sutter (2011) study the determinants and effects of voluntary leadership in public goods games, whereby voluntary leadership is defined as being willing to act first and lead others by example. In contrast, in our context leadership means making a binding decision on behalf of a group

of people who will receive a common payoff, as in Charness, Rigotti and Rustichini (2007), Sutter (2009) and Ertac and Gurdal (2012). Sutter (2009) is of particular interest, because it implements a treatment with an intergenerational communication channel, whereby advice can be transmitted to past and future decision-makers in a risk-taking context similar to ours. The findings are that risky investments are the most prominent recommendation, and such recommendations significantly affect actual decisions when they are backed up by an expected payoff reasoning.

The effect of advice from other players has also been documented in settings such as the ultimatum game Schotter and Sopher (2007), coordination games (Schotter and Sopher (2003), trust game (Schotter and Sopher (2006). Çelen et al. (2010) show that subjects are more willing the follow the advice from other players than copying their choices. Charness et al. (2013) find that the advice becomes effective only when the advice-giver has incentives to convince. Unlike these papers, which study how advice influences others' individual choices, we study the effects of preference communication in a group context with common payoffs and a single decision-maker.

Our focus on alternative leadership mechanisms relates the current paper to a different strand of the literature that studies the behavior of elected and appointed leaders. Drazen and Ozbay (2012), for example, study the decisions of elected vs. appointed leaders in terms of their decisions in a setup similar to a dictator game. They find that elected leaders more frequently follow a non-selfish policy, which is likely guided by a reciprocity motive to reward their election by vote. The paper closest to the current paper in this literature is Kocher et al. (2009), who find that elected leaders display a more democratic as opposed to an autocratic leadership style, in terms of following the majority decision of the group. Two immediate points of departure of our paper are that we consider "self-selected" rather than elected leaders, and the leader can observe the individual preference of each group member, rather than a single majority decision. Another important difference is in focus--the aforementioned studies implement situations where the leader's other-regarding preferences have an important role, because of either a payoff divergence between the leader and the followers, or a different risk profile faced by the leader. In contrast, our setting involves pure payoff commonality among group members ex-post, thereby shutting down social preference motives or any direct payoff incentives for becoming or refraining from becoming leaders. The absence of election by vote in our setup also prevents a reciprocity motive in leaders' decisions. Our focus, then, is specifically on the effects of leadership mechanism on the propensity of leaders to go with their own idea or others' recommendations in implementing what is best for the group.

Our main finding is that the leadership selection mechanism can crucially influence the type of decisions made in group contexts, especially when there is communication between the group members and the

leader. The core result is that preference communication has an effect on the group decision only when the leader is appointed. Self-selected leaders are in fact found to be generally less responsive to the group context: they are (1) less likely to change their own preferred decision in the group context when they decide without communication, (2) less likely to follow the communicated preferences by other group members, when such information is available.

The rest of the paper is organized as follows. In section 2, we describe the design and procedures. Section 3 presents the results, and Section 4 includes a discussion and concluding remarks.

II. Experimental Design and Procedures

The decision context in our experiment is based on the risk allocation task of Gneezy and Potters (1997), whereby subjects decide how to allocate 10 Turkish Liras[3] between a riskless option and a risky option. While the amount invested in the riskless option is safe, the amount invested in the risky option is doubled with probability *p,* and lost with probability *1-p*. The experiment consists of four different group decision-making treatments that differ in terms of the leader selection mechanism and the availability of preference communication to the leader, as well as an individual decision treatment that serves as a control. For each of these five treatments, three periods are run, with the probability of winning set to 0.3, 0.5 and 0.7.[4] Each subject, then, goes through 15 periods of decision-making, with the order of the treatment configurations randomly determined in each session, from among treatments in the following table:

Treatment	Payoff Commonality	Leader Selection	Preference Communication	No. of Periods
1: Individual	No	-	-	3
2: Group T1	Yes	Appointed	No	3
3: Group T2	Yes	Self-selected	No	3
4: Group T3	Yes	Appointed	Yes	3
5: Group T4	Yes	Self-selected	Yes	3

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[3] At the time of the experiments, 1 TL corresponded to $0.62.
[4] Notice that in the original paper by Gneezy and Potters (1997), the amount invested in the risky option is multiplied by 2.5 with probability ⅓ and is lost with probability ⅔.

In all group treatments, the decision-making context is such that a single subject makes an allocation decision on behalf of the whole group, composed of three members including herself. Based on the outcome of this decision, all subjects in the same group receive the same payoff. Other group members can observe the leader's decision, but not the outcome.[5] At the end of any group period, non-leader members communicate their opinion of the implemented decision to the group leader, in binary like-or-dislike messages that are not payoff-relevant.

In periods with appointed leadership, the group decision-maker role is randomly assigned to one of the three group members, whereas in voluntary leadership periods each individual is asked, at the start, whether they would like to be the decision-maker for their group or not. In the latter, if more than one person wants to be the decision-maker, a random draw among those determines the leader. If no one wants to be the decision-maker, one of the three people in the group is selected randomly to make the decision. If the period is a "no communication" period, the leader proceeds to make the group decision. If the period is a "communication" period, the non-leader group members are individually asked how much they would allocate to the risky option, if they were the group decision-maker.[6] This information is then made available to the leader, but the leader has the option to view or not view it before he/she makes the group choice.

The experiments were conducted at two universities in Turkey, Koc University and TOBB ETU, using undergraduate students as subjects. The experiment was programmed using Z-tree (Fischbacher (2007)). We have data from 156 subjects in total: 57 females and 99 males. All subjects were paid a show-up fee of 5 Turkish Liras, in addition to the amount earned in the experiment. Subjects never learned who was in their group. One of the 15 periods was chosen randomly at the end for payment. If an individual task was chosen for payment, subjects were paid on the basis of their own decisions. If the group task was chosen for payment, all three subjects that form a group got the same payoff, based on the decision of the group leader.

III. Results

3.1 Individual Risk Decisions

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[5] The goal was to prevent spillovers on risk-taking behavior from positive and negative outcomes of previous risky decisions of oneself and others.
[6] The non-leader group members know that the leader can see this information, therefore strategic advice is possible.

We first present results from decision periods where individuals decide alone and the consequences of their decisions only matter for themselves. Table 1 reports summary statistics on the average amount invested in the risky option during these rounds. One average, individuals allocate 5.23 to the risky option, and men take more risk than women (p=0.002 in a Mann-Whitney test). For given probabilities of winning, the gender difference is statistically significant only for the higher two probabilities, p=0.5 and p=0.7 (p-values=0.014 and 0.002 respectively, in Mann-Whitney tests).

< Table 1 here >

The results of these nonparametric tests are also confirmed in an OLS regression which shows that males take more risk, controlling for the probability of winning as well as session effects (Table 2).[7] As expected, individuals also respond significantly to p: the higher the winning probability, the higher the amount invested in the risky option.

< Table 2 here >

3.2 Leadership Decisions:

In the overall data, individuals say yes to the question of whether they would like to decide on behalf of the group 85% of the time. Interestingly, leadership willingness is almost completely invariant to the availability of information about group members' preferences, with the percentages being 86% and 84% for the information and no information treatments, respectively.

In terms of leadership willingness across gender, our data confirm Ertac and Gurdal (2012): on average, men are significantly more willing to make the group decision than women. In the full data, men are willing to make the group decision 89.9% and women 76.3% of the time (p<0.01 in a Mann-Whitney test). This difference does not respond to the availability of preference communication from other group members either. Table 3 breaks down the decision to lead by information treatment, for each gender. While men's leadership propensity is somewhat smaller when information is available, women's leadership propensity is almost exactly the same.

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[7] In all regressions with multiple observations from the same subject, standard errors are clustered at the subject level in order to correct for dependence.

< Table 3 here >

Table 4 reports results from a logistic regression where we control for gender, probability of winning and the availability of preference information, as well as session effects. The main regression periods (Table 4, column 1) confirm that men are significantly more likely to decide, and that the availability of preference information has no significant effect on leadership choice.[8] Gender-specific regressions show that women's leadership tendency increases in later periods (Table 4, column 2)—in fact, while leadership willingness is 72% vs. 86% for women and men in the earliest self-selected leadership period, it becomes 86% vs. 88% in the latest self-selected leadership period. The probability of winning, when it attains the highest value of 0.7, has a significant positive effect on leadership for men (Table 4, column 3). Recall that men's risk-taking is also more responsive to changes in the probability of winning. Coupled with this fact, this additional willingness to lead might be due to joy from generating a high payoff for the group.

< Table 4 here >

3.3 Group Decisions without Preference Communication:

Table 5 provides summary statistics on the risk taken on behalf of the group, when the leader does not have access to recommendations by other group members. When leaders make their decisions without information about others' preferences, we observe that self-selected and appointed leaders take similar levels of risk on behalf of the group.

< Table 5 here >

In regression analyses of the pooled data from appointed and self-selected leaders as well as in separate regressions for appointed vs. self-selected leaders, we find that the probability of winning significantly increases the risk taken on behalf of the group, as expected, and gender does not have a significant effect (Table 6).

< Table 6 here >

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[8] The results are robust when we control for the individual risk-taking by taking the amount invested in the risky option during the corresponding individual round. Using the average risk taken in the three individual rounds instead does not make a difference.

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An important question in studying group decision-making is whether individuals take more, less or similar amounts of risk when deciding on behalf of a group, as compared to how they decide individually. When individuals receive no information about others' preferences, we find that 41.7% make exactly the same decision they make individually, whereas 31.1 % and 27.2% engage in cautious- and risky-shifts, respectively. Regressions of the within-person difference between group risk and the risk taken in the corresponding individual round show that neither the leader selection mechanism nor gender makes a significant difference in the propensity of cautious vs. risky shifts. However, the leadership mechanism has a crucial effect on the likelihood of leaders to "shift" at all. Regression table 7 shows that assigned leaders are 11 percentage points more likely to make a different decision in a group context (Column 1, p=0.058), and the size of the absolute difference from individual decisions are also significantly larger for assigned leaders (Column 2, p=0.011).

< Table 7 here >

3.4. Treatments with Preference Communication:

3.4.1. Communicated Preferences:

We first explore the question of what kind of preferences are communicated to the leader by group members. The first issue here is whether information transmission to the leader is strategic, that is, whether individuals strategically report riskier or more cautious preferences to the leader, when they are not the one making the decision. When we look at the absolute value of the difference between the communicated risk-taking amount and the actual individual risk taken in the corresponding individual decision round, we find that this difference is non-zero 57.9% of the time, and is significantly different from zero in a Wilcoxon test (p<0.001). In other words, preference communication is overall strategic with respect to individual risk. Moreover, the communicated preference-individual risk difference is significantly positive (Wilcoxon sign-rank test, p=0.02), meaning that individuals overall give riskier recommendations than the risk they take for themselves.[9]

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[9] An alternative measure would be to control for what subjects would have done under similar circumstances if they were the group leader. In our design this is only observable for subjects who ended up being the leader in a group round with the same probability. We therefore use the individual risk measure, which is available for all subjects. However, if we do use the available data for the corresponding group decision, we find similar results: advice-giving is strategic, with p<0.001, and communicated preferences tend to be riskier than subjects' own group decisions (p=0.06).

The next question is the determinants of communicated preferences or recommendations in general, and in particular whether the communicated preferences respond to the leader selection mechanism. A Mann-Whitney test shows that preferences communicated to appointed and self-selected leaders are not significantly different (p=0.94), and a regression that controls for observables such as winning probability and gender as well as session confirms this (Table 8, Column 1). Higher winning probabilities significantly increase the riskiness of preferences communicated to the leader, as expected. Running separate regressions of the determinants of recommendations to appointed and self-selected leaders reveals an interesting interaction with gender: men give riskier recommendations than women when they know the group leader is appointed, controlling for their own risk aversion (Table 8, Columns 2,3). This could be a consequence of the two genders having different expectations about appointed leaders' potential decisions.

< Table 8 here >

3.4.2 Group Risk Decisions with Preference Communication:

Table 9 provides summary statistics on the overall risk taken by leaders across leadership treatments under the availability of preference information. We start by noting that when preference information is available, it is viewed by the leaders in a large majority of the cases (85%), and turn to the questions of (1) whether and how strongly such information affects decisions, and (2) whether its effects interact with the leader selection mechanism.[10]

< Table 9 here >

The first question is whether the two pieces of information/recommendations received from the other group members have a significant impact on the risk taken on behalf of the group. In a regression where we pool all data, we find that the average communicated risk preference indeed has a significant effect on the group risk taken: when the group recommends taking higher risk, actual group decisions are riskier (see Table 10, Column 1).

Further results emerge when we consider the interaction of preference communication with the leadership selection mechanism. Using separate regressions for the impact of preference information on the group

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[10] In unreported regressions, we find that the likelihood of viewing the advice does not depend on our treatment variables.

decisions of appointed and selected leaders, we find that the average risk recommendation from group members has a significant effect on decisions only when the leader is appointed--that is, self-selected leaders' decisions are not affected by the communicated preferences of the group members (Table 10, Columns 2 & 3). These results are robust to using the maximum and/or minimum of the recommendations, instead of the average.[11] They are also robust to controlling for the risk taken in the corresponding individual decision round. These findings show that communication mechanisms will have a significant impact on implemented decisions in groups only if leadership responsibility is exogenously assigned.

< Table 10 here >

We now turn to study in more detail why the two pieces of information transmitted by non-leaders affect or do not affect the leader's decision. If we conceptualize the leader's choice as a compromise between her own preferences and the preferences of the other two individuals, then an important object of interest is how much a leader's choice deviates from or follows the communicated suggestions of others, given her own preferences about what to do.

A proper measure of the true preferences of a leader in the group context is what the leader would have decided for the group, had he/she not known the preferences of others. This counterfactual decision is not directly observable in our design; however, it is possible to proxy it by the risk taken in the corresponding no-communication group rounds with the same probability of winning, at least for individuals who ended up making the group decision in those rounds, voluntarily and/or by appointment. In the following analyses, we use this corresponding group decision whenever it is available, and use the risk taken in the corresponding individual round when not, in constructing a control for the leader's true preferences.[12] Regression models reported in Table 11 study the determinants of the absolute deviation from the average communicated preference, defined as $|choice - (\sum_{j=1}^{2} pref_j / 2)|$, where j is an index for the non-leader group members. Appointed leaders are overall found to be significantly less likely to deviate from the communicated preferences in their choices in every model. As the riskiest preference increases and the most cautious preference decreases, the deviation is larger (Column 3). Including a measure of the difference between the two pieces of information (a measure of the consistency of the group preferences)

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[11] When we include both the maximum and the minimum of the preferences together, both are significant for assigned leaders, and neither is significant for voluntary leaders.
[12] Using either the "corresponding group decision" measure by itself or the "corresponding individual decision" by itself instead of this measure does not change the main result.

also turns out to have a significantly positive effect on the deviation, suggesting that leaders may find it harder to deviate from the group's preferences when they get closer to unanimous (Column 2).[13]

<Table 11 here >

In order to further understand the nature of the deviations from others' preferences, we also separately consider deviations from the maximum (riskier) recommendation and the minimum (more cautious) recommendation. Interestingly, it turns out that self-selected leaders have a significantly larger deviation than appointed leaders from the minimum recommendation but not the maximum (Mann-Whitney test, p=0.04 and p=0.39, respectively). That is, self-selected leaders tend to deviate more easily from cautious recommendations by others, and this result remains in unreported regressions that control for the leader's own risk preference.

In addition to communicating preferences, group members also express their satisfaction with the group decision via a like-dislike message after the decision has been implemented. The likelihood that a non-leader group member expresses a positive sentiment is significantly higher for appointed leaders (p=0.03 in a chi^2 test of proportions), which is consistent with our result that appointed leaders display a more "participative" leadership style.

4. Discussion and Concluding Remarks:

The main insight that comes out of the experiment is that leader selection mechanisms can crucially affect the way both leaders and followers behave, and the differences are especially apparent in group settings where communication of preferences to the leader is possible. Our results indicate that communicated preferences by group members are less likely to have an effect on the decisions made by self-selected than appointed leaders. There could be two reasons why appointed and self-selected leaders behave differently in response to preference communication. First, voluntary leadership might select certain attitudinal characteristics that induce a person to not put too much weight on others' preferences. In fact, Ertac and Gurdal (2012b) study the correlation of personality traits with the willingness to be a leader,

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[13] The result that assigned leaders deviate less from others' preferences is robust to classifying the two recommendations as "unanimously at least as risky", "unanimously at least as cautious", or "divergent", depending on how they compare to the leader's preference. Using the average absolute deviation from each piece of advice (the average of the absolute differences between the actual decision and each communicated preference ($\sum_{j=1}^{2}|choice - prefj|$/2) as the dependent variable also does not change the results.

and find agreeableness to be negatively correlated with leadership willingness.[14] Alternatively, or in addition, the institutional environment may make individuals behave in certain ways. Appointed leaders may feel that since leadership is bestowed upon them in a situation where no group member was ex-ante different in terms of (1) possessing the right of leadership, or (2) expressing a preference for/against leadership, they have a responsibility to take the preferences of the group into account. In contrast, since our setup partially implies delegation of responsibility to the leader by other group members in voluntary rounds (if somebody is a leader in a voluntary round, it is more likely than assigned rounds that others in the group did not wish to be leaders), self-selected leaders may feel more entitled to go with their own preferences when making the group decision. Similar mechanisms might be behind our finding that when the leader acts without knowing the preferences of others, self-selected leaders are less likely to change their individual risk-taking decisions, i.e. are less responsive to the group context.[15]

In terms of group decisions, we find that there is no strong overall tendency towards risky- or cautious-shifting compared to individual decisions. However, communication of preferences to the leader involves a strategic element, and the overall tendency in the information treatment is to communicate preferences that are riskier than individual decisions.

There are also some notable gender effects in the data. In terms of leadership willingness, we find that women are less frequently willing to become leaders than men, consistently with Ertac and Gurdal (2012) and Arbak and Villeval (2011). Among men, we observe that higher probabilities of winning increase the willingness to make decisions on behalf of the group. This could be due to a joy of winning on behalf of the group motive that is similar to the higher estimated pure preference of males for competition as in the gender-competition literature (Gneezy and Rustichini, 2004; Niederle and Vesterlund, 2007), or the higher estimated joy of winning in auctions as in Ertac et al. (2011). It could also be due to expectations of starker preference differences between men and women for the higher probabilities, which are in fact empirically correct given our data. There is also some evidence that male and female followers have a different reaction to appointed leaders--male followers, in particular, make riskier recommendations when the leader is exogenously assigned.

What makes some women opt for leadership and some shy away is an interesting question that is not fully answered by our data. The availability of preference communication mechanisms, for one, does not seem

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[14] Arbak and Villeval (2011) find a small effect of agreeableness in the same direction in their study on voluntary leadership in public good contributions.

[15] Our results are partially in line with Kocher et al. (2009) in that autocratic leadership in response to the team's opinion is positively correlated with a lower likelihood to change one's individual decision in a team context.

to affect the leadership propensity for females. However, our data provide some evidence that repeated exposure to leadership decision environments and/or the experience of assigned leadership can induce women to start self-selecting into leadership more frequently in later periods. Further research should consider alternative institutional factors and policies that might influence this gender gap.

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Table 1: Individual Risk

	All	Women	Men
p = 0.3	2.79(2.44)	2.53(2.03)	2.94(2.64)
	[156]	[57]	[99]
p = 0.5	5.17(2.63)	4.53(2.24)	5.54(2.77)
	[156]	[57]	[99]
p = 0.7	7.72(2.29)	7.12(2.22)	8.07(2.26)
	[156]	[57]	[99]
Overall	5.23 (3.17)	4.73 (2.86)	5.52 (3.31)
	[468]	[171]	[297]

Note: Amount invested as main number, standard errors in parentheses, number of observations in brackets.

Table 2: Determinants of Individual Risk

	Amount Invested
Male	0.63**
	(0.27)
p = 0.5	2.45***
	(0.24)
p = 0.7	5.04***
	(0.28)
Period	-0.04
	(0.03)
Constant	3.30***
	(0.49)
Controls for Session	Yes
N	468
R^2	0.451

OLS regression. Standard errors in parentheses.
$^{*}p < 0.1,\ ^{**}p < 0.05,\ ^{***}p < 0.01$

Table 3: Leadership Decisions

	All	Women	Men
All Periods	0.85 (0.36)	0.76 (0.42)	0.90(0.30)
	[936]	[342]	[594]
Periods without	0.84 (0.37)	0.77(0.42)	0.88(0.32)
Preference Comm.	[468]	[171]	[297]
Periods with	0.86(0.35)	0.76(0.43)	0.92(0.28)
Preference Comm.	[468]	[171]	[297]

Note: Leadership proportions as main number, standard errors in parentheses, number of observations in brackets.

Table 4: Determinants of Willingness to Lead

	All	Women	Men
Male	0.16***	-	-
	(0.04)		
p = 0.5	0.02	-0.02	0.04
	(0.02)	(0.05)	(0.02)
p = 0.7	0.04*	0.01	0.06**
	(0.02)	(0.05)	(0.02)
Communication	-0.02	-0.001	-0.03
	(0.02)	(0.04)	(0.03)
Period	0.006**	0.01**	0.002
	(0.002)	(0.01)	(0.003)
Controls for Session	Yes	Yes	Yes
Observations	936	342	552
Pseudo R^2	0.073	0.099	0.047

Note: Marginal effects from logistic regression reported. Dependent variable: Willing to lead=1, Not willing to lead=0. Standard errors in parentheses. $^* p < 0.1$, $^{**} p < 0.05$, $^{***} p < 0.01$

Table 5: Group Risk without Preference Communication

	All	Appointed	Self-Selected
p = 0.3	2.62 (2.26)	2.54 (2.17)	2.69 (2.36)
	[104]	[52]	[52]
p = 0.5	5.18 (2.31)	5.42 (2.58)	4.94 (1.98)
	[104]	[52]	[52]
p = 0.7	7.38 (2.62)	7.19 (2.69)	7.58 (2.56)
	[104]	[52]	[52]
Overall	5.06 (3.09)	5.05 (3.14)	5.07 (3.05)
	[312]	[156]	[156]

Note: Amount invested as main number, standard errors in parentheses, number of observations in brackets.

Table 6: Leader Risk-taking without Preference Communication

	All	Appointed	Self-Selected
Appointed	0.01	-	-
	(0.23)		
Male	0.36	0.56	0.18
	(0.31)	(0.45)	(0.37)
p = 0.5	2.58***	2.88***	2.41
	(0.30)	(0.45)	(0.36)
p = 0.7	4.75***	4.70***	5.04
	(0.38)	(0.52)	(0.46)
Period	0.05	-0.01	0.11*
	(0.04)	(0.07)	(0.06)
Constant	2.60***	2.75**	2.09**
	(0.77)	(1.12)	(1.05)
Controls for Session	Yes	Yes	Yes
Observations	312	156	156
R^2	0.489	0.450	0.572

OLS regressions. Standard errors in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 7: Choice-shift by Leaders in Periods without Preference Communication

	Shift (Logit: 1:Shift, 0:No shift)	Size of the Shift (OLS)
Appointed	0.11*	0.50**
	(0.05)	(0.19)
Male	-0.03	0.21
	(0.07)	(0.26)
$p = 0.5$	0.11	0.34
	(0.07)	(0.28)
$p = 0.7$	-0.06	-0.12
	(0.07)	(0.27)
Period	-0.005	-0.04
	(0.008)	(0.03)
Constant	-	1.58
		(0.47)
Controls for Session	Yes	Yes
Observations	312	Observations 312
Pseudo R^2	0.045	R^2 0.075

Column 1 reports marginal effects from a logistic regression of shift. Column 2 reports results from an OLS regression of the size of the shift. Standard errors in parentheses. $^*p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

Table 8: Preference Communication to the Leader

	All	Appointed	Self-Selected
Appointed	-0.0260	-	-
	(0.158)		
Male	0.559[**]	1.101[***]	-0.0463
	(0.264)	(0.332)	(0.299)
p=0.5	2.128[***]	2.085[***]	2.248[***]
	(0.274)	(0.365)	(0.328)
p=0.7	4.354[***]	4.449[***]	4.265[***]
	(0.246)	(0.342)	(0.318)
Period	-0.0184	-0.0192	0.00581
	(0.0241)	(0.0469)	(0.0335)
Constant	3.845[***]	3.415[***]	3.815[***]
	(0.562)	(0.720)	(0.482)
Controls for Session	Yes	Yes	Yes
Observations	624	312	312
R^2	0.40	0.42	0.42

Table 9: Group Risk with Preference Communication

	All	Appointed	Selected
p = 0.3	2.87 (2.44)	3.02 (2.43)	2.73 (2.47)
	[104]	[52]	[52]
p = 0.5	5.14 (2.30)	4.85 (2.30)	5.44 (2.30)
	[104]	[52]	[52]
p = 0.7	7.82 (2.05)	7.58 (2.21)	8.08 (1.87)
	[104]	[52]	[52]
Overall	5.28 (3.04)	5.15 (2.97)	5.42 (3.11)
	[312]	[156]	[156]

Note: Amount invested as main number, standard errors in parentheses, number of observations in brackets.

Table 10: Leader Risk-taking with Preference Communication

	All	Appointed	Selected
Appointed	-0.13	-	-
	(0.22)		
Avg. Pref.	0.26***	0.49***	-0.02
	(0.09)	(0.12)	(0.11)
Male	0.42*	0.33	0.72**
	(0.25)	(0.36)	(0.31)
$p = 0.5$	1.50***	0.53	2.51***
	(0.39)	(0.55)	(0.49)
$p = 0.7$	3.80***	2.01**	5.57***
	(0.54)	(0.76)	(0.58)
Period	-0.04	-0.09	-0.01
	(0.03)	(0.07)	(0.05)
Constant	3.85***	1.92	4.38***
	(0.51)	(1.27)	(1.05)
Controls for Session	Yes	Yes	Yes
Observations	265	129	136
R^2	0.581	0.593	0.641

OLS regression. Standard errors in parentheses.
$^{*}\ p < 0.1,\ ^{**}\ p < 0.05,\ ^{***}\ p < 0.01$

Table 11: Absolute Deviation from the Average Communicated Preferences

	(1)	(2)	(3)
Avg.pref.	0.0475	0.0229	
	(0.0832)	(0.0840)	
Appointed	-0.370**	-0.362*	-0.362*
	(0.186)	(0.187)	(0.187)
Own risk	-0.0113	-0.0327	-0.0327
	(0.0679)	(0.0680)	(0.0680)
Male	0.360	0.429*	0.429*
	(0.229)	(0.222)	(0.222)
Variability		0.177***	
		(0.0532)	
Max.pref.			0.189***
			(0.0594)
Min.pref.			-0.166**
			(0.0753)
Period	-0.0285	-0.0365	-0.0365
	(0.0243)	(0.0245)	(0.0245)
p=0.5	-0.425	-0.258	-0.258
	(0.316)	(0.313)	(0.313)
p=0.7	-0.717*	-0.508	-0.508
	(0.409)	(0.420)	(0.420)
Constant	2.103***	1.752***	1.752***
	(0.562)	(0.535)	(0.535)
Observations	265	265	265
R^2	0.07	0.12	0.12

OLS regression. Dependent variable: |group risk-average pref|. Standard errors in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$