

Are entrepreneurs lone wolves?

An experimental analysis of sorting into teams*

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Abstract

Despite sizable potential gains from partnerships, the majority of new ventures are founded by solo entrepreneurs. We conduct a large-scale lab-in-the-field experiment to explore whether this phenomenon is attributable to entrepreneurs' particular preference for individual work. We find entrepreneurs to be as likely to opt for revenue sharing as non-entrepreneurs. Adding a joint asset allocation choice to the team option, we find no evidence that entrepreneurs are more averse to sharing decision rights than others. Our results call into question the widely-held belief that entrepreneurs are 'lone wolves' with exceptionally strong preferences for working individually rather than in teams.

Keywords: field experiment, entrepreneurship, endogenous team formation

JEL codes: C93, L26, M52

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1 Introduction

Our paper is motivated by a puzzling empirical observation: despite sizable potential gains from teaming up, a significant share of new ventures is still founded by solo entrepreneurs (Astebro and Serrano, 2015; Burton et al., 2009; Shane, 2007).¹ The prevalence of solo entrepreneurship is surprising given the multitude of reasons why partnerships could be beneficial, including access to more diverse skills and information (Parker, 2009), increased start-up capital (Beckman et al., 2007; Cooper and Saral, 2013; Fairlie and Robb, 2007), access to support and external financing (Beckman et al., 2007; Franke et al., 2006) and improved decision making by teams (Cooper and Saral, 2013; Kerr and Tindale, 2004).² In view of the considerable potential benefits of teamwork, it is important to understand why so many entrepreneurs forgo the gains associated with teaming up.

Admittedly, there are potential costs associated with team start-ups: there are search costs attached to finding a partner, and even if a suitable partner is found, team synergies do not always occur naturally or costlessly (e.g., Faraj and Sproull, 2000; Lazear, 1999; Mäs et al., 2013). Other drawbacks of teamwork include issues related to moral hazard such as free riding (Holmstrom, 1982) or, specific to entrepreneurial start-ups, idea expropriation (Astebro and Serrano, 2015). In recent years, a new explanation has been put forth by Cooper and Saral (2013): entrepreneurs avoid teams due to their strong preferences for individual work. Their reasoning echoes the popular notion that entrepreneurs are “lone wolves” who derive utility from being independent (Blanchflower and Oswald, 1998; Reynolds and Curtin, 2008).

From a policy perspective it is crucial to distinguish between the above mentioned explanations. If founders are restricted in their networks (as suggested by Ruef et al. (2003)) or it is costly for them to find partners with the appropriate complementary assets (Astebro and Serrano, 2015), then there is room for improvement by targeted interventions to facilitate team start-ups. However, if the primary motive for being a solo entrepreneur is an aversion to working in teams (as proposed by Cooper and Saral (2013)), then such policies are unlikely to succeed. In this paper we aim to explore the behavioral motives of entrepreneurs for joining or avoiding teams. By conducting an artefactual field experiment (Harrison and List, 2004) where network constraints play no role and search costs are eliminated by design, we are able to focus on the impact of preferences and beliefs on the choice to join teams.

Our experimental design is informed by results from the literature on endogenous team formation, combined with insights on behavioral traits of entrepreneurs. Perceived gains from joint production are crucial determinants of the sorting decision, and are influenced by beliefs about one’s performance: predicted (absolute and relative) ability is found to be negatively related to the willingness to join a team (e.g. Kuhn and

¹Burton et al. (2009), using data from the Panel Study of Entrepreneurial Dynamics, and Astebro and Serrano (2015), analyzing data from the US Small Business Administration both find that around 50-60% of new ventures are established by a single individual. Even though the last two decades have seen a strong shift away from solo entrepreneurship towards team start-ups (Astebro and Serrano, 2015; Klotz et al., 2014), these teams mainly consist of two people and are very often formed with spouses or family members (Ruef et al., 2003).

²Using propensity score matching to alleviate endogeneity concerns, Astebro and Serrano (2015, p. 231) estimate the economic benefits of having partners with complementary assets and find that “partnerships double the probability of commercialization and increase revenues by 29% at the sample mean”.

Villeval, 2014). Risk exposure is also a critical factor in the decision to join teams. As Bäker and Mertins (2013) explain, teamwork reduces the risk from individual idiosyncratic shocks such as luck, motivation or distraction, but it introduces the “strategic” risk of being matched with a co-worker of unknown ability. In a lab experiment they find the second channel to be more important, implying that risk aversion should decrease the willingness to sort into teams. Another relevant aspect of teamwork is that it reduces payoff autonomy, potentially making teams unattractive for individuals with a high desire for control (Owens et al., 2014).

While the above factors mostly pertain to teams that involve joint production, real life team situations often entail joint decision making as well. Kocher et al. (2006), using a beauty-contest game to study preferences for individual or group decision making, find that the majority of participants prefer the latter. Masclet et al. (2009) show that those who expect larger compromises as a result of team choices tend to pay more to avoid joint decision making. Interestingly, Fehr et al. (2013) and Bartling et al. (2014) find evidence that decision rights carry intrinsic value beyond their instrumental benefits. Based on their result we expect those with a greater need for power to dislike teams involving joint decision making even in the absence of a conflict of interest between the team members.

Combining the above insights with results on the behavioral attributes of entrepreneurs we can derive predictions for their team choices. We start with the most prevalent observation dating back to Knight (1921) that entrepreneurs have a higher tolerance for risk than the general population.³ Since risk aversion is expected to be negatively correlated with preferences for teamwork, this channel predicts that entrepreneurs are *more* likely to choose team production than others. Another empirical stylized fact is that entrepreneurs tend to be more (over)confident than non-entrepreneurs (Astebro et al., 2014; Hmieleski and Baron, 2009; Puri and Robinson, 2013). If entrepreneurs are indeed more prone than others to overestimate either their own performance or their relative rank compared to their potential teammates, then the gains they expect from team-based remuneration will be smaller, leading to a *lower* willingness to join teams. It is ex ante unclear which of these two channels (i.e., risk attitude or beliefs about performance) will dominate. However, if entrepreneurs have a strong preference for independence and attach a particularly great value to autonomy, as often suggested in the literature (Benz and Frey, 2008; Reynolds and Curtin, 2008), we can hypothesize that *all else equal* (i.e. controlling for productivity, risk preferences and beliefs concerning ability) they are less likely to sort into teams.

When it comes to joint decision making, there are different reasons why entrepreneurs might be particularly averse to teaming up. First, entrepreneurs tend to perceive themselves as relatively more risk tolerant (Koudstaal et al., 2016). This belief may translate into the expectation of being teamed up with a less risk tolerant partner, leading to a large anticipated compromise in the joint asset allocation choice that in turn reduces their willingness to join teams. Second, entrepreneurs are hypothesized to attach especially high intrinsic value to decision rights (Bartling et al., 2014), suggesting that we should observe a greater tendency among entrepreneurs to avoid sharing decision rights regardless of the expected outcome of the joint decision making process.

³While this “common wisdom” has been confirmed recently by e.g. Holm et al. (2013), Koudstaal et al. (2016) only find entrepreneurs to be unique in their lower degree of loss aversion, and not in their risk or ambiguity aversion.

In order to test the above predictions we conduct a large scale incentivized online experiment among entrepreneurs (N=400), managers (N=155) and employees (N=609) in the Netherlands. The experiment consists of four incentivized parts. In the first part, we assess participants' productivity in a real-effort task. In the second part, we measure our subjects' risk preferences through an allocation choice between a safe and a risky asset. In the third part, we use an incentive-compatible bidding mechanism to elicit participants' willingness to pay for the team option. Participants are randomly assigned to one of the two treatment conditions that differ in whether the team option entails only joint production (where payoffs reflect synergies between the members' output) or also joint decision making (where participants decide on the asset allocation choice together). In the fourth part of the experiment we measure participants' beliefs regarding their own performance as well as the performance and the asset allocation choice of their potential teammates. These four incentivized parts are followed by a short questionnaire collecting background information. To answer our research question, we compare the willingness to join a team between the three occupational categories for each treatment.

Overall, our results suggest that participants respond to the potential monetary gains associated with teams: close to 90% of respondents have a positive willingness to pay for the option to form a team in both of our treatments. In line with previous literature on endogenous team formation we find that behavioral traits are important determinants of the team choice. Controlling for actual task performance, risk aversion and beliefs about absolute and relative performance all affect participants' bids for the team option in the hypothesized directions (Bäker and Mertins, 2013; Kuhn and Villeval, 2014). We also confirm Kuhn and Villeval (2014)'s result that men are as likely as women to join teams in the presence of efficiency gains. A between-treatment comparison of participants' willingness to pay for the team option reveals that shared decision rights make teams unappealing for those who expect the joint asset allocation choice to be different than their individual preferred allocation (Masclot et al., 2009).

Our findings, however, provide no support for the 'lone wolf' hypothesis that entrepreneurs have a particular taste for individual work. If anything, a raw comparison shows that entrepreneurs pay slightly *more* than employees for the possibility to join a team, while there is no significant difference between entrepreneurs and managers. A regression analysis reveals that entrepreneurs' higher willingness to pay compared to employees is fully explained by differences between the two groups in demographic characteristics (in particular, level of education). Controlling for measures of risk preferences and performance beliefs, we find no indication that entrepreneurs are less inclined to join a team than others *ceteris paribus*. Furthermore, there is no support in our data for entrepreneurs being more averse to group decision making than other participants, and they do not respond differently to a potential compromise in the asset allocation choice than members of the other groups.

We know of only two other papers that consider entrepreneurs' decisions to join teams in incentivized experimental settings. Masclot et al. (2009) focus on individual and team decisions over risky gambles, while Cooper and Saral (2013) analyze a team production setting. Both above-mentioned studies are based on relatively small samples. In Masclot et al. (2009), the total number of participants is 144, 48 of whom are

salaried workers and 14 are self-employed, whereas the subject pool in Cooper and Saral (2013) consists of 184 individuals of whom 29 are full-time and 15 are part-time entrepreneurs.

We build on these important exploratory studies and extend them along several dimensions. First, we study a large and diverse subject pool of 1,164 individuals. We find that the 400 entrepreneurs who agreed to participate in our study are relatively more successful; that is, they have a higher income, more years of schooling, and are more likely to run mature and successful businesses than the population of entrepreneurs in the Netherlands on average. Arguably, our participants are entrepreneurs in the Schumpeterian sense (Schumpeter, 1934, 1942) and are therefore more likely to foster innovation and economic growth (Aghion and Howitt, 2006), making them particularly interesting to study from a policy perspective.⁴ Additionally, the size of our sample of entrepreneurs allows us to study the preferences of different subgroups of entrepreneurs (founders, majority shareholders, etc.) separately. The remainder of our sample consist of managers as well as employees. As Koudstaal et al. (2016) argue, a control group of managers might be more appropriate for such comparisons because they tend to be similar to entrepreneurs both in terms of demographic characteristics as well as in the tasks their jobs involve (Brockhaus, 1980; Holm et al., 2013).⁵ We also find evidence in our sample that entrepreneurs and managers are very similar to each other in terms of age, education, income and experience, whereas employees in our study tend to be different along these dimensions. Thus, constructing a double control group of managers and employees facilitates a cleaner test of behavioral differences between entrepreneurs and others, and at the same time maintains the comparability of our results to existing studies that rely on a more general sample of the population as a control group (e.g., Djankov et al., 2005, 2006).

Besides these appealing features of our sample, we also contribute to the literature on endogenous team formation by combining within one study the two features of teamwork that have so far only been analyzed separately: joint production and joint decision making. This aspect is particularly relevant for entrepreneurs who often face a trade-off between attracting the resources required to build company value and retaining autonomy in decision making (Wasserman, 2016). Finally, we introduce a novel team production function that rewards complementarities between the teammates' outputs. In most existing experimental studies on endogenous team formation, the team option is modeled as a simple revenue sharing contract, e.g. an equal split of the pooled total output of the members (Bäker and Mertins, 2013; Dohmen and Falk, 2011; Herbst et al., 2015) or with a pre-defined, automatic mark-up on top of the joint output (Cooper and Saral, 2013; Kuhn and Villeval, 2014). Our approach is a unique addition to the literature that allows participants to benefit from teaming up even with a less able partner provided that there are complementarities between their outputs, and at the same time does not automatically guarantee an efficiency gain but makes it conditional on the 'match' between teammates.⁶

⁴Similar to Levine and Rubinstein (2016), we consider someone an entrepreneur in the Schumpeterian sense if they "undertake costly and risky investments to develop better goods, services, and production processes, with corresponding effects on factor markets and economic growth". In our specific context, these are the more successful entrepreneurs with an incorporated firm, above-median income or above-median number of employees (see Koudstaal et al. (2016)).

⁵Consider, for instance, that both entrepreneurs and managers are responsible for taking strategic decisions and for managing subordinates (if they have any).

⁶In Hamilton et al. (2003)'s field experiment the team option entails synergies - however, showing the existence of complemen-

The rest of this paper is structured as follows. Section 2 introduces the context and design of the experiment. Section 3 contains an overview of the data and the descriptive statistics. Section 4 presents the main results of the study, while Section 5 provides a discussion of the results. Section 6 concludes.

2 Context and Design

2.1 Context

Our study was conducted as the fourth wave of an extensive scientific project studying various behavioral traits of entrepreneurs, managers and employees in the Netherlands. Each wave of this project encompasses a large-scale lab-in-the-field (or, in the terminology of Harrison and List (2004), *artefactual field*) experiment in the form of an online incentivized survey. The waves all have a different focus: risk and uncertainty (Wave 1, October-November 2013), confidence and optimism (Wave 2, May 2014), intuitive vs. rational decision making (Wave 3, December 2014) and preference for teams (Wave 4, discussed in this study). A detailed description of the general project and the results of the first wave may be found in Koudstaal et al. (2016).

We follow the definitions outlined in Koudstaal et al. (2016) to classify survey participants into occupational categories. Entrepreneurs are defined as having founded, inherited or taken over a company that they currently (co-)manage and of which they have at least 5% of the shares.⁷ In Section 4 we also explore different, stricter definitions for being an entrepreneur. Managers are employed by an organization they did not start up themselves and have at least two subordinates for whom they are directly responsible (i.e. “direct reports”). Finally, we consider someone an employee if they are employed by an organization they did not set up themselves and have less than two direct reporting lines.⁸

Our survey was conducted in the spring of 2015. To recruit participants for our study, we used the following channels: we contacted entrepreneurs with the help of “Synpact”, a large organizer of entrepreneurship events, while managers were contacted via “De Baak”, a highly reputed training institute for managers. For the recruitment of employees we collaborated with a Dutch market research agency.⁹ 15,000 entrepreneurs, 4,131 managers and 8,000 employees were sent an invitation to participate in our study, and 1,164 individuals (400 entrepreneurs, 155 managers and 609 employees) completed our online survey. Thus, we have

tarities is one of their results, not a feature of their experimental design.

⁷Five percent is the cutoff ownership that the tax authority consider ‘a substantial interest’.

⁸We also regard project managers as ‘managers’ whenever they have overall responsibility of their project and at least two direct reporting lines. Survey participants who belonged to multiple occupational categories were instructed to select the one generating most of their income. The 34 participants in our survey who reported they did not belong to either of the three above occupational categories were excluded from analysis.

⁹Since these are the same channels used to recruit participants in the earlier waves of the scientific study mentioned above, there is considerable overlap in the subject pool of our study and the previous waves, especially among entrepreneurs and managers. Approximately half of our respondents (492 people) participated in one or more of the earlier waves, but only 67 individuals completed all four surveys of the general project. There is little difference in terms of demographic characteristics between respondents who participated before and those who were new to the project (the gender composition and the level of education is similar in the two groups, but “new” participants are on average 2.5 years younger), and we found no significant difference in their performance or choices in our survey.

an overall response rate of 4.3%, slightly lower than the response rates observed in previous waves of the project, but comparable to European response rates in e.g. Graham et al. (2013).¹⁰

Since our respondents belong to the working population and many of them have high income, the relatively low earnings used in traditional laboratory experiments with student subjects were unlikely to provide proper incentives for them. Instead, we decided to offer very high prizes (that were contingent on decisions in the survey) to twenty randomly selected prizewinners. Such an approach is common in the literature and should produce similar results as when paying out all participants (see e.g. Gneezy and Rustichini (2000) and Laury (2006)).¹¹ The payment structure was clearly communicated to participants at the beginning of the survey, together with the assurance that prizewinners would be drawn by a civil-law notary. Prizewinners earned on average €330.58 with a minimum of €148 and a maximum of €785.¹²

Participants spent on average 13 minutes completing the survey that was designed and pre-tested to take approximately 15 minutes, suggesting that they took the tasks and choices seriously. The survey was conducted in Dutch.¹³

2.2 Design

Our experiment consisted of four incentivized parts: a production phase, an asset allocation choice, a choice between an individual or a team option, and an evaluation phase; followed by a non-incentivized background questionnaire. We begin with a short overview of each part of the survey, then discuss in detail the elicitation of team preferences.

2.2.1 Overview of the survey

Upon starting the survey, respondents received information on the payment structure and answered questions about their occupation, gender, age and education before they began the payment-relevant tasks. The first incentivized part of the experiment entailed a real-effort task: participants had 10 minutes to solve 10 puzzles from the Raven Advanced Progressive Matrices (Raven et al., 2003). This task required participants to complete puzzles consisting of three rows of three figures where the bottom-right figure was missing (see Figure A1 in Appendix A). Performance on this task provides a proxy for cognitive ability, as Raven matrices are developed to serve as a “culture-free IQ test” (Herz et al., 2014, p.5). The task is particularly suited for

¹⁰Unfortunately, we only have limited information on the characteristics of non-respondents in our study: the only two dimensions along which we can compare respondents to non-respondents are age and gender. We find no significant differences between the two groups in terms of these characteristics. Furthermore, we find it encouraging that we do not observe any major significant differences in background characteristics between the respondents of the four different waves conducted within the same research project.

¹¹Intuitively, such a payment structure announced up front may attract the more risk tolerant members of the potential subject pool, leading us to underestimate differences between occupational categories in terms of risk preferences. As we see in Section 3, these concerns do not seem relevant in our setting.

¹²The *ex post* chance of being paid out was approximately 1 in 58. To alleviate the concern that participants *ex ante* might hold different beliefs about the likelihood of being a prizewinner, they were informed at the beginning of the survey that the chance of being paid out had been approximately 1 in 100 in earlier research waves (e.g. in Koudstaal et al. (2016)).

¹³Both the original and a translated version of the full survey is available from the authors upon request.

online applications since correct solutions are not easily found on the Internet. Participants faced individual piece rate incentives of €40 per correctly solved puzzle. Feedback on performance was not provided until the very end of the survey.

Part 2 of our experiment consisted of an asset allocation choice that served to measure participants' risk preferences. Following the method of Gneezy and Potters (1997), respondents were asked what share of their Part 1 earnings they were willing to invest in a risky gamble that offered a 67% chance that the money invested would be lost and a 33% chance to win two and a half times the amount invested (on top of the investment). Subjects made their asset allocation choice using a slider, as shown in Figure A2 in Appendix A.¹⁴

In Part 3, the key element of our survey, we offered respondents the chance to form a team with another randomly chosen survey participant. Notably, respondents were randomly assigned to one of the two treatment conditions that differed in what the team option entailed: in one treatment the team option only involved joint production (i.e. revenue sharing with a payoff function that acknowledges synergies) while in the other treatment it also included joint decision making (i.e. a potential compromise in the asset allocation choice). The details of the team option and our elicitation technique are presented in Section 2.2.2.

In Part 4 of the survey we measured participants' beliefs about the number of puzzles they and their potential teammate solved correctly in Part 1. We also let respondents guess their potential partner's Part 2 asset allocation choice. All three belief elicitation questions were incentivized: participants received €20 for correctly guessing their own and their teammate's performance on the Raven task, and could earn another €20 when their guess for their partner's investment decision was less than five percentage points away from the true value.

After the four incentivized parts, the survey concluded with a questionnaire designed to provide insight into respondents' decision making process and to collect some background characteristics. First, participants were asked to select from a list of possible explanations the option(s) that described their Part 3 choice the most accurately. The list was based on the most common answers respondents provided in a pilot survey, and included options such as "*I believed the team option could increase my earnings.*", "*I did not want to take too much risk.*", "*I thought I solved more puzzles correctly than other participants.*" etc. Respondents then answered background questions specific to their occupational categories. Entrepreneurs reported the legal structure of their companies, whether they were founders, the number of their employees and the share they owned in their companies. Managers reported whether they were general or project managers, whether they were the CEOs of their organization, and the number of their direct reports. All respondents were asked to report the years of professional experience they had in their current occupational group, and to select the income category they belonged to (with the option to keep this information private).

¹⁴While this method is not able to differentiate between risk loving and risk neutral subjects (the expected return on the gamble is positive, so already a risk neutral subject should invest everything), it is a simple, quick and easy-to-understand method for measuring different degrees of risk aversion and has been widely used in the literature, see e.g. Dreber et al. (2011) and Charness and Gneezy (2012). Participants report the share of their earnings to be invested because the exact amount they earned is not known to them at this stage. We assume risk preferences to be stable traits (Dohmen et al., 2011) and thus do not expect the actual level of Part 1 earnings to influence participants' investment choices. In a regression analysis explaining respondents' investment choices we find support for this assertion - results are available from the authors upon request. We also confirm in Section 4.1 that choices in the survey were unaffected by the slider's default option.

2.2.2 Details of the team choice

This section reviews in detail the core of our experiment: eliciting the willingness to participate in a team. As mentioned before, in the third part of our survey respondents chose between an individual and a team remuneration scheme. Specifically, respondents were asked whether they wanted to keep their individual piece rate earnings from the real effort task of Part 1 or form a team with another survey participant instead. Note that by asking participants to choose a remuneration scheme *ex post* for their Part 1 performance, we ruled out free-riding by design. This decision was motivated in part by practical concerns: a second ‘production’ phase would have considerably increased the length of our survey and would have potentially resulted in lower completion rates. Second, eliminating free riding opportunities allowed us to abstract away from strategic concerns and higher order beliefs, making our design cleaner and the results easier to interpret. We discuss this choice in more detail in Section 5.

Using a between-subjects design, we randomly assigned respondents to one of the two treatment conditions that only differed in the content of the team option. We performed a stratified randomization by gender and occupational categories to ensure that we can analyze these subsamples separately. Table 1 provides an overview of the design. In the Joint Production treatment, the team option only affected the earnings from the real effort task but not the investment decision from Part 2. The Joint Decision treatment, on the other hand, entailed both joint production and a joint investment decision: in the team option, the share invested in the risky bet was determined as the unweighted average of the two teammates’ individual choices in Part 2. Hence, the team option in this treatment entailed the possibility of being moved away from one’s individual utility-maximizing risk exposure.¹⁵

Table 1: SUMMARY OF THE TREATMENT CONDITIONS

	Team option influences:	
	Earnings from Raven puzzles	Asset allocation choice
Joint Production treatment	✓	
Joint Decision treatment	✓	✓

A distinguishing feature of our design is the introduction of conditional efficiency gains in team production. In many real life settings gains from joint production are *ex ante* unknown and depend on the degree of complementarities between the team members. Previous studies on endogenous team formation, however, modeled team remuneration either as an equal split of the team output, or involved an arbitrary, pre-defined mark-up to capture efficiency advantages. We extend the literature by introducing a team production function that allows, but does not guarantee, synergies from joint production.¹⁶ In particular, participants in our

¹⁵In our design, there is no scope for the ‘wisdom of crowds’. Since the decision is related to individual preferences, there is no single ‘correct’ answer. Team decision making thus does not help the members to achieve a more efficient outcome: individual choice in our setting is always weakly preferred to the group choice. We do not model the bargaining process either, i.e., the compromise that results from the joint decision making is always the unweighted average of the two members’ individual choices.

¹⁶A drawback of our design choice is that the size of the potential gains from the teamwork are *a priori* unknown, and we do not

experiment received the following instruction regarding earnings in the team option: “*You get €40 for each puzzle that **either you or your teammate** solved correctly in Part 1. Therefore your earnings in the team option are always at least as high as in the individual option, and higher in case your teammate solved more/different puzzles correctly than you did*”. To ensure that the set-up was clear to all participants, we provided numerical examples on how the team option could affect earnings and investment decisions (see Figure A3 in Appendix A).

Participants were informed that their teammate would be randomly drawn from the total sample of survey respondents. To fix beliefs, we explicitly mentioned that their potential partner was equally likely to belong to either of the three occupational categories (entrepreneur, manager or employee).¹⁷ Participants received no feedback at any point in the survey about the identity, performance or decisions of their potential teammate.

Instead of a binary choice between the individual and the team option, we elicited participants’ willingness to pay for the team option by means of a BDM mechanism (Becker et al., 1964). This allowed us to obtain a continuous measure of team preferences in an incentive-compatible manner. Specifically, we gave each respondent an endowment of €50 that they could either keep or use to bid for the possibility to be in a team.¹⁸ Participants were informed that the actual price of the team option would be randomly drawn from the interval [€1,€50] at the notary after the survey was closed. Teams were only formed if both potential team members submitted a bid that was at least as high as the actual price. Team formation thus required mutual consent. Bids only had to be paid in case subjects actually formed a team. Participants were reminded that it was in their best interest to report their preferences truthfully.

3 Descriptive statistics

The aim of this section is to provide a general overview of our data. Our sample is comprised of the 400 entrepreneurs, 155 managers and 609 employees who have completed our online survey. 588 respondents experienced the Joint Production and 576 the Joint Decision condition, and the two treatments were balanced along observable dimensions. In the following, we describe our respondents along demographic variables (Panel A of Table 2), then continue with a summary of their survey choices (Panel B of Table 2).

The main take-away from Panel A of Table 2 is that differences in demographic characteristics between entrepreneurs and managers, although statistically significant, are rather small in size, while employees

observe participants’ beliefs about the size of these gains.

¹⁷When assigning potential teammates to our 20 prizewinners we used weighted probabilities to ensure that the chance for being paired with a teammate from either of the three categories was indeed the same despite their share in the subject pool being different. After bidding for the team option in the above-described scenario where the potential teammate was randomly drawn from among all survey participants, respondents were asked a second question eliciting their willingness to pay for teaming up with a partner from their own occupational category. We relegate the discussion of these answers to a separate paper. Since the second scenario was only introduced after participants made their choice in the first one, answers in the first scenario - analyzed in this study - are unaffected.

¹⁸In this setting the team option weakly dominates the individual option in terms of expected payoffs, and bidding zero always ensures that a respondent is paid on the individual basis. To keep the choice as simple as possible we decided not to allow negative bids.

differ substantially from both groups along all dimensions. Entrepreneurs and managers in our sample tend to be older: they are on average 50.29 and 48.30 years old, respectively, compared to a mean age of 43.25 for employees. Entrepreneurs and managers report fewer years of work experience (approx. 14 years in each group) than employees (close to 22 years). These differences result primarily from the fact that we consider professional experience *in the given occupational category*, and neither entrepreneurs nor managers tend to start in their current categories immediately after finishing school. The share of female respondents is rather low among entrepreneurs and managers: just over a quarter of the entrepreneurs and 37% of the managers are women, while the sample of employees is completely balanced by gender.¹⁹

Table 2: DESCRIPTIVE STATISTICS

	Entrepreneurs (N = 400)		Managers (N = 155)		Employees (N = 609)		Comparisons	
	mean	std. dev.	mean	std. dev.	mean	std. dev.	ENT vs. MAN p-value	ENT vs. EMP p-value
<i>Panel A: Demographic characteristics</i>								
Age	50.29	9.65	48.30	8.47	43.25	11.72	0.018**	0.000***
Professional experience (years) ^a	13.77	7.92	14.00	9.84	21.77	11.70	0.801	0.000***
Female (dummy)	0.26	0.44	0.37	0.49	0.50	0.50	0.010***	0.000***
Years of education	16.75	1.60	17.30	1.15	16.09	1.68	0.000***	0.000***
Gross annual income (€) ^b	79248.77	79142.74	80448.72	36684.3	34476.63	20466.01	0.898	0.000***
<i>Panel B: Survey choices</i>								
Puzzles correct (actual) (0-10)	5.28	2.20	6.06	1.95	4.58	2.24	0.000***	0.000***
Puzzles correct (guess) (0-10)	6.18	1.76	6.27	1.99	5.29	2.01	0.654	0.000***
Overestimation (-10-10)	0.91	1.85	0.21	1.76	0.71	2.02	0.000***	0.112
Partner's correct (guess) (0-10)	5.63	1.33	5.82	1.39	5.40	1.57	0.152	0.013**
Relative performance (guess) (-10-10)	0.55	1.65	0.45	1.59	-0.12	1.92	0.4912	0.000***
Investment in risky gamble (0-100)	52.70	26.72	52.34	28.87	40.51	25.53	0.893	0.000***
Partner's investment (guess) (0-100)	48.44	19.28	51.07	18.16	45.22	19.37	0.133	0.010**
Diff. in investment (guess) (-100-100)	4.27	27.22	1.27	29.26	-4.71	25.03	0.271	0.000***

^aObservations for this variable are missing for 42 respondents.

^bObservations for this variable are missing for 391 respondents.

Notes: Overestimation denotes the difference between a participant's true score and his/her guessed number of correct answers (positive numbers indicate overconfidence). *Relative performance (guess)* denotes the difference between participants' guess for their own score and their guess for the score of a randomly selected other survey participant (positive numbers indicate a belief of higher relative performance). *Diff. in investment (guess)* denotes the difference between a participant's own investment choice and his/her guess for the investment of a random other survey participant. Pairwise comparison of means from t-tests with unequal variances: *** p<0.01, ** p<0.05, * p<0.1

In our sample managers are on average the highest educated, followed by entrepreneurs and employees. The first panel of Figure B1 in Appendix A compares the distribution of educational attainment between occupational categories and shows that entrepreneurs are most likely to have completed college education, while the modal category among managers is a university degree. The share of participants without tertiary education is the highest among employees.

Studying our respondents' income, we find support for the empirical stylized fact that entrepreneurship is an activity with a large variance in returns (Astebro et al., 2014): while the mean earnings of managers and entrepreneurs are not significantly different, the standard deviation is much higher among entrepreneurs.²⁰ Panel B of Figure B1 confirms that the most frequently selected income category is the same among both

¹⁹ As mentioned before, employees were recruited via a market research agency, and the sampling aimed for gender balance.

²⁰ This result, however, should be treated with caution as almost half of the entrepreneurs and managers in our sample chose not to report their income.

entrepreneurs and managers (€75,001 - 125,000), but entrepreneurs are more likely than managers to fall into either the highest or the lowest income categories, in accordance with observations by e.g. Hamilton (2000). The modal income category for employees in our sample is €25,001 - 50,000 per annum. It is interesting to note that the average salary income for employees in the Netherlands in 2014 was approximately €36,900, which is remarkably close to the mean income reported by employees and substantially lower than the average salary of entrepreneurs or managers in our sample.²¹ Chi-square tests (unreported) confirm that differences between occupational categories in terms of education and income are highly significant.

Table 3: ENTREPRENEURS' CHARACTERISTICS

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>
Number of employees ^a	14.22	1	0	1000
Experience (years) ^b	14.00	13	0	52
		Yes		No
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Founder ^a	321	80.25	62	15.50
Incorporated	188	47	212	53
Majority shareholder	263	65.75	137	34.25
Self-employed (no employees) ^a	77	19.25	306	76.50
Survival phase (0-5 years) ^b	91	22.75	281	70.25

^a Observations for these variables are missing for 17 entrepreneurs.

^b Observations for these variables are missing for 28 entrepreneurs.

Before discussing respondents' survey choices, we provide some additional details on entrepreneurs' characteristics in our sample. As shown in Table 3, there is great variation among our respondents in how many people their firms employ: while the mean number of employees is 14.22, the median respondent employs only one person and the maximum number of employees reported is 1000 (see Figure B2 in Appendix B for the full distribution). Professional experience varies between less than a year and 52 years, with a median of 13 years. The vast majority of respondents are founders of their company (a commonly used stricter definition of entrepreneurs): only 15.50% reported to have inherited, taken over or joined the firm they currently manage. About half of the entrepreneurs have firms that are incorporated, and two-thirds are majority shareholders in their company. Less than a fifth of entrepreneurs fall into the category of self-employed without employees. Finally, approximately 23% of the entrepreneurs in our sample have young firms in the survival phase (i.e. firm age between 0 and 5 years).

An important question is, of course, to what extent the entrepreneurs in our sample are representative of the population of Dutch entrepreneurs at large. To this end, we compare the entrepreneurs in our sample to the population of entrepreneurs in the Netherlands in terms of several key individual and firm characteristics.²² At the individual level, we find that female entrepreneurs are underrepresented, with a share of

²¹Source: Statistics Netherlands (www.cbs.nl)

²²Information on the characteristics of Dutch entrepreneurs was collected via: <http://mkbstatline.cbs.nl>, a data portal provided by Statistics Netherlands, and a yearly report by the Chamber of Commerce on entrepreneurial activity in the Netherlands (see: www.kvk.nl/advies-en-informatie/overheid/economisch-inzicht-met-data-van-de-kvk/jaaroverzicht-ondernemend-nederland).

26% in our sample compared to 34% in the whole population. Furthermore, entrepreneurs in our sample are slightly older than the average Dutch entrepreneur, i.e. a mean of 50 v.s 46 years. Our sample also seems to be higher educated with almost 50% (25%) of our entrepreneurs having a college (university) degree compared to an average of 25% (14%) among Dutch early stage entrepreneurs.²³ Entrepreneurs in our sample tend to have higher earnings, i.e. a mean of €79,248 compared to €36,100 for the average full-time entrepreneur in the Netherlands. One interpretation of this finding is that either “Synpact” or our study in particular has attracted the more successful entrepreneurs. Alternatively, it is also possible that low-income entrepreneur participants decided not to report their incomes in our survey. However, even when setting the missing incomes to zero, we still find an average income estimate of €40,000 for entrepreneurs. Moreover, entrepreneurs typically underreport their incomes in surveys (Hamilton, 2000), supporting our argument that we oversampled successful entrepreneurs. The comparison of the firm level characteristics confirms this notion even further. For example, the share of self-employed (with no employees) is only 19% in our sample, compared to 52% in the overall population (excluding part-time entrepreneurs). The share of incorporated businesses is also much larger in our sample, i.e., 47% vs. 22% in among all firms registered in the Netherlands in the 2015. Furthermore, the companies in our sample seem to be older, with only 22.75% being in the survival phase, compared to 35% in the population.

These comparisons show that the entrepreneurs in our sample own larger, more mature and more successful business. Arguably, this makes our study more interesting from a policy perspective. These are the entrepreneurs in the Schumpeterian sense (Schumpeter, 1934, 1942) and therefore the most likely to foster innovation and economic growth (Aghion and Howitt, 2006). As such, our study provides an important extension to the existing studies that relate mostly to self-employed entrepreneurs (e.g., Cooper and Saral, 2013; Masclet et al., 2009)

Returning to Table 2, Panel B allows us to assess the actual and perceived performance, risk preferences and beliefs of entrepreneurs compared to the rest of our sample (we postpone the discussion of team bids, our main variable of interest, until Section 4). We find that entrepreneurs perform worse on the real-effort task than managers (they solve on average 5.28 puzzles out of 10, while managers have a mean score of 6.06) but better than employees who answer 4.58 puzzles correctly - differences that are highly significant according to t-tests. The second and third rows of Panel B show that entrepreneurs are prone to overestimation (Moore and Healy, 2008): on average, their guessed performance exceeds their true score by almost 1 puzzle.²⁴ Employees similarly overestimate their absolute performance, while managers are rather accurate in predicting their absolute scores. According to the fourth and fifth row of Panel B, entrepreneurs and managers believe they score higher than a random other survey respondent, while employees do not. As shown in row 6, entrepreneurs and managers are very similar in terms of their risk preferences (both groups invest on average 52% of their earnings in the risky gamble), while employees are substantially more risk averse. Finally, entrepreneurs’ mean guess for their teammate’s investment in the risky bet is 48.44%, which

²³Information on educational attainment is missing for 64% of the entrepreneurs captured by Statistics Netherlands. Hence, for this variable we rely on information provided in the national report of the Global Entrepreneurship Monitor (GEM) 2013.

²⁴See Benoît et al. (2015) for an extensive discussion on the different measures for overconfidence and their limitations.

is significantly lower than their own investment choice, indicating that they consider themselves more risk loving than others in the survey population. Employees, on the other hand, predict that they invest less than a random other participant would in the risky bet. Figure B3 in Appendix B shows, separately by occupational groups, the distribution of expected differences between one's own allocation choice and that of a randomly chosen survey participant. For both entrepreneurs and managers, the median gap is zero. In all three categories, the majority of respondents expect a relatively small difference in investment choice: the share that expected a gap of more than 50 percentage points (in either direction) is small.

4 Results

We start our analysis of selecting into teams in Section 4.1 by studying behavior in the Joint Production condition where the team option affects participants' earnings from the real-effort task but leaves their asset allocation choice unchanged. This treatment allows a straightforward comparison of our results with studies on endogenous group formation focusing exclusively on revenue sharing. In Section 4.2 we then estimate how a joint asset allocation choice affects preferences for teaming up by comparing the willingness to pay for the team option between the Joint Production and the Joint Decision treatments. Throughout the analysis we test for differences between entrepreneurs, managers and employees in their attitudes towards teams.

4.1 Preferences for team production

The mean bid for the team option in the Joint Production treatment was €28.00 with a standard deviation of €16.32 (remember that participants could bid any amount between 0 and €50). Figure 1a shows the distribution of participants' bids. The majority of respondents had a positive willingness to pay for the possibility to form teams: little more than 10% of the participants chose to bid zero and 18% was willing to pay the maximum possible amount, €50 for the team option. Even though bids were reported using a slider, respondents were still inclined to choose "round" numbers, i.e. multiples of five and especially ten. We see no indication of participants being biased by the slider's default setting: €25, the default option is only the fifth most popular choice. According to our exit survey, monetary considerations were the most important in explaining participants' team choices: in line with Kocher and Sutter (2005), we find that the expected gains in earnings are the most prevalent reasons for joining teams.²⁵

Figure 1b shows the mean bids for the team option separately for entrepreneurs, managers and employees. A surprising pattern emerges from this figure: while there is no difference between the bids of entrepreneurs and managers, both groups seem to pay *more* for the team option than employees. The raw

²⁵The most often selected explanation for bids in this treatment was the one emphasizing the monetary benefits of the team option ("I believed the team option could increase my earnings"), listed by 39.3% of the respondents. Participants also frequently cited following their intuition (38.9%) and trying to avoid taking too much risk (23.6%). About a fifth of the respondents expressed a preference for control ("I wanted to be responsible for my earnings and not depend on others"), while 14.1% based their decision on the belief that they performed better than others. Reassuringly, only about 10 percent of respondents indicated that they made their team bid at random ("It was just a guess").

difference in mean bids between entrepreneurs and employees is €2.7 (or one-seventh of a standard deviation) and is marginally significant. The difference between managers and employees is similar in size but is imprecisely estimated. Figure B4 in Appendix B presents the distribution of team bids by occupational categories, and shows that employees are much less likely than either managers or entrepreneurs to bid the maximum possible amount, €50 for the team option. In sum, a simple comparison of the willingness to join teams between occupational groups offers no support for the hypothesis that entrepreneurs have a stronger preference for payoff autonomy than non-entrepreneurs.

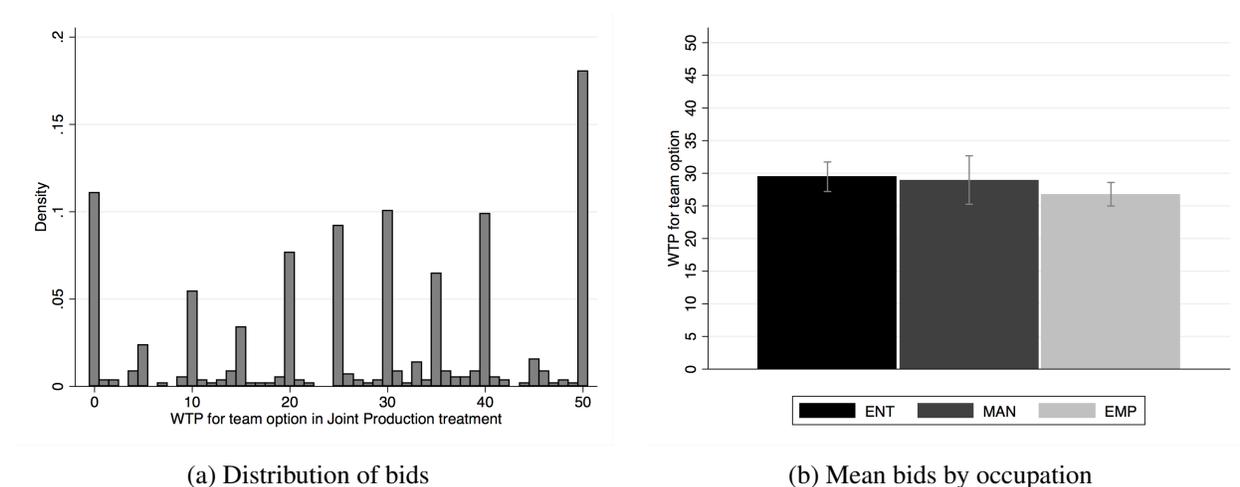


Figure 1: Bids for the team option in the Joint Production treatment

In the following, we test whether the above result is sensitive to controlling for task performance. We then explore whether differences between the groups in team bids are attributable to demographic characteristics other than occupation. Finally, we aim to separate preferences for independence from the impact of other behavioral factors such as risk aversion and overestimation of performance. Each column of Table 4 presents estimated coefficients from different model specifications explaining respondents' bids for the team option in the Joint Production treatment. Covariates are added sequentially to analyze their impact on the team bids as well as on the gap between entrepreneurs and others. We present results from tobit models to account for the potential left- and right-censoring introduced by our elicitation method.²⁶

We start the analysis by including as control variable the true number of puzzles participants solved correctly, thereby correcting for differences in the actual monetary gains respondents can anticipate from team-based remuneration *ex ante*. Employees, being on average the lowest performers on the Raven puzzles (see Table 2), have the highest expected monetary gains from forming teams.²⁷ Consequently, the inclusion

²⁶Our results are qualitatively unchanged when we estimate OLS regressions instead, see Table B1 in Appendix B.

²⁷Figure B5 in Appendix B shows for each occupational category the difference between actual and optimal bids - the latter representing the *ex ante* expected gains from the team option for a perfectly informed participant, calculated by assessing for each puzzle and for each potential teammate whether the given question was solved correctly by the teammate but not by the participant herself. Optimal bids are constructed assuming everyone who bids €25 or higher is a potential teammate. Weights are used to ensure that the likelihood of being teamed up with a manager, entrepreneur or employee is the same.

of task performance as a control is expected to increase the estimated gap in the willingness to join teams between employees and the other groups. Indeed, in column (1) of Table 4 we find that given the same number of correct puzzles, entrepreneurs bid €3.89 more than employees for the possibility to form a team, a result that is marginally significant. A Wald-test confirms that there is no significant difference between entrepreneurs and managers. We note that task performance does not seem to affect team bids; as we show in column (4), it is participants' beliefs regarding their performance that matter.

Table 4: BIDS FOR THE TEAM OPTION IN THE JOINT PRODUCTION TREATMENT

<i>WTP for team option</i>	(1) Performance	(2) Demographics	(3) Risk	(4) Confidence
ENT	3.890* (2.071)	2.339 (2.487)	0.849 (2.443)	1.334 (2.395)
MAN	3.469 (2.940)	1.332 (3.299)	-0.022 (3.226)	-0.094 (3.152)
Puzzles correct (actual)	-0.216 (0.423)	-0.508 (0.445)	-0.496 (0.434)	0.040 (0.524)
Female		-1.239 (1.975)	-0.106 (1.942)	-1.028 (1.912)
Age		0.093 (0.090)	0.098 (0.088)	0.090 (0.086)
Education		3.257*** (1.059)	3.082*** (1.034)	3.318*** (1.013)
Income category				
< €25,000		0.167 (2.897)	-0.201 (2.829)	-0.074 (2.763)
€25,001 - 50,000		1.804 (2.698)	1.423 (2.636)	1.663 (2.578)
€50,001 - 75,000		-1.220 (3.342)	-2.684 (3.274)	-2.054 (3.205)
€75,001 - 125,000		1.784 (3.743)	0.436 (3.652)	-0.205 (3.582)
> €125,001		-9.064 (5.690)	-8.935 (5.544)	-7.776 (5.424)
Investment in gamble			0.174*** (0.034)	0.174*** (0.033)
Puzzles correct (guess)				-1.834*** (0.617)
Partner's correct				3.149*** (0.681)
Constant	28.272*** (2.316)	17.501*** (5.934)	10.360* (5.963)	0.344 (6.566)
N	588	588	588	588
Pseudo-R ²	0.001	0.004	0.011	0.016
ENT = MAN	0.890	0.745	0.772	0.628

Notes: The table displays estimated coefficients from tobit models (lower limit 0, upper limit 50). The dependent variable is the bid for the team option. The estimation sample includes respondents assigned to the Joint Production treatment. ENT and MAN are dummy variables indicating entrepreneurs and managers, respectively (omitted category: employees). For income, the omitted category is "I prefer not to disclose". ENT = MAN refers to p-values from Wald-tests comparing the estimated coefficients for entrepreneurs and managers. Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

As we have seen in Table 2, our group of entrepreneurs differs from employees (and to a lesser extent, from managers) along several observable dimension. To ensure that we do not mistakenly attribute differences in team preferences to occupational categories when they are actually driven by other demographic variables, in column (2) of Table 4 we add controls for gender, age, education and income.²⁸ We observe a reduction in the estimated gap between entrepreneurs and employees, and the difference in bids between the two categories is no longer significant. We find suggestive evidence that the initial difference in raw means between the occupational categories is explained by differences in educational attainment: in our sample employees are less educated than entrepreneurs or managers, and results in column (2) indicate a highly significant positive association between schooling and team bids.²⁹ Consistent with Kuhn and Villeval (2014)'s finding that men and women are equally likely to join teams in the presence of efficiency gains, we detect no impact of gender on bids. The willingness to join teams is not significantly related to age (a result that is robust to estimating a non-linear relationship). We find no clear impact of income on bids either, although due to the substantial non-response to the income question we treat this outcome with caution.

Another candidate to affect the sorting decision into teams are risk attitudes. As discussed previously, teaming up has an ambiguous effect on risk exposure: while joint production reduces the impact of idiosyncratic shocks, it also introduces the strategic risk of being assigned a low-ability teammate (Bäker and Mertins, 2013). The latter channel is reinforced by the elicitation technique we use to measure team preferences whereby participants choose between keeping the sure endowment of €50 or using it to bid for the team option with uncertain returns. Column (3) of Table 4 confirms that investment in the risky gamble is indeed highly significantly and positively correlated with team bids, implying that more risk tolerant subjects tend to enter teams more. Since employees in our sample take significantly less risks than others, we hypothesize that risk attitudes explain a large part of the gap in bids between them and entrepreneurs/managers. Indeed, we find that controlling for risk preferences further attenuates the difference in bids between entrepreneurs and employees: the estimated gap in this specification is reduced to €0.85. The difference between entrepreneurs and managers remains insignificant despite including the allocation choice as a control - a result that is unsurprising given that the two groups demonstrated very similar risk attitudes in our survey.

We continue by testing how absolute and relative performance beliefs affect the choice to join teams. In column (4) of Table 4 we include respondents' guesses for the number of puzzles they and their potential partner solved (together with the actual number of correct puzzles). We confirm that one's own predicted absolute performance is negatively associated with the willingness to join teams, while a higher performance guess for one's potential teammate is associated with higher bids for the team option, as in Kuhn and Villeval (2014). These channels are predicted to depress the team bids of entrepreneurs in particular given their tendency to both overestimate their own performance and to expect a 'weaker' potential partner (see Table

²⁸The variable *experience* is highly correlated with age and it is missing for 42 respondents, so we decided not to include it as a control variable in our preferred specification.

²⁹Note that schooling is positively related to team choice even after controlling for performance on the Raven task which serves as a proxy for IQ, so its impact is unlikely to be related to (a lack of) understanding the instructions.

2). Controlling for beliefs regarding absolute and relative performance indeed leads to a slight increase in the estimated gap between entrepreneurs and employees, however, the difference remains insignificant. We find no significant difference between entrepreneurs and managers, either.

We conclude our discussion of Table 4 by noting that after controlling for performance, demographic characteristics, risk attitudes, and beliefs concerning absolute and relative performance we find no evidence that entrepreneurs are less likely than managers or employees to sort into teams. This result is at odds with our hypothesis that *all else equal*, entrepreneurs have a stronger preference for individual work due to their superior desire for payoff autonomy. Respondents’ self-reported explanations for their choices provide no support for this hypothesis, either: entrepreneurs in our sample were no more likely than others to select the statement “*I wanted to be responsible for my earnings and not depend on others*”.³⁰

4.2 The impact of team decision making

In this section we explore how joint decision making affects respondents’ willingness to form teams. As discussed before, participants were randomly assigned to one of the two treatment conditions that were identical except for the content of the team option. Forming a team involved jointly determined earnings in both treatments, and also a joint asset allocation choice in the Joint Decision condition. By contrasting the bids of participants randomly allocated to the two treatments we can observe to what extent shared decision rights make the team option unattractive, whether this effect is particularly strong among entrepreneurs, and how the response depends on the size of the compromise participants expect as a result of the joint choice.

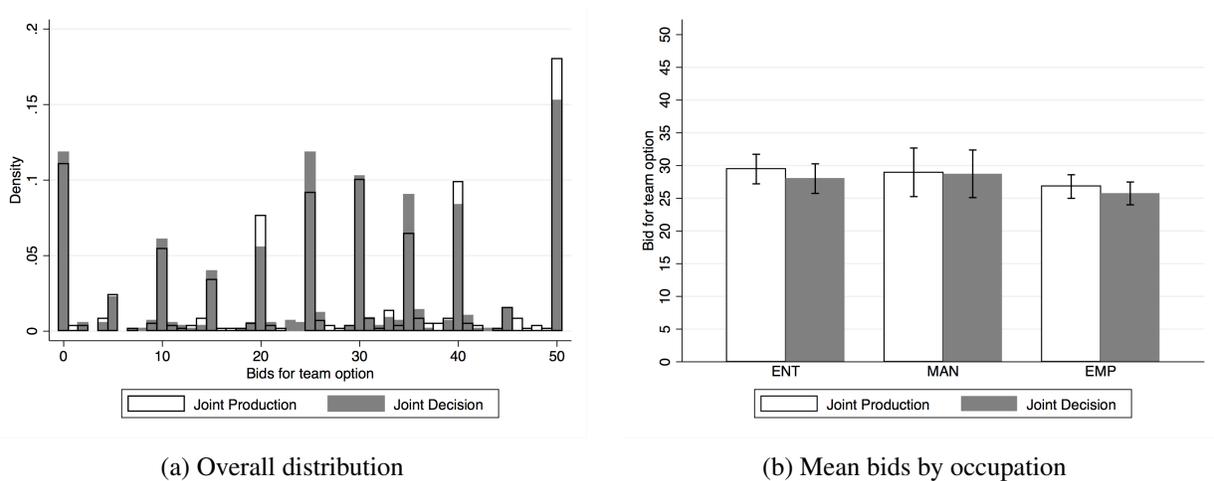


Figure 2: Comparison of bids for the team option between the two treatments

Overall we find that respondents bid on average €26.91 (with a standard deviation of €15.83) in the Joint Decision treatment, only slightly less than the mean bid of €28.00 in the Joint Production treatment. Figure 2a compares the distribution of bids across the treatments. A Kolmogorov-Smirnov test does not reject

³⁰Please refer to Figure B6 in the Appendix for the share of respondents selecting each explanation by occupational categories.

the equality of the two distributions (p-value=0.187). Correspondingly, there are no significant differences between treatments in the share of participants who selected the explanations “*I didn’t want to take too much risk*”, “*I don’t want to depend on others*” or “*I don’t trust anyone I don’t know*”. Figure 2b shows that the difference in mean bids between the two treatments is not significant even when we perform the comparisons separately within occupational categories.

We continue our analysis by showing that the above results are robust to the inclusion of covariates. Column (1) of Table 5 confirms that participants do not bid less for the team option when it involves joint decision making even in a specification where we control for the task performance and various demographic characteristics of the respondents.³¹ Column (2), in turn, verifies that neither entrepreneurs nor managers react differently to shared decision rights than employees: the coefficient associated with the interaction term ENT * Joint Decision treatment is negative, but small and imprecisely estimated.

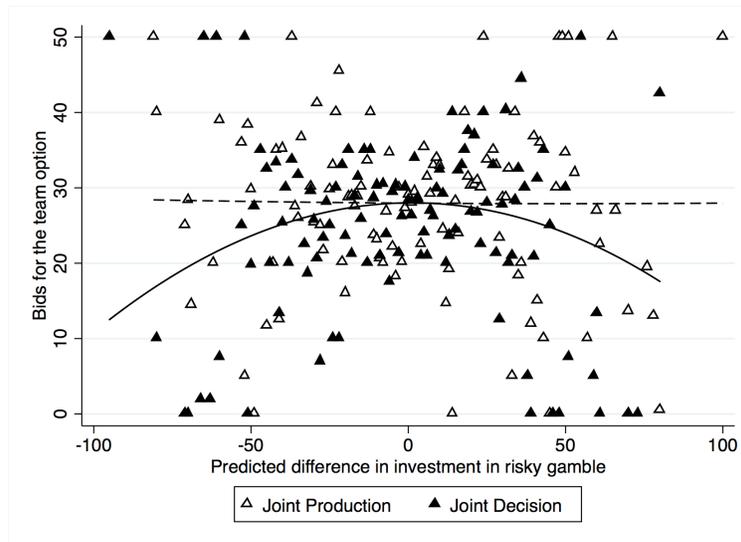
Table 5: COMPARISON OF BIDS BETWEEN TREATMENTS

<i>WTP for team option</i>	(1)	(2)	(3)	(4)
JD treatment	-1.512 (1.283)	-1.198 (1.765)	1.778 (1.893)	1.869 (2.197)
ENT	1.860 (1.711)	2.103 (2.216)	2.038 (1.707)	2.068 (2.209)
MAN	1.248 (2.286)	1.789 (3.000)	1.375 (2.280)	1.667 (2.992)
ENT * JD treatment		-0.495 (2.814)		-0.065 (2.809)
MAN * JD treatment		-1.101 (3.965)		-0.597 (3.957)
Difference in investment			0.028 (0.049)	0.028 (0.049)
JD treatment * Diff. in investment			-0.175** (0.072)	-0.174** (0.072)
Puzzles correct (actual)	-0.232 (0.304)	-0.234 (0.305)	-0.223 (0.303)	-0.224 (0.303)
Demographic controls	✓	✓	✓	✓
Constant	19.821*** (4.255)	19.652*** (4.298)	19.054*** (4.398)	18.998*** (4.433)
N	1164	1164	1164	1164
Pseudo-R ²	0.003	0.003	0.004	0.004
ENT = MAN	0.775		0.755	

Notes: The table displays estimated coefficients from tobit models (lower limit 0, upper limit 50). The dependent variable is the bid for the team option. The estimation sample includes all participants in the survey. ENT and MAN are dummy variables indicating entrepreneurs and managers, respectively (omitted category: employees). *JD treatment* is a dummy variable indicating participation in the Joint Decision treatment. *Difference in investment* is the absolute value of the difference between a participants’ own investment in the risky gamble and their guess for their potential partner’s investment. The symbol “*” denotes interaction terms between variables. All three models presented in the table include the same set of control variables as column (2) of Table 4. *ENT = MAN* refers to p-values from Wald-tests comparing the estimated coefficients for entrepreneurs and managers. Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

³¹The fact that the inclusion of covariates does not change our estimates is unsurprising given that our treatments were balanced in terms of all the observable characteristics.

In the following we attempt to tease apart the impact of the instrumental and the intrinsic value of decision rights. The former results from the fact that joint decision making may move participants away from their most preferred asset allocation choice, while the latter applies even if participants expect no conflict of interest. The instrumental value of decision rights increases with the expected compromise in allocation choice, which, in turn, depends on the discrepancy between one's own allocation choice and that of their potential team mate. We thus predict that participants' beliefs about the share their prospective partner invested in the risky gamble influence their reaction to joint decision making in the team option.³² We test this prediction by controlling for (the absolute value of) the “*Difference in investment*”, i.e. the estimated discrepancy between one's own preferred allocation choice in Part 2 and that of their partner, and by interacting this variable with the indicator for the Joint Decision treatment.³³ In column (3) of Table 5 we indeed find that the larger the expected compromise, the less respondents bid for the teams in the Joint Decision treatment.



Note: Quadratic fit lines: dotted - Joint Production; solid - Joint Decision treatment.

Figure 3: Bids in the two treatments, by predicted investment difference

Figure 3 demonstrates this result graphically. It shows for each level of predicted investment difference the mean bid for the team option in the two treatments. The estimated quadratic fit lines suggest that the willingness to join teams in the Joint Decision treatment is indeed related to the expected investment difference:

³²Assuming CRRA preferences, we can back out participants' risk aversion parameter from the share they choose to invest in the risky gamble in Part 2 of the survey, and then use this parameter, together with respondents' beliefs about their partner's investment choice, to estimate the utility loss they expect from the compromise in allocation choice that results from teaming up. This “instrumental” value of keeping the decision rights is estimated to be quite small for respondents with low levels of risk aversion or for those who expect only a small gap between their own and their partner's investment choice.

³³We include the absolute value of the expected difference in our regressions for ease of exposition. We arrive at the same conclusion if we test for an inverse U-shaped relationship between the difference in investments and the bids by including the actual level and the square of the expected gap. Results available from the authors upon request.

the larger the discrepancy in either direction, the lower the bid for the team option.³⁴ Reassuringly, there seems to be no association between the bids and the expected investment difference in the Joint Production treatment.

Finally we assess the claim that entrepreneurs attach a higher intrinsic value to decision rights than others. We do so by estimating entrepreneurs' differential response to the Joint Decision treatment, controlling for the impact of the expected difference in investment on team bids. In other words, we test whether entrepreneurs dislike joint decision making more than non-entrepreneurs, correcting for potential differences between groups in the perceived instrumental value of decision rights. As shown in column (4) of Table 5, there is no indication of a differential response among entrepreneurs to the shared allocation choice in this specification, either.

4.3 Robustness checks

We devote this section to assessing the robustness of our results. We test whether our findings are sensitive to the particular definition of entrepreneurship we use, and whether our results are biased by participants' lack of understanding of the instructions. We also discuss the issue of multiple hypothesis testing and consider the power of our study.

Table 6: JOINT PRODUCTION - Different definitions for entrepreneurs

<i>WTP for team option</i>	(1)	(2)	(3)	(4)
	Founders	Incorporated	Majority shareholders	2+ employees
ENT (<i>different definitions</i>)	0.956 (2.873)	2.164 (3.230)	1.784 (2.734)	1.845 (2.947)
MAN	2.054 (3.397)	1.183 (3.354)	1.674 (3.277)	1.288 (3.245)
Puzzles correct (actual)	-0.743 (0.487)	-0.580 (0.491)	-0.500 (0.466)	-0.535 (0.468)
Demographic controls	✓	✓	✓	✓
Constant	21.091*** (6.408)	19.113*** (6.538)	19.878*** (6.264)	21.522*** (6.326)
N	501	479	515	487
Pseudo-R ²	0.004	0.004	0.004	0.004
ENT = MAN	0.755	0.783	0.973	0.869

Notes: The table displays estimated coefficients from tobit models (lower limit 0, upper limit 50). The dependent variable is the bid for the team option. Estimation samples include respondents assigned to the Joint Production treatment. Additional sample restrictions apply for entrepreneurs in each column: (1): only founders; (2): only incorporated; (3): only majority shareholders; (4): only entrepreneurs with at least 2 employees. ENT and MAN are dummy variables indicating entrepreneurs (defined as described above) and managers, respectively (omitted category: employees). All models include the same set of control variables as column (2) of Table 4. ENT = MAN refers to p-values from Wald-tests comparing the estimated coefficients for entrepreneurs and managers. Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

³⁴A regression explaining team bids in the Joint Decision treatment with the expected investment difference and its squared term yields an overall F-statistic of 3.63 (with a corresponding p-value of 0.027), much higher than the F-statistic from a linear specification, 0.06.

In our main analysis we defined as entrepreneur someone who has founded, inherited or taken over a company. In the following, we consider different, stricter categorizations, limiting our attention to the arguably more successful entrepreneurs: a sample that is particularly interesting from a policy perspective. We consider four definitions: founders; owners of incorporated businesses; entrepreneurs who are majority shareholders in their company; and business owners with at least two employees.³⁵

As shown in Table 6, regardless of the definition we adopt, entrepreneurs are not significantly different than others in our sample in terms of preferences for joint production: the estimated differences in bids between entrepreneurs and employees range between €0.956 and €2.164 depending on the definition we use, and are not significant at conventional levels. In Table B2 in Appendix B we further explore whether entrepreneurs attach greater intrinsic value to decision rights than others, using the four alternative definitions as above. Studying the group of majority shareholders in this context is particularly interesting as they are hypothesized to have the strongest preference for retaining full autonomy over their decisions. However, we find no indication for a particularly strong willingness to keep decision rights among entrepreneurs according to either of our definitions.

The last categorization we consider is related to experience. Preferences for working alone or in a team might change over time, as suggested by Cooper and Saral (2013). Therefore, we also differentiate between entrepreneurs who have young firms in the so-called survival phase (i.e. 0-5 years old) and those with more established firms. Table B3 in Appendix B indicates that entrepreneurs in the survival phase have a strong preference for teamwork as long as it only entails revenue sharing (column (1)). However, this subgroup seems to have a strong distaste for joint decision making (column (2)), not explained by the instrumental value of decision rights (column (3)). Note that these results are very imprecisely estimated and thus should be treated only as suggestive evidence. It is also unclear whether they reflect changes in preferences that occur with experience, or rather they result from differential selection out of entrepreneurship based on team preferences.

Next we address the issue of possible measurement error. Given the relatively complex elicitation technique we used to measure participants' preferences for joining teams it is important to show that our results are not driven by confusion, and in particular by systematic differences between occupational categories in understanding the instructions. First we point out that in all our regression specifications we control for participants' performance on the Raven puzzles, arguably a proxy for IQ (Herz et al., 2014), supporting our claim that differences between groups in cognitive abilities are unlikely to distort our results. A second approach is to use participants' explanations for their team decision to narrow down our estimation sample, omitting those who reported having chosen a bid at random. Our findings are robust to the exclusion of respondents who chose the exit survey option "*It was just a guess*" as explanation for their team bids.³⁶

The third point we address in this section is multiple hypothesis testing. In the Joint Production treatment we consider the association between the bids for the team option and several explanatory variables:

³⁵We have chosen 2 employees as a cut-off for two reasons. First, it is consistent with our definitions of managers having at least two direct reports; second, this captures entrepreneurs with above-median number of employees in our sample.

³⁶Results available from the authors upon request.

occupational category, actual performance, gender, age, education, income, risk taking, absolute and relative performance guess. Using a Bonferroni-correction and comparing our p-values to a critical value of 0.0056 ($=0.05/9$), we find that all our results remain significant. Second, in the between-treatment comparison, even though we only consider one treatment (adding joint decision making to the team option) and focus on a single outcome (the willingness to pay for the team option), we compare response to the treatment across three subgroups. Given that we have found no significant differences between groups to start with, more conservative standard error estimates would only further strengthen our claim that entrepreneurs do not respond differently to joint decision making than others.

Finally we consider the issue of sample size and power. Since we essentially present null results it is crucial to show that our study is well-powered to detect meaningful differences between the occupational categories and treatments if they exist.³⁷ Assuming a 95% significance level and 80% power, in the Joint Production treatment we can detect a difference in mean bids between entrepreneurs and employees (managers) of 0.25 (0.37) standard deviation, corresponding to approximately €4.1 (€6.3). Similarly, in the full sample we can detect a difference in mean bids between the two treatments of 0.16 standard deviation (€2.6), and in the subsample of entrepreneurs a difference of 0.28 standard deviation (€4.6). Performing a regression analysis with additional predictors tends to increase the precision of estimates and reduce the sample size required for any given level of power, thus the above numbers likely represent conservative estimates for the minimum detectable effect sizes (Gelman and Hill, 2007). We conclude that although our study is underpowered to detect differences of the size we estimated in Tables 4 to Table 6, these differences are small in size and of little economic significance. As a comparison, note that the estimated difference in bids for the team option between entrepreneurs and non-entrepreneurs was approximately one standard deviation in Cooper and Saral (2013).³⁸

5 Discussion

In the previous section we found that the presence of potential efficiency gains induce the majority of respondents to bid a positive amount for the option to join a team, and that bids differ by respondents' level of education, risk preferences and expected absolute and relative performance. We have also shown that entrepreneurs are no less likely than employees or managers to select into team production. Moreover, we have found that entrepreneurs are no more averse to joint decision making than others in our sample. In this section we compare our findings to the studies closest related to ours. We then review certain features of our context and design, and discuss whether they affect the generalizability of our results.

Our findings concerning factors relevant for sorting into teams are in line with several seminal papers in

³⁷In the following, we apply the simple rules of thumbs derived in List et al. (2011). Our calculations are based on the assumption that bids are normally distributed and a t-test is used to determine differences.

³⁸Masclet et al. (2009) do not report the standard deviation of participants' willingness to pay to decide alone, but find a difference in bids between self-employed and others of approximately 2.6 units on a scale ranging from zero to ten, much larger in relative terms than the point estimates we have obtained (note that our scale runs from zero to fifty).

the field, such as e.g. Kuhn and Villeval (2014), Bäker and Mertins (2013) and Kocher and Sutter (2005).³⁹ This is reassuring given that our respondents are drawn from the working population while the aforementioned studies are based on student samples. Our conclusions, however, differ from the results of the two existing studies that have considered entrepreneurs' choices for teams in incentivized experimental settings: Cooper and Saral (2013) find that entrepreneurs are more likely than non-entrepreneurs to work alone rather than in teams, and Masclet et al. (2009) find that self-employed pay more than others for the possibility to make decisions individually.

A possible explanation for the discrepancy between their results and ours is related to characteristics of the subject pools. First, we study a large sample of entrepreneurs, many of them owners of successful businesses (different than the artisans and self-employed in Masclet et al. (2009)'s study), and compare them to a unique double control group of managers and employees. Second, while entrepreneurs in our sample are on average better educated than employees, entrepreneurs in Cooper and Saral (2013)'s study tend to be lower educated than the non-entrepreneur and non-student participants. Given the positive association we find between level of education and the willingness to join teams, this difference in sample composition could contribute to our contradictory findings.⁴⁰ Moreover, due to differences in how team-based remuneration is modeled, Cooper and Saral (2013) find risk preferences to play a negligible role in determining participants' willingness to join teams, while risk tolerance is an important predictor of joining teams in our experiment. Given that entrepreneurs are on average less risk averse than the general population, this channel could also explain why we find a relatively higher willingness to pay for the team option among entrepreneurs than did Cooper and Saral (2013). The most notable difference in design between our study and the paper by Masclet et al. (2009) is the way the outcome of the team decision making process is determined: an unweighted average of the team mates' choices in our case, and a unanimous agreement among the three group members in Masclet et al. (2009). We argue that the latter constitutes a much larger loss of autonomy and has the potential of a much less advantageous outcome for self-employed given their superior risk tolerance than what they face in our study, potentially explaining differences between their findings and ours.

Besides the amount of risk the team option involves and the way group decisions are determined, there are other design features that are potentially relevant for the generalizability of our findings. First, as discussed in Section 2.2, we eliminated the option for free-riding in teams. Even though theoretical papers emphasize the incentives to free ride (e.g. Holmstrom, 1982), in real life team settings such incentives are often reduced by the possibility of monitoring (Grosse et al., 2011), combined with a threat of punishment (Ernst Fehr, 2000) or exclusion (Kopányi-Peucker et al., 2015). Empirical studies often show little evidence for free riding in teams (e.g. Bäker and Mertins, 2013; Hamilton et al., 2003; Herbst et al., 2015). Furthermore, Cooper and Saral (2013) find no difference between entrepreneurs and non-entrepreneurs in their

³⁹Comparison with other important studies on endogenous team formation is less straightforward as they concern choices between fixed pay and team-based remuneration (Dohmen et al., 2011), offer a simultaneous choice between individual, tournament and group pay (Wozniak et al., 2014), introduce competition between teams (Dargnies, 2012; Healy and Pate, 2011; Herbst et al., 2015), or let people select their team mates instead of exogenously assigning them (Bandiera et al., 2013).

⁴⁰While Masclet et al. (2009) do not compare self-employed and salaried workers in their sample along educational attainment, their results are obtained controlling for graduate degree.

tendency to free-ride. For all the above reasons we believe this design choice is unlikely to be the main driver of our findings.

Second, the team option in our setting did not involve an actual interaction between the teammates. Admittedly, by abstracting away from social interactions, we are unable to capture the potentially important non-pecuniary benefits of teamwork (Bandiera et al., 2013; Hamilton et al., 2003). This design choice was mostly due to practical constraints imposed by our data collection method: since respondents of our online survey did not necessarily work on the questionnaire at the same time, a real-time interaction or communication would not have been possible. In the experimental economics literature it is not uncommon to study sorting into team incentive schemes without allowing respondents to interact with each other (see e.g. Cooper and Saral, 2013; Kuhn and Villeval, 2014). Moreover, there are also real life examples that resemble the way we modeled teamwork. In the world of open-source software, developers often work individually and remotely on issues, submit their solutions, and the best suggestion gets accepted.⁴¹ Similarly, in case of international scientific collaborations, the parties often already have ideas or preliminary results at the time they decide to cooperate and pool their resources for a better final outcome.

Third, our study was not designed to analyze the role of social preferences in endogenous team formation. While social preferences have been shown to influence the choice to join teams (Dur and Sol, 2010; Kuhn and Villeval, 2014; Teyssier, 2008), to keep our survey as short as possible we decided to focus on other aspects of the team decision such as risk taking and confidence, dimensions along which entrepreneurs have been shown to differ from the general population (Astebro et al., 2014).

Finally, we find it important to stress that the cross-sectional nature of our study only allows us to measure the possible correlation between occupational categories and team preferences, but it does not address the question of causation. Our results do not rule out the possibility that those with a stronger taste for individual work are more likely to become entrepreneurs but they are also more likely to fail and thus less likely to show up in our sample. Similarly, we are not able to tell whether working as an entrepreneur alters people's preferences for teams. To address these issues, a panel data set would be required.

6 Conclusion

Our study contributes to the literature on the behavioral foundations of entrepreneurship by conducting a large-scale incentivized online survey that analyzes the decision to sort into teams among entrepreneurs, managers and employees. Differentiating between two team contexts - one that only entails joint production (with uncertain efficiency gains) and one that also involves joint decision making (such that the team's choice is the average of the two teammate's individual allocation choices) - allows us to separate effects that have not been distinguished in earlier studies.

In contrast with the popular wisdom that portrays entrepreneurs as 'lone wolves' we find no difference between entrepreneurs and others in their preferences for team production once we control for demographic

⁴¹As an example consider the Linux kernel development process: <http://techblog.aasisvinayak.com/linux-kernel-development-process-how-it-works/>.

characteristics. Entrepreneurs in our sample do not differ from non-entrepreneurs in their response to shared decision rights, either. Risk preferences and beliefs concerning the potential partner's performance and investment choice affect bids for the team option in the expected directions, but have limited role in explaining choices between occupational categories.

Note that in our experiment joining a team does not involve a total loss of control and authority since payoffs are determined *jointly* and decision rights are not passed on to someone else but *shared*. Our setting is thus a good approximation of the dilemma between starting up alone or in a team, but it does not necessarily speak to the choice between self-employment and salaried work, the latter often involving fixed pay and complete loss of authority. Our results are therefore most relevant for policy makers interested in increasing the share of team start-ups.

Based on our results, we contend that entrepreneurs may not have a stronger taste for independence and may not attach superior value to decision rights compared to members of other occupational categories. Our results are remarkably robust to using different (stricter) definitions when categorizing respondents as entrepreneurs, such as focusing only on founders, owners of incorporated businesses, etc. Our findings suggest that preferences for teamwork are unlikely to explain entrepreneurs' propensity to start up alone rather than with a partner, highlighting the importance of other factors such as search costs or network constraints. Our results thus imply that policy interventions facilitating the search for founding partners could successfully increase the share of team start-ups and, assuming that founding partnerships are indeed beneficial, may be welfare enhancing.

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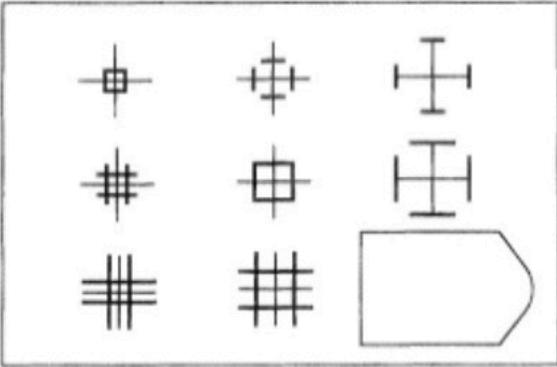
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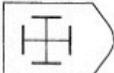
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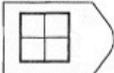
A Excerpts from the online survey

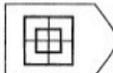
 UNIVERSITY OF AMSTERDAM
FACULTY OF ECONOMICS AND BUSINESS

1) Which of the eight possibilities below completes the pattern?
If you do not know the answer, feel free to guess or to skip to the next puzzle.

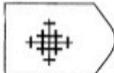


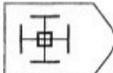


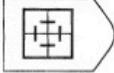


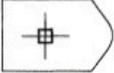












0%  100%

Figure A1: Example of a Raven puzzle

Part 2: Investment decision

In Part 1 you have accumulated a certain amount (between €0 and €400) by earning €40 for each puzzle you solved correctly. In Part 2 of the survey, we ask you to indicate **what share** of these earnings you would like to invest in a risky bet. Anything you do not invest, you keep with certainty. You may decide to invest any share between 0 and 100% of your earnings.

The risky bet has two possible outcomes:

- with 2/3 (67%) chance, you lose the money you invested
- with 1/3 (33%) chance, you win two and a half times the amount you invested (on top of your investment)

If you are among the 20 prizewinners and you decide to invest a share of your earnings, an additional draw at the civil-law notary will determine the outcome of the lottery, based on the probabilities given above. We can therefore provide no immediate feedback in the survey on whether you have lost or won in the lottery.

Please use the slider below to indicate what share of your earnings you wish to invest in this risky bet.

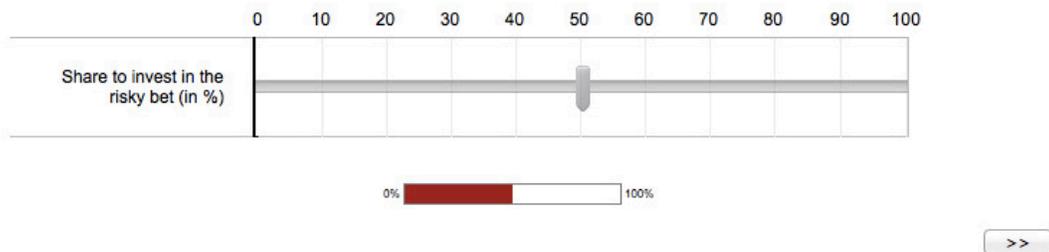


Figure A2: Measuring risk aversion

Example:

(Please note that the numbers in the example below are hypothetical and convey no information about the actual performance/choices of other respondents.)

- Imagine you solved puzzles 1 and 2 correctly (Part 1), and chose to invest 60% (Part 2).
- Participant B solved puzzles 2 and 3 correctly (Part 1), and chose to invest 20% (Part 2).
- Participant C solved puzzle 1 correctly (Part 1), and chose to invest 80% (Part 2).

The table below shows **your outcomes**, depending on your choice (team/individual option) and your randomly assigned partner (either B or C).

Your outcomes	Individual	In a team	
		with Participant B	with Participant C
# correct puzzles	2	3	2
Earnings	2*€40	3*€40	2*€40
Investment (share of earnings)	60%	60%	60%

(a) Joint Production treatment

Example:

(Please note that the numbers in the example below are hypothetical and convey no information about the actual performance/choices of other respondents.)

- Imagine you solved puzzles 1 and 2 correctly (Part 1), and chose to invest 60% (Part 2).
- Participant B solved puzzles 2 and 3 correctly (Part 1), and chose to invest 20% (Part 2).
- Participant C solved puzzle 1 correctly (Part 1), and chose to invest 80% (Part 2).

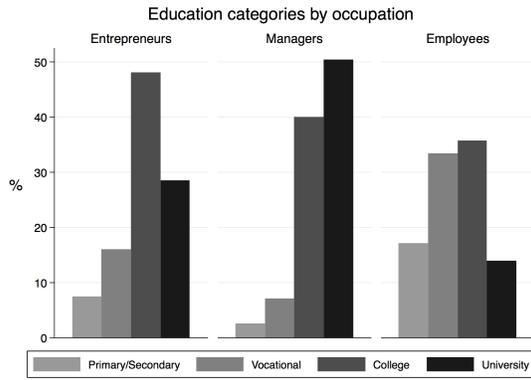
The table below shows **your outcomes**, depending on your choice (team/individual option) and your randomly assigned partner (either B or C).

Outcomes of Participant A	Individual	In a team	
		with Participant B	with Participant C
# correct puzzles	2	3	2
Earnings	2*€40	3*€40	2*€40
Investment (share of earnings)	60%	40%	70%

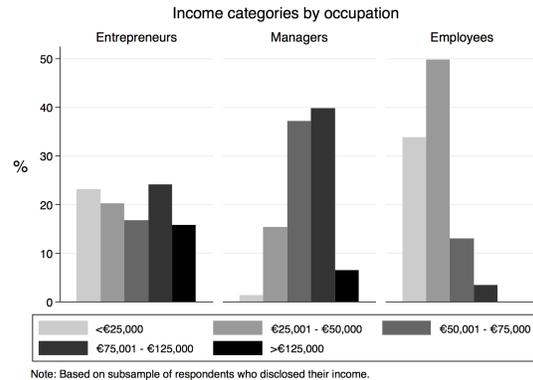
(b) Joint Decision treatment

Figure A3: Explaining the team option in the survey

B Additional figures and tables

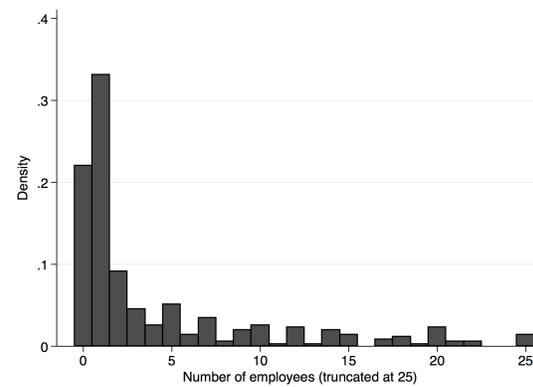
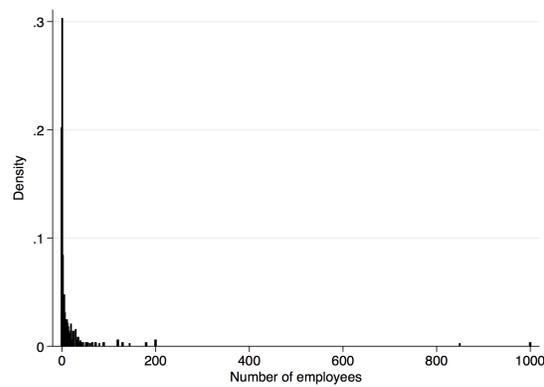


(a) Education



(b) Income (Note: data missing for 391 respondents)

Figure B1: Characteristics by occupation



(a) All

(b) Truncated

Figure B2: Distribution of the number of employees

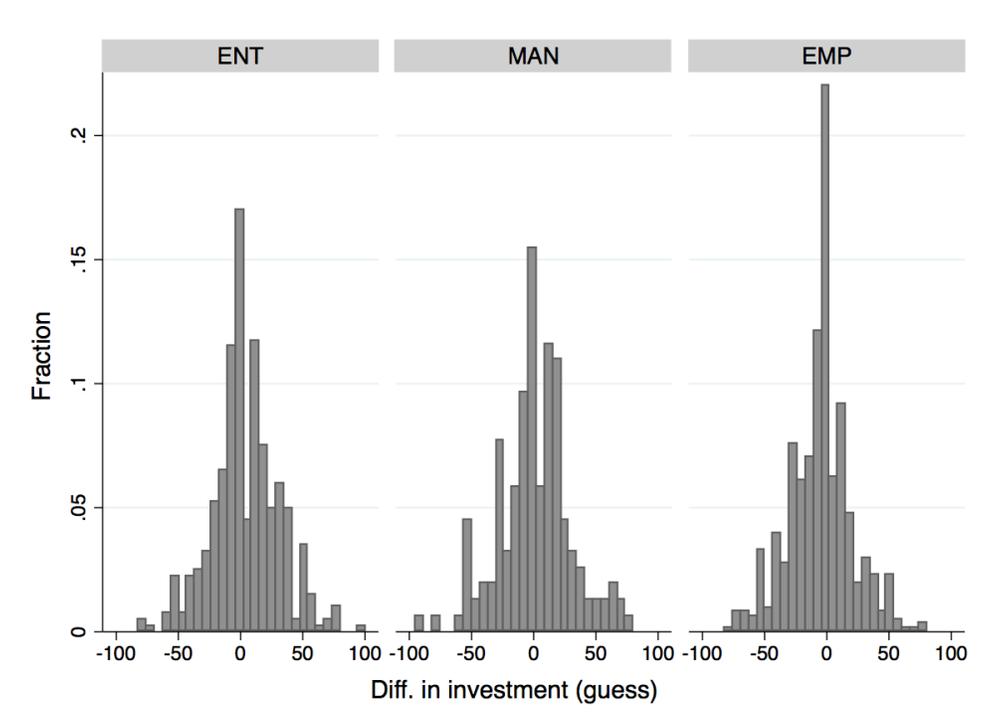


Figure B3: Distribution of guessed difference in investment, by occupation

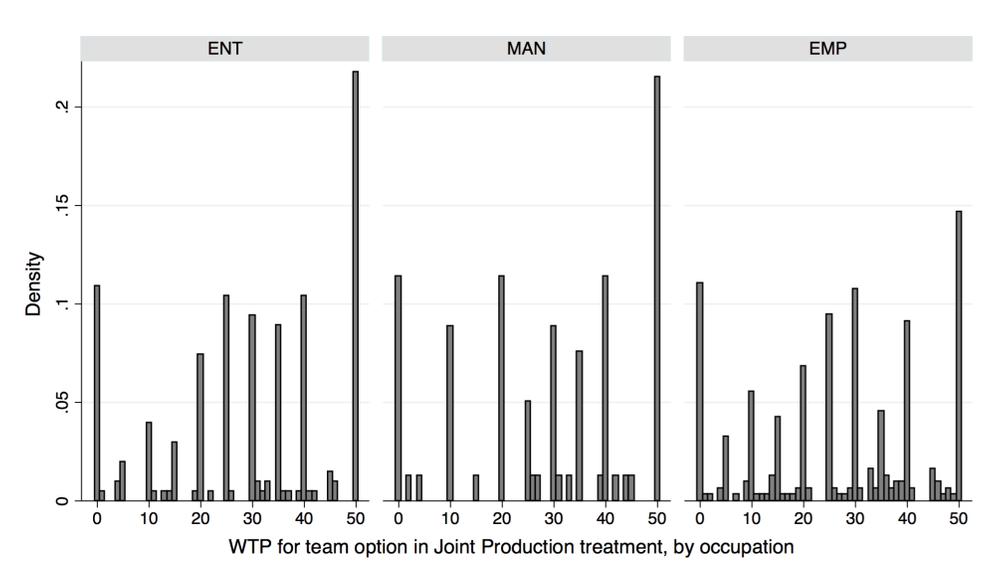


Figure B4: Distribution of bids for the team option in the Joint Production treatment, by occupation

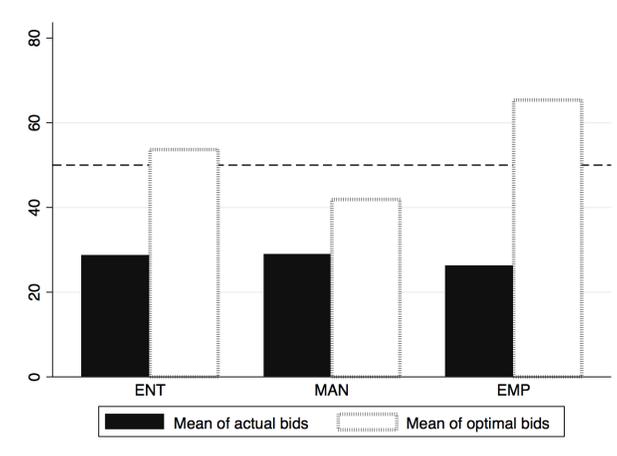


Figure B5: Actual and optimal bids for the team option, by occupation

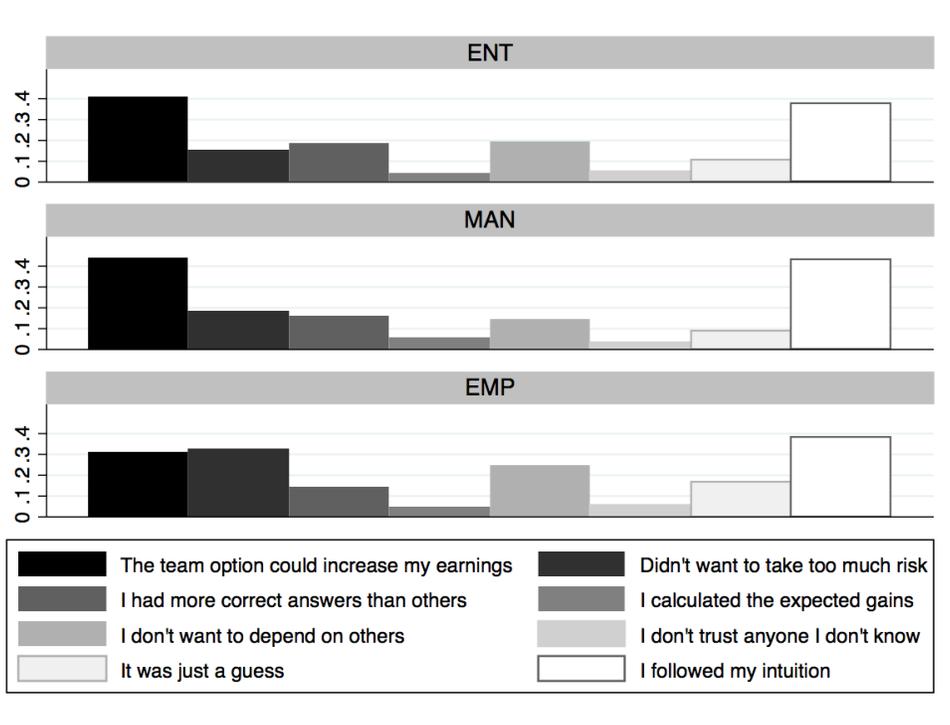


Figure B6: Share of respondents who selected the given explanation for their team bids, by occupation (both treatments combined)

Table B1: BIDS FOR THE TEAM OPTION IN THE JOINT PRODUCTION TREATMENT - OLS ESTIMATES

<i>WTP for team option</i>	(1)	(2)	(3)	(4)
	Performance	Demographics	Risk	Confidence
ENT	2.840*	1.288	0.179	0.544
	(1.494)	(1.806)	(1.778)	(1.748)
MAN	2.553	0.602	-0.365	-0.425
	(2.118)	(2.392)	(2.346)	(2.299)
Puzzles correct (actual)	-0.229	-0.420	-0.413	-0.017
	(0.306)	(0.323)	(0.316)	(0.383)
Female		-1.441	-0.632	-1.334
		(1.429)	(1.406)	(1.387)
Age		0.087	0.092	0.085
		(0.066)	(0.064)	(0.063)
Education		2.425***	2.327***	2.505***
		(0.770)	(0.753)	(0.739)
Income category				
< €25,000		-0.024	-0.302	-0.169
		(2.112)	(2.066)	(2.024)
€25,001 - 50,000		1.127	0.786	0.909
		(1.959)	(1.916)	(1.878)
€50,001 - 75,000		-0.616	-1.661	-1.198
		(2.429)	(2.383)	(2.337)
€75,001 - 125,000		1.688	0.767	0.259
		(2.698)	(2.643)	(2.600)
> €125,001		-6.578	-6.567	-5.712
		(4.133)	(4.041)	(3.964)
Investment in gamble			0.127***	0.126***
			(0.024)	(0.024)
Puzzles correct (guess)				-1.377***
				(0.447)
Partner's correct (guess)				2.440***
				(0.487)
Constant	27.838***	19.241***	13.929***	6.180
	(1.682)	(4.334)	(4.356)	(4.756)
N	588	588	588	588
R ²	0.007	0.034	0.078	0.119
ENT = MAN	0.895	0.759	0.804	0.651

Notes: The table displays estimated coefficients from OLS regressions. The dependent variable is the bid for the team option. The estimation sample includes respondents assigned to the Joint Production treatment. ENT and MAN are dummy variables indicating entrepreneurs and managers, respectively (omitted category: employees). For income, the omitted category is "I prefer not to disclose". ENT = MAN refers to p-values from Wald-tests comparing the estimated coefficients for entrepreneurs and managers. Standard errors in parentheses; * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B2: JOINT DECISION MAKING - Different definitions for entrepreneurs

<i>WTP for team option</i>	(1)	(2)	(3)	(4)
	Founders	Incorporated	Majority shareholders	2+ employees
JD treatment	-1.210 (1.766)	-1.209 (1.740)	-1.242 (1.732)	-1.193 (1.737)
ENT (<i>different definitions</i>)	0.287 (2.589)	1.096 (2.870)	1.770 (2.470)	0.574 (2.708)
MAN	2.396 (3.025)	1.500 (3.017)	2.122 (2.966)	1.522 (2.994)
ENT * JD treatment	2.435 (3.362)	-1.720 (3.614)	-0.330 (3.165)	0.686 (3.466)
MAN * JD treatment	-1.687 (3.973)	-1.075 (3.913)	-0.990 (3.895)	-0.975 (3.905)
Puzzles correct (actual)	-0.404 (0.326)	-0.470 (0.332)	-0.224 (0.316)	-0.390 (0.328)
Demographic controls	✓	✓	✓	✓
Constant	23.097*** (4.576)	20.189*** (4.732)	21.848*** (4.482)	21.974*** (4.665)
N	1000	952	1027	971
Pseudo-R ²	0.004	0.003	0.003	0.003

The table displays estimated coefficients from tobit models (lower limit 0, upper limit 50). The dependent variable is the bid for the team option. Sample restrictions apply for entrepreneurs in each column: (1): only founders; (2): only incorporated; (3): only majority shareholders; (4): only entrepreneurs with at least 2 employees. ENT and MAN are dummy variables indicating entrepreneurs (defined in each column as described above) and managers, respectively (omitted category: employees). All models include the same set of control variables as column (2) of Table 4. Standard errors in parentheses: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table B3: THE IMPACT OF EXPERIENCE - Distinction by survival phase

<i>WTP for team option</i>	(1)	(2)	(3)
ENT (0-5 yrs)	6.131 (3.764)	6.528* (3.598)	6.513* (3.585)
ENT (5+ yrs)	0.344 (2.743)	0.074 (2.453)	0.025 (2.446)
MAN	1.039 (3.282)	1.706 (2.984)	1.582 (2.976)
Puzzles correct (actual)	-0.450 (0.450)	-0.215 (0.306)	-0.201 (0.305)
JD treatment		-1.191 (1.752)	1.799 (2.188)
ENT (0-5 yrs) * JD treatment		-5.202 (4.908)	-4.882 (4.893)
ENT (5+ yrs) * JD treatment		1.668 (3.130)	2.136 (3.126)
MAN * JD treatment		-1.140 (3.937)	-0.647 (3.930)
Diff. in investment			0.030 (0.049)
JD treatment * Diff. in investment			-0.169** (0.072)
Demographic controls	✓	✓	✓
Constant	16.928*** (6.035)	19.377*** (4.340)	18.701*** (4.471)
N	572	1136	1136
Pseudo-R ²	0.005	0.003	0.004

Notes: The table displays estimated coefficients from tobit models (lower limit 0, upper limit 50). The dependent variable is the bid for the team option. The estimation sample in column (1) is restricted to participants in the Joint Production treatment. All models include the same set of control variables as column (2) of Table 4. Standard errors in parentheses: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$