Procedural preferences for autonomy: an experimental study with Colombian workers

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Abstract

I document how the procedure of allocating barely identical tasks among team members affects productivity and the willingness to pay for repeating the job alone rather than in teams. I find a complementarity relation between the assignment procedure (*by-choice, imposed by a third party with a higher hierarchy, or random*) and the preferences about the task to perform. For participants in the *Imposed* mechanism, being assigned to a preferred task increases performance, while being imposed on a non-preferred task negatively affects performance. Moreover, I find that the participants who were more interested in paying for autonomy were those randomly assigned to be autonomous (*by-choice*) at the beginning of the experiment. Hence, these results suggest that people care about factors beyond payoffs, such as autonomy. Among self-employed workers, the effect on the productivity of being imposed on a non-preferred task is exacerbated, and I did not find any statistical impact on the willingness to pay for playing alone.

Keywords: autonomy, procedural preferences, self-employed

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1 Introduction

In daily life, people are not only interested in what they get but also in how they get it. For example, in a job, people are not only interested in the salary, they also obtain utility from other characteristics beyond this salary (e.g., flexibility, possibility to be creative, autonomy). As a result, preferences regarding these characteristics are part of the overall utility that a job can provide. The latter is related to the procedural utility approach to well-being, according to which people do not only obtain utility from outcomes, but they also value the processes and conditions to reach them (Frey et al., 2016; Benz, 2005). Therefore, preferences for specific procedures can affect individual decisions in a wide range of situations, such as how people react when an individual goes in front of others waiting in a queue (Dold and Khadjavi, 2017) and economic decisions, such as job selection.

For instance, although being self-employed usually represents less payment and more work hours, several studies have found that self-employed people report higher job satisfaction or happiness compared to people who are employed (Benz and Frey, 2008b; Fuchs-Schündeln, 2009; Blanchflower and Oswald, 1998; Crum and Chen, 2015; Binder and Coad, 2016; Andersson, 2008). This result seems to be explained by the work conditions, including autonomy, the possibility of being creative, and being part of the decision-making process (Benz and Frey, 2004,0; Hundley, 2001). Thus, it is argued that self-employed people enjoy their position outside of hierarchical structures due to purely procedural reasons, given that autonomy and independence are considered suitable decision-making procedures in contrast with the ones that are hierarchical (Benz, 2005). However, how procedural preferences affect utility depends on individual preferences for work procedures (Fuchs-Schündeln, 2009).

In this regard, Perry et al. (2007) propose that some informal workers choose their occupations according to individual needs, such as the desire for flexibility and autonomy. Similarly, Maloney (2004) argues that a low-skilled worker who could be in the formal sector may prefer to be independent, given that informal opportunities can offer more dignity and autonomy than formal jobs. On the whole, these findings highlight the importance of procedural attributes beyond income (understood as the forms or characteristics of the work in which people obtain their income) when people decide how they will obtain it. Hence, this could also be useful in explaining informality or self-employed conditions as the optimal relationship with the labor market and the state for people with particular preferences.

In this paper, I aim to explore how procedural preferences might affect choices and productivity using a proctored online experiment that emulates a work environment. To do that, I designed an experiment where people must complete two encryption tasks with a partner (encoding numbers to consonants in one task and vowels in the other) and introduce treatments through how these tasks are assigned within each member's group. More precisely, I grand hierarchical roles to team members so that one of the members is in charge of the decision-making about the task each member must perform, and the other member has to abide by the other member's decision. Therefore, I establish three procedures to reach the task to be made. In the first one, individuals are randomly assigned by the computer (control group). In the second, participants can choose the task they and the other group member will perform. Finally, in the third mechanism, participants are assigned to a task imposed by the other participant in the group.

The tasks assigned among team members were explicitly designed for this experiment. These meet the characteristic of being comparable in performance but distinguishable between them. More precisely, the participants generate a preference for one of the two tasks, while also guaranteeing that none of these tasks is strictly preferred to the other by most of the population. In the experiment, approximately half of the participants prefer one of the tasks and the other half the other. In addition, the productivity in both tasks was the same in the stage shared by all mechanisms. Thus, I can isolate the effect of the pure mechanism as the expected productivity is the same regardless of the tasks to perform.

I also exploit the task assignment results (whether participants are assigned or not to their preferred task in the game). I determine the preferred task by a question in which participants, before starting the treatment stages, state which of the tasks they would like to do if the decision was theirs. Thus, I measured how this hierarchical decision process, whose result may or may not be to the participants' liking, affects the task's productivity and the probability of paying to switch to an individual work scheme where they can control decision-making. Finally, I conducted my experiment in Colombia, the country with the highest self-employment rate among OECD countries [1]. It allows us to have variability in socio-demographic characteristics of interest by facilitating the recruiting of self-employed and employed workers.

Despite the importance of self-employment, little is known about the extent to which people choose it as a survival strategy or individual preferences, and which are these preferences.

[1] OECD (2022), Self-employment rate (indicator). doi: 10.1787/fb58715e-en

Although plenty of studies analyze the characteristics and determinants of self-workers, most use observational or self-reported data (Gindling and Newhouse, 2014; Simoes et al., 2016; Leoni and Falk, 2008; Goetz and Rupasingha, 2014; Simoes et al., 2016). Little research on the role of preferences has been done, possibly because it would require specific surveys or an experiment to study it. However, it had been analyzed the preferences for independence and risk (Brown et al., 2011; Fuchs-Schündeln, 2009), the relationship between the attitudes toward risk and independence with the entrepreneurial intention (Douglas and Sheperd, 2002) and the procedural utility as an explanatory variable of self-employment status (McClough et al., 2014).

From experimental economics, most studies focus on risk aversion for self-employed workers or entrepreneurs. That is the case of Masclet et al. (2009), who studied the link between attitudes toward risk and employment status. For instance, Colombier et al. (2008) found that self-employed individuals are less risk-averse. Also, a growing number of studies have been carried out on teamwork preferences for self-employed. In this path, it has been found that the self-employed or entrepreneurs have a greater willingness to pay to participate alone when they have to choose between playing alone or in a team (Masclet et al., 2009; Cooper and Saral, 2013).

The main result of this paper shows that the assignment mechanism and preferences about the task to be made are complements. There is a differential effect in the mechanism according to whether the task to be made is preferred or not. Being imposed on a preferred task improves performance. On the contrary, when the non-preferred task was imposed, the effect of the mechanism on performance decreased. I also find that the participants more interested in paying for autonomy were those randomly assigned to be autonomous (who are in charge of the decision-making about the assignment of tasks). These results provide evidence of a preference for retaining control but not a preference to be in charge when affected by others' decisions. However, this last result could be explained, to some extent, by an income effect: people who were imposed to do something unwanted have the lowest productivity and, consequently, a smaller income to make a high payment for playing alone.

Among self-employed workers, I find that the effect of being in the *Imposed* mechanism on performance when assigned to a non-preferred task is boosted (i.e., the magnitude of the effect gets bigger compared to the pooled sample). Thus, self-workers seem to be more affected when they are forced to do something they mainly do not prefer to do. Finally, I did

not find any statistical effect on the willingness to pay. Both results, however, may be affected by the limited size of the sample.

These results provide evidence on the behavioral effect that could have the preferences over the processes through which people get their income. Even when earnings depend on individual productivity, people's preferences about procedures and tasks affect how they perform. I understand these results as evidence of the procedural preferences related to the individual preferences for autonomy [2]. Concerning the related literature, the contribution of this work lies in developing an experiment with two tasks to which the participants are indifferent and have similar levels of productivity that allow: i) to study the preferences for labor autonomy using a procedural preferences approach and ii) to analyze whether there are differences in the preferences for labor autonomy between individuals of different job types, self-employed and employees of a developing country. In addition, in line with the literature in experimental economics, which has studied the preferences for group work of self-employed and entrepreneurs (Masclet et al., 2009; Cooper and Saral, 2013), this research seeks to isolate one of the possible underlying mechanisms behind the results found in these documents (i.e., the preference for autonomy).

2 Experiment

2.1 Experimental design

My experiment consists of three treatments, each one with three stages. In the first stage, participants must carry out two encryption tasks of similar effort- writing consonants and writing vowels-each lasting 90 seconds. Once the participants finish their practice with the two tasks, they must answer which of the two tasks they would like to develop in the next stage if the decision depended on them. Participants will receive 500 COP for each sequence performed correctly at this stage.

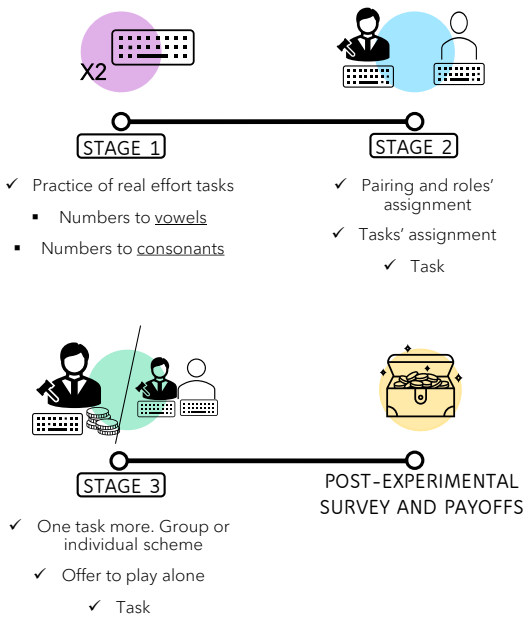
In the second stage, I devised a matching algorithm that randomly matched each participant with another participant in the session who had a similar performance in the first stage and who agreed on the same preferred task. Then, each group will have to perform two encryption tasks, one for each person. Treatments are then included as the procedural framing

[2] Although I grant some privileges to specific participants in the experiment, I do not take these results as evidence of procedural fairness as the random assignment of these privileges guarantees that people do not feel it is unfair.

to assign the task to be carried out by each group member. Once the tasks assignment is made, each player develops their assigned/chosen task for 3 minutes. Both players' payouts depend on their performance in completing the task. Specifically, each player receives 1kCOP for each sequence performed successfully at this stage. The last means that the group is innocuous in terms of profits.

In the third stage, participants will perform one of the tasks once more for 3 minutes. However, I allow participants to decide whether they want to pay for controlling the election of the task they must do. Participants must choose between participating as a couple or paying a random fee (F) that randomly takes values between 0 and 4kCOP in steps of 1kCOP to participate individually [3]. Each participant will be free to perform the task they prefer in the individual participation scenario. In the group participation scenario, the tasks will be assigned through the same procedural framing as in stage 2. Players know that staying in a group scheme implies the resignation of groups, roles, and tasks. Also, if they do not accept to pay the offer, they do not have to pay anything. Once participants decide on accepting or not the fee, they do once more one of the tasks according to the scheme they choose. Figure 1 displays a summary of the stages.

Figure 1: Experiment stages



[3]On the same decision page, I remind each participant how much they earned until this point as it might be essential to give them an idea of how much the fee is concerning their earnings.

2.1.1 Payoffs

The earnings for each participant will be:

$$\Phi_i = 500(n1b_i + n1a_i) + 1.000(n2_i + n3_i) - F_i$$

Where $n1a_i$ and $n1b_i$ represents the number of sequences solved correctly by each individual during the first stage in each of the tasks, and $n2_i$ and $n3_i$ represent the number of tasks correctly solved by each individual during stage 2 and 3 respectively. F_i is the random fee proposed by the computer to each participant to change to the individual schema of participation (it takes the value of 0 if participant i does not accept paying the fee to be on the individual scheme). Accordingly, the players will maximize their winnings to the extent that $n1a_i$, $n1b_i$, $n2_i$ and $n3_i$ are greater and F_i=0.

Thus, all economic incentives grant that regardless of the procedure to which participants are assigned to and the task they finally perform, the participants should exert equal effort on the tasks and thus have similar performance, at least if only payments are taken into account. Similarly, economic incentives also grant that people only should take the scheme change if the value proposed randomly by the computer is 0.

2.2 Treatment variations and roles

- **Random** - The tasks assignment is carried out randomly by the computer. Although the computer will pair participants to another session player, there will be no roles (senior player, junior player).

- **Treatment 1 (hierarchical)** - Randomly, the computer assigned each player to a role between senior or junior player. The senior player is in charge of assigning team tasks. Thus, he must decide which of the tasks he wishes to carry out and which one the other member of his group should carry out, bearing in mind that each group must carry out both tasks (write consonants and write vowels).

- **Treatment 2 (hierarchical)** - This treatment is similar to treatment 1 except for the inclusion of information about the preferences of the junior player over the tasks. Before making the assignment, the senior player has information about the junior player's preferred task. In addition, the junior player knows that the senior player knows his preferences before making the assignment in the treatment. This information is not

binding; it does not oblige the senior player to make a specific assignment and only takes an informational role.

Roles in treatments 1 and 2 help recreate a hierarchical scenario where a person in charge takes decisions (an autonomous participant) while the other person in the group carries out the decisions imposed by the senior teammate (a non-autonomous participant). In the control condition, there are no roles. However, participants are matched in pairs to have a group scenario comparable with the other treatments. Finally, both -treatments and roles- are assigned randomly between participants.

Given the combination of treatments and roles, I have three different mechanisms –procedures– of getting the tasks to be made, 1) *Random*, which corresponds to participants in the control group, 2) *By-choice*, which corresponds to the Senior player in treatments 1 and 2, and finally, 3) *Imposed*, that correspond to the Junior players in treatments 1 and 2. The reader can notice that what I have called assignment mechanisms correspond to the roles assigned in the treatments or the absence of roles in control. Finally, all three mechanisms have the same economic incentives, so participants should be indifferent between them from an outcome-related view. However, the procedures differ in the decision-making assignation and thus on the autonomy implied in each one. I would refer to these mechanisms as i) *Control* ii) *By-choice*, and iii) *Imposed* for the rest of the document.

2.3 Real effort tasks

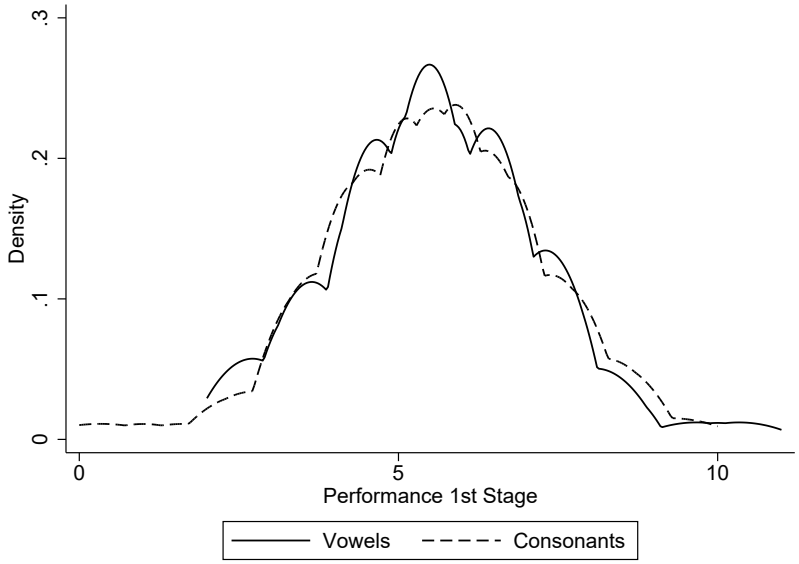
Given my design, I had to use two very similar real effort tasks (RET's hereafter) with no differences in productivity and preferences about them. To do that, I adapt the encryption task from Benndorf et al. (2019), which minimizes participant learning on the task through a double randomization process. I build two encryption tasks, one to encode numbers to vowels and the other to encode numbers to consonants. I use five consonants near the location of vowels on the board to minimize differences attributable to the letter's position on the board (see Figure 2).

Figure 2: Letters for encryption tasks

2.3.1 Validation of real effort tasks

In the following figure, I compare the performance distribution on each task with the workers' sample from the first stage of the experiment. The order in which participants went through the tasks was random to avoid distribution differences due to that. Although there are some differences, these are small and not statistically significant. Table 3 shows the test result for distribution differences among tasks.

Figure 3: RET's performance in practice stage



Notes: Kernel density using a epanechnikov function

I also asked participants about their preferred tasks. The options' order was presented randomly in the app to guarantee that responses were not biased by the order in which the

Table 1: Differences between RET's

Null Hypothesis	*p-value*
Performance vowels=Performance consonants	0.997
Prefers vowels task=0.50	0.393

Note: The first hypothesis was tested using a Kolmogorov–Smirnov test. The second hypothesis was tested using a Binomial probability test.

options appeared. This sample slightly chooses the vowel task as their preferred task (54 percent) over the consonants task (46 percent). Nevertheless, differences are minor, and the mean is not statistically different from 50% in any of the tasks (see Table 1). These results support the implementation of these two tasks in my experimental design. Furthermore, this clarifies that whatever the effect is find, it is not a consequence of natural differences between the tasks.

2.4 Procedure and sampling

I conducted the experiment between October and December 2021 with Colombian workers pre-registered online in a socioeconomic questionnaire diffused through the university's social media of the economics department. Besides, I invited people from the Rosario Experimental and Behavioral Economics Lab's non-student subjects' pool. This questionary allows us to invite people between 25 and 45 years old who work as employees or who declare themselves as self-employed. I fixed this age range because I was interested in people old enough to be working at the moment of the study, but young enough to be familiar with the computer and the board as the experiment requires minimum typing abilities. I obtained approval from the Ethics Committee at Universidad del Rosario for this initial survey and the experiment.

On average, sessions took place online through the Zoom platform and lasted 45 minutes. I employed proctored web conferencing sessions to maintain some control of the experiment sessions and emphasize the synchronous nature of the game. The experiment was programmed and monitored through oTree (Chen et al., 2016). At the start of the session, I provide each participant with an individual Heroku link to the experiment app and instructions to access the game. The experiment instructions were directly in the course of the experiment app [4] and unless individual participants questions, there was no other public intervention made by the instructors of the session.

[4] All instructions are available in the online appendix: https://github.com/laurapradaa/PreferencesForAutonomy

At the end of the experiment, the participants go through an iterative choice list to capture people's risk preferences (Falk et al., 2018). I pay for this task with a 10% of probability. Once finished, participants answered a post-experimental survey, including demographic questions and questions about their experience in the experiment. Finally, they were redirected to a questionary for the payment information. After completing this questionary, they could exit the Zoom session, and the pages opened on internet explorer during the experiment. The payment was made up to 48 hours later to their participation through an online transfer.

In total, I ran 11 sessions for a total of 139 participants [5]. On average, participants earned 35.950 COP, which is 1.19 times the minimum daily wage in Colombia by the time the experiment was conducted. Each session introduced only one treatment, which implies one pair of procedures for treatments (*By-choice, Imposed*) and one procedure to control (*random*). Also, treatments were assigned between individuals. In other words, participants only participate in one variation of the experiment.

I also ran five additional sessions with students at Universidad del Rosario. The protocol and economic incentives were the same as the sample with workers. However, students invited were selected from the subjects pool of the Rosario Experimental and Behavioral Lab –REBEL–. On average, participants earned 41,333 COP [6]. Table 2 provides information on the size of each sample and sub-sample.

Table 2: Sample

	Control	T1	T2
Workers sample			
Self-employed	20	12	19
Employees	32	30	24
Full sample (137)	52	42	43
Students sample			
Full sample (57)	19	22	16

[5] I only use data for 137 participants as 2 participants in the initial sample were people with a very low performance, and therefore they were classified as outliers

[6] 16 participants received 10,000 additionally as show up fee

2.5 Descriptive statistics

I had 194 participants summing up the workers' sample and the students' sample. Table 3 shows the final allocation of participants across the two dimensions of interest, mechanism and preference for the task. Notably, the proportion of people doing what they want in the *By-choice* mechanism is greater than in the two other groups. However, although they can decide, some people did their least preferred task. I interpret that as the result of indifference about tasks for these participants, or as the result of prosocial preferences according to which they give up their preferences. In the control group, the proportion is almost 50%, consequently to the fact that the computer randomly makes task allocation. Finally, the proportion of people doing what they want is the lowest for participants in the *Imposed* mechanism. This information shows that there are enough people in each group, which means people are doing what they want and what they do not want in all three mechanisms. The last allows the regression analysis proposed in the following section.

Regarding other characteristics of the sample, the average age of the participants in the workers' sample was 31 years, and 43% of the sample were men. Concerning the labor and social security characteristics, 37% of the participants were self-employed, 79% were in the contributory social security system, and 14% did not have a long-term savings plan for retirement. In terms of the device used to participate in the experiment, 80% used a laptop, and 55% used a mouse. Finally, about 80% of the participants have university education or more.

Students were younger than people in the workers' sample, with an average age of 20. Also, 53% were men, and 9% of them reported being working by the time of the experiment. Besides, 54% were in the contributory social security system, and 51% did not have a long-term savings plan for retirement. The last have sense given the live stage of students who participated; they are young, do not work, and are still beneficiaries of their parent's social security. In addition, 91% used a laptop, and 43% used a mouse. Regarding education, all participants in this sample studied at university when the experiment was conducted.

Tables A6 and A7 provide the balance test for these characteristics across treatment and working status groups. In general, the sample is well-balanced across comparison groups. However, the treated workers are slightly more educated than those in the control group. In the student sample, the proportion of women is higher in the control group, and participants in the treatments prefer to play in a group scheme. All the characteristics across workers' samples are balanced if self-employed and employee participants are compared. Only the

Table 3: Allocation between dimensions of analysis

	Mechanism			
Task	Random	By choice	Imposed	Total
Preferred task	38	43	23	104
Opposite task	33	19	38	90
Total	71	62	61	194

Note: Groups using the pooled sample

variables associated with social security are unbalanced, but this is expected as most self-employed people in Colombia are also in the informal market.

3 Results

3.1 Pooled sample

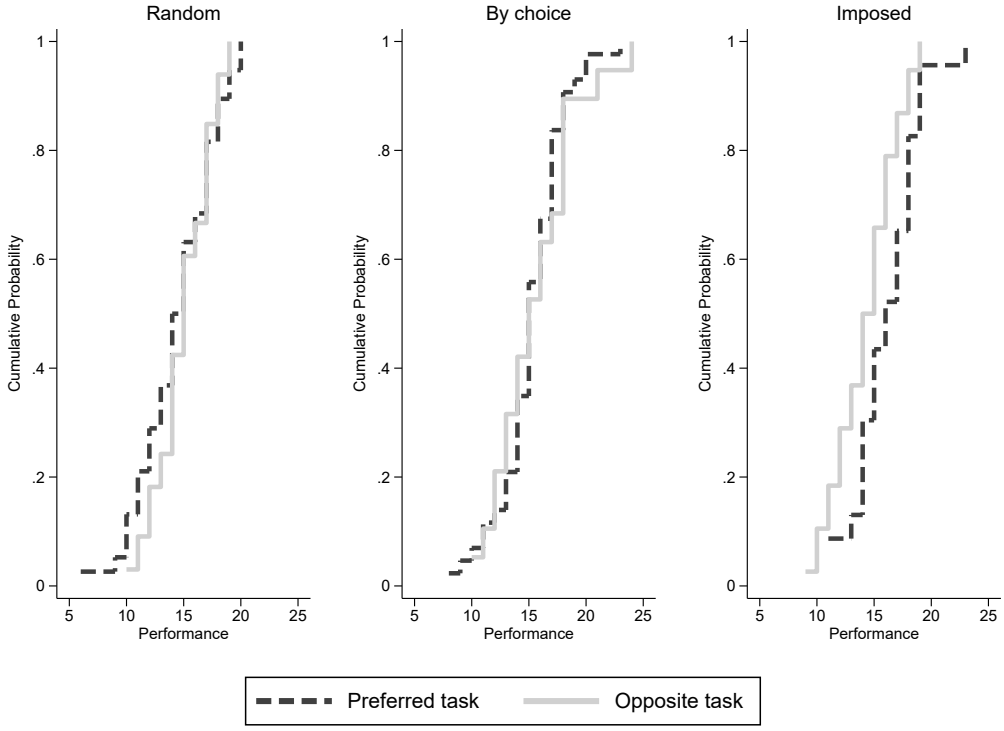
I have two outcomes over which I measured the effect of the two dimensions of analysis: 1) the second stage performance in the encryption tasks (productivity hereafter) and 2) the take-up of the random fee proposed to switch to an individual scheme that I take as a measure of willingness to pay. In the first one, I capture a behavioral effect on productivity; in the second, I capture whether people accepted a lower final payoff or a compensating effect for participating in an environment with processes/mechanisms that they appreciate more.

As mentioned before, I have one pair of procedures for treatments (*By-choice*, *Imposed*) and one procedure in control (*Random*). It implies that, in each treatment group, I have two different effects. Hence, to assess the effect of each mechanism, I cannot analyze my data in the usual way by grouping participants across treatments as a whole (i.e., dummies for treatments 1 and 2). Instead, I analyze the effect of each of the three mechanisms involved in treatments. It means that I grouped participants according to the roles randomly assigned in stage 2. This is not problematic because information delivery is the only difference between participants in treatments 1 and 2. Hence, in the *Random* mechanism are included all participants in the control group that, in sum, are participants without a role. In the *By-choice* mechanism are included all senior players and all junior players are included in the *Imposed* mechanism. Therefore, in the following analysis, I intend to assess the effect of each mechanism as explained above.

As expected, people's productivity varies if the task done is the preferred one and depending

on the assignment mechanism to reach the task. The figure below reveals that this is especially true for participants in the *Imposed* mechanism. Productivity is affected when people must perform an unwanted task due to the senior team member's decision. This is suggested by the cumulative distribution on the right panel in Figure 4, where is a clear gap between doing the preferred task or not for participants without autonomy.

Figure 4: Performance by mechanism and preferences about the task to be made

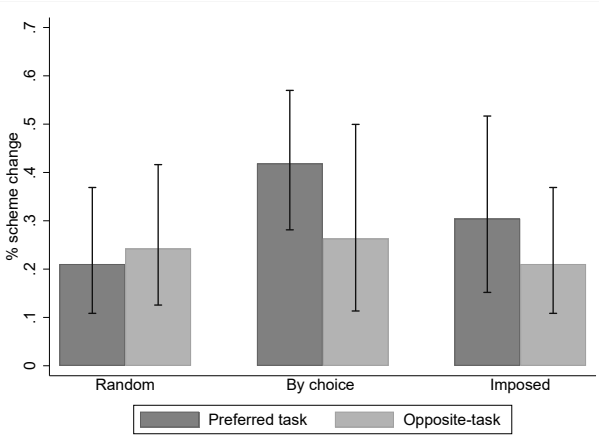


Note: Cumulative distribution function of performance in the second stage.

Regarding willingness to pay to control tasks assignment, I find that for controls, there is no clear visual difference between participants assigned to their preferred task and those assigned to the opposite task (see Figure 5). The same does not happen in the other two assignment mechanisms, where it is more apparent that people doing their preferred task are more likely to pay for the scheme change. For people who decide to perform the task they want, it is important to have still control over doing what they want and are more minded to pay for it. There is also a greater proportion of people assigned to their preferred task paying for being in the individual scheme for people assigned by a third party. Nevertheless, error bars are overlapped in all cases, and there is no evidence up to this point of statistical differences among the dimensions of interest. Figure A1 and Table A1 show the decreasing

take-up of the fee to switch scheme as the size of the fee rises.

Figure 5: Fee take-up by mechanism and preferences about the task to be made



Note: Error bars show 95% confidence intervals.

I test whether these differences are statistically significant with a simple regression analysis in the tables below. Thus, I specified the following equation to account for the differences generated for each assignation mechanism:

$$y_i = \alpha_1 ByChoice_i + \alpha_2 Imposed_i + \phi I_i + x_i'\lambda + \epsilon_i \tag{1}$$

Where: y_i is the productivity on the second stage or the acceptance of the fee for playing autonomously at the third stage. $ByChoice_i$ takes the value of one if the participant is in the *By-choice* mechanism, and $Imposed_i$ take the value of one if the participant is in the *Imposed* mechanism. That implies that participants in the Random mechanism belong to the excluded category. I_i is a dummy taking the value of one if the participant receives information. Finally, x_i is a set of control variables. More specifically, in the models where I use covariates, I include participants' age, gender, high school education, and whether they experimented on a laptop or used a mouse. I also controlled for the proposed fee size in the regression for the fee take-up. Additionally, in all models, I control for the inclusion of information and the sample type. Finally, standard errors are clustered to pair level, where each pair correspond to the couple matched for the second stage of the experiment. I do not add fixed effects at the session level as I do not have variation in the assignment mechanism across sessions for control participants.

In Table 4, I estimate the effect of each mechanism in both of my outcomes, with and without

the inclusion of individual covariates. On performance (columns (1) and (2)), there is no effect observed for any of the mechanisms. It makes sense, especially in the *Imposed* mechanism, as there converges two opposite forces, one of the people assigned to the task they wanted and one assigned to their opposite task. Regarding willingness to pay, participants in the *By-choice* mechanism are more likely to pay for playing alone when compared with those in the control group. Particularly, the point estimate is 0.16. This means the probability of paying for a scheme change increases by 16 percentage points, a 71% increase compared with controls.

Table 4: Mechanism effect on performance and fee take-up

	Performance at 2nd stage		Fee take-up	
	(1)	(2)	(3)	(4)
By choice	0.460	0.427	0.164**	0.163**
	(0.598)	(0.569)	(0.0739)	(0.0718)
Imposed	0.105	0.0455	0.0579	0.0429
	(0.590)	(0.564)	(0.0759)	(0.0748)
+ Information	0.238	0.0384	-0.0386	-0.0203
	(0.580)	(0.599)	(0.0703)	(0.0700)
Workers' sample	-1.886***	-1.384**	0.00865	-0.0442
	(0.464)	(0.611)	(0.0572)	(0.0872)
Covariates	No	Yes	No	Yes
N	194	194	194	194
F	4.717	4.112	11.41	10.36
R2	0.0933	0.177	0.207	0.245
Mean Dep.Var	14.66	14.66	0.23	0.23

Notes: This table presents the OLS estimation of the performance in the second stage (Columns 1 and 2) and the willingness to pay for playing alone in the third stage (Columns 3 and 4). *By choice* is a dummy that indicates the participant takes part in the *By-choice* mechanism. *Imposed* is a dummy that indicates the participant takes part in the *Imposed* mechanism. In all models, I control for the inclusion of information and the sample type. In columns 2 and 4, I include the participants' age, gender, high school education, and whether they experimented on a laptop or used a mouse. I also controlled for the proposed fee size in columns 3 and 4. In round brackets are presented clustered robust standard errors at pair level. Pairs correspond to the pairs composed for participation in the second stage. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Finally, the information about preferences does not affect either the performance or the fee take-up for playing alone. Furthermore, workers performed worse than students, which is coherent with the fact that students, given their average age, have been more in touch with technology than workers. However, being a worker does not affect the fee take-up.

To disentangle the opposite forces that I expect to have within each mechanism, I also perform a regression analysis looking for the effect of the two dimensions I am interested in, which are the mechanism and the preferences about the task to be made (Table 5). When analyzing

the data in this way, I find some complementarity between both dimensions, especially in the effect on the second stage's performance. There is an effect on two sides for participants in the *Imposed* mechanism, a differential effect that depends on whether the assigned task is the preferred or not. First, participants assigned to their preferred task have a better performance. On average, they increase their performance on almost two sequences. Second, the effect on participants' performance decreased for participants imposed on their non-preferred task [7]. So given that both, controls and treated participants, have the same economic incentive, it appears to be the procedure, in conjunction with the preferences about the tasks, that determines these productivity changes. In contrast, there is no effect on performance independently of the task for participants in the *By-choice* mechanism.

For the willingness to pay, the results suggest that people in the *By-choice* mechanism who choose their preferred task are still more likely to pay for an individual scheme. One can think that these could be related to some expertise that people want to take advantage of. However, the same does not happen for participants doing what they wanted in the control group. Thus, I interpret this effect as a desire to maintain the randomly assigned control. Also, it reveals that being the boss or the person in charge of decision-making seems to be more appreciated by people, not because it represents a bigger outcome but because people value the autonomy of this position. The results suggest no effect among participants for whom the task was imposed. According to the information on performance, it might be possible that some rent effect explains this behavior. If the people assigned to the opposite task have worse performance, they have a small budget to decide on. However, although participants imposed to the task they preferred have a better performance, either is not an effect.

In Table A4, I replicated Table 5 but instead of estimating the effect of the *Imposed* and *By-choice* mechanisms compared to the random mechanism (controls), I compare in this specification the difference in the variables of interest between the participants of the *By-choice* and *Imposed* mechanism, using the *By-choice* as a basis for comparison. I find that the performance of those imposed significantly decreases when imposed on a non-preferred task. However, I do not find any other statistically significant difference in outcomes between the two groups. These results suggest that, although the people assigned to the *By-choice* mechanism have a greater probability of taking the fee to change the scheme than the people assigned to the random

[7] In model 2 the effect of doing the non-preferred task in those who are in the *Imposed* mechanism is -1.97 with a p-value of 0.017

scheme (controls), they do not have a greater willingness to pay for the change of scheme than those who are in the *Imposed* mechanism.

I also analyzed the fee take-up for playing alone with a logit regression as this is a dichotomous variable (Table A2). Results are very similar to those reported with the linear model. In Figure 6, I plot the predictive margins of the ratio of the earnings accumulated by the participants until the beginning of stage 3 and the fee proposed to change the scheme when added to the specification in column (3) of Table A2. This reveals that the fee size according to earnings significantly affects the acceptance of the scheme change.

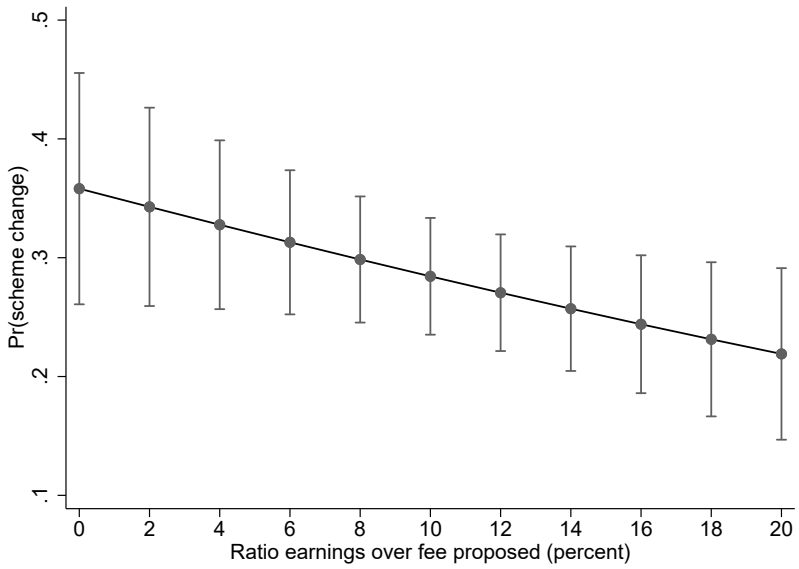
Table 5: Mechanism and preferences effect on performance and fee take-up

	Performance at 2nd stage		Fee take-up	
	(1)	(2)	(3)	(4)
By choice	0.781	0.759	0.233**	0.248**
	(0.704)	(0.653)	(0.0951)	(0.0953)
Imposed	1.936**	1.884**	0.173	0.175
	(0.926)	(0.911)	(0.129)	(0.130)
Opposite task	0.557	0.757	0.0458	0.0733
	(0.445)	(0.462)	(0.0990)	(0.102)
By choice × Opposite task	0.00394	0.113	-0.206	-0.249*
	(0.971)	(0.984)	(0.150)	(0.147)
Imposed × Opposite task	-2.686***	-2.730***	-0.199	-0.235
	(0.915)	(0.921)	(0.150)	(0.154)
+ Information	-0.265	-0.499	-0.0352	-0.0124
	(0.616)	(0.636)	(0.0733)	(0.0730)
Covariates	No	Yes	No	Yes
N	194	194	194	194
F	4.597	4.496	9.189	10.13
R2	0.133	0.217	0.225	0.267
Mean Dep. Var	14.39	14.39	0.21	0.21

Notes: This table presents the OLS estimation of the performance in the second stage (Columns 1 and 2) and the willingness to pay for playing alone in the third stage (Columns 3 and 4). *By choice* is a dummy that indicates the participant takes part in the *By-choice* mechanism. *Imposed* is a dummy that indicates the participant takes part in the *Imposed* mechanism. *Opposite task* is a dummy that indicates whether participant performed their non-preferred task. In all models, I control for including information and the sample type. Columns 1 and 3 do not include other covariates. In columns 2 and 4, I include the participants' age, gender, high school education, and whether they experimented on a laptop or used a mouse. I also controlled for the proposed fee size in columns 3 and 4. In round brackets are presented clustered robust standard errors at pair level. Pairs correspond to the pairs composed for participation in the second stage. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6 shows the effect of the procedures on three questions about participants' experience in the game asked at the end of the experiment. Specifically, I asked for i) their satisfaction with

Figure 6: Predictive margins of the fee ratio



Notes: Predictive margins of the ratio of the earnings accumulated by the participants until the beginning of stage 3 and the fee proposed to change the scheme when added to the specification in column (3) of Table A2. Error bars show 95% confidence intervals

having been part of a team. In this variable, people punctuate their satisfaction on a scale of 1 to 7, with seven being the maximum satisfaction. ii) The relationship quality with the other participant from very good to very bad [8]. For the regression, this variable takes values between 1 and 4, where one is very good, and four is very bad. Finally, iii) the intention to play alone if they were to play the game again. Although these are not my principal outcomes, I asked people these questions to determine whether the treatment changes how they feel and thus understand if the results I find are related to these changes.

First, control participants randomly assigned to a non-wanted task felt more satisfaction as a group member and reported having a better relationship quality with the other in the group. Second, participants in the *By-choice* mechanism performing the desired task reported a better relationship quality. However, these results are significant only with a confidence level of 90 percent. Third, participants in the *Imposed* mechanism assigned to a non-preferred task reported being less satisfied and having a worse relationship with their partners. Finally, there is no effect on the preferences reported for playing alone if they retake the experiment. Therefore, these results, along with Figure 6, could support the hypothesis about an income effect on people in the *Imposed* mechanism. In short, although they seem less happy with

[8]The only interaction between the group members is the assignment of tasks.

their partners and being part of a group, they are not more willing to pay for playing alone than the participants assigned initially to the *Random* mechanism.

Table 6: Mechanism and preferences effect on the relationship quality and preferences for playing alone

	Satisfaction		Relationship quality		Prefers to play alone	
	(1)	(2)	(3)	(4)	(5)	(6)
By choice	0.380	0.399	-0.343*	-0.367*	0.119	0.119
	(0.301)	(0.304)	(0.199)	(0.195)	(0.102)	(0.100)
Imposed	0.584	0.623	-0.290	-0.290	-0.0197	-0.0276
	(0.381)	(0.392)	(0.272)	(0.272)	(0.135)	(0.134)
Opposite task	0.584*	0.607*	-0.339*	-0.356*	-0.120	-0.112
	(0.299)	(0.306)	(0.200)	(0.195)	(0.0832)	(0.0875)
By choice × Opposite task	-0.306	-0.309	0.450	0.472	-0.0341	-0.0569
	(0.452)	(0.480)	(0.322)	(0.334)	(0.142)	(0.145)
Imposed × Opposite task	-1.026**	-1.022**	0.602*	0.605*	0.223	0.191
	(0.462)	(0.467)	(0.322)	(0.323)	(0.147)	(0.147)
N	194	194	194	194	194	194
F	1.001	1.043	1.400	1.363	1.678	2.542
R2	0.0345	0.0580	0.0441	0.0626	0.0431	0.0964

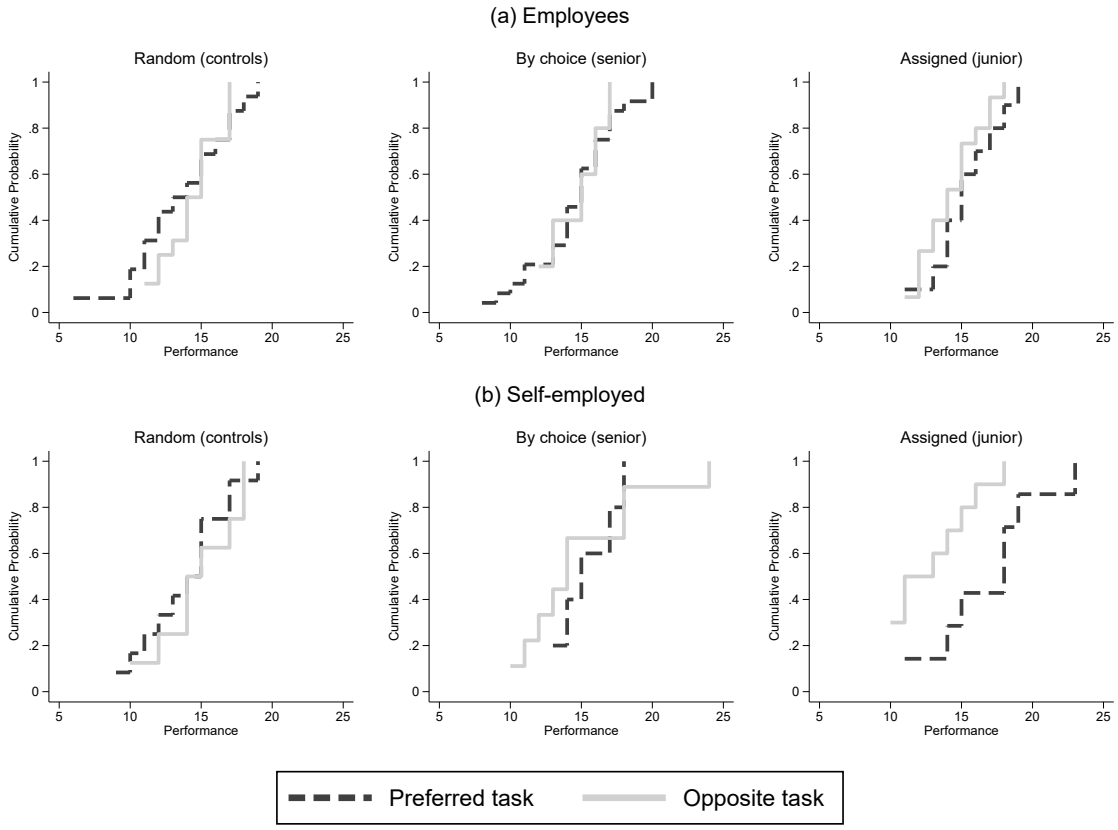
Notes: This table presents the OLS estimation of the participant satisfaction as a group member (Columns 1 and 2), the punctuation on the relationship quality with the other team member (columns 3 and 4), and the preference for playing alone in other participation of the same game (Columns 5 and 6). *By choice* is a dummy that indicates the participant takes part in the *By-choice* mechanism. *Imposed* is a dummy that indicates the participant takes part in the *Imposed* mechanism. *Opposite task* is a dummy that indicates whether participant performed their non-preferred task. Columns 1, 3, and 5 do not include covariates. In columns 2,4, and 6, I include the participants' age, gender, high school education, and whether they experimented on a laptop or used a mouse. Additionally, I control for the inclusion of information and the sample type in all models. In round brackets are presented clustered robust standard errors at pair level. Pairs correspond to the pairs composed for participation in the second stage. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Information could represent an essential factor to the detriment of the processes used. Thus, I also test whether the information affects the outcomes. In other words, I test whether being assigned for a third party to a task that the participant did not want, when this third party knows of their preferences, worsens the negative effect on performance and the capability to stay in the group scheme. As shown in Table A3, there is no evidence that this happened in the experiment. Hence, the fact that the person who assigned you to do your non-preferred task knows your preferences before doing the assignment does not affect either the productivity or the fee take-up for playing alone.

3.2 Results on workers

Figure 7 displays the performance in the second stage separately for employees and self-employed. I split the sample according to the self-definition of participants in the post-experiment survey. Hence, in this section, I call self-employed workers the people who report being independent workers on the survey. As before, the difference in performance is evident for panels of *Imposed* players. However, now these differences get more prominent for self-employed participants. There is a bigger difference between being assigned for a third party to a task they preferred to another one they did not, even though their earnings only depend on their performance. The last implies that people should perform equally from an outcome-oriented vision. The prediction before is also supported by the task comparability shown in the section concerning the tasks.

Figure 7: Performance at second stage (workers' sample)

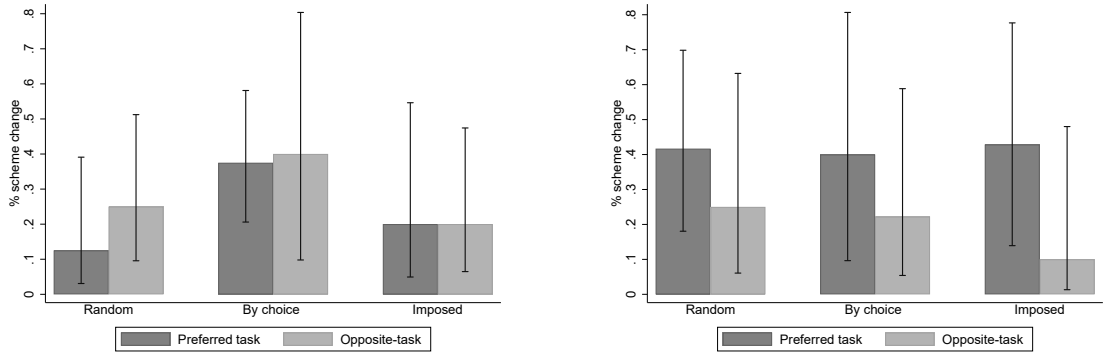


Note: Cumulative distribution function of performance in the second stage.

Self-employed participants are more likely to pay for an individual scheme than employees. Although both figures are pretty different for the self-employed (panel b in Figure 8), it is clear that regardless of the mechanism, they are more likely to pay for being autonomous

when assigned to their preferred task. It stands out too, that a lower proportion is observed for those assigned to the non-wanted task. On the contrary, there is no clear pattern for employees on the proportion paying on the individual scheme on panel a. As a matter of fact, it appears to be visual differences only in the random mechanism. Finally, as in the figure for the pooled sample, there is no apparent difference in proportions according to error bars.

Figure 8: Fee take-up (workers' sample)



(a) Employees (b) Self-employed

Note: Error bars show 95% confidence intervals.

I performed the regression on the mechanism effect only (as in Table 4), but now I interact the assignment mechanism with being self-employed. Furthermore, for these estimations, I used only the workers' sample. As a result, Table A5 reveals that there is no observable effect, either on performance or the fee take-up for playing alone. Nevertheless, as discussed in the previous section, two different forces are expected to happen within each mechanism.

For the following analysis, I used separate samples, employees and self-employed, to estimate the effect of interest. This is my preferred specification for looking at the effect on workers, as a triple interaction might not be clear enough. Table 7 shows the result of estimation in Table 5 but for separate samples. I also observe a differential effect of the preferences about the task to be made in mechanisms. Imposed self-workers who have to do their opposite task decrease their performance, which is unclear for employees. In contrast, there is no result for any sample on the probability of paying for a scheme change.

Finally, given the path observed in the figure above, I test whether the preference for the tasks affects outcomes regardless of the mechanism. As seen in the figure, not doing the preferred task decreases the change to pay for playing alone for self-employed participants but not employees (see Table 8). However, this result is statistically significant only with a

90% confidence interval.

Table 7: Mechanism and preferences effect on performance and fee take-up (workers' sample)

	Self-employed		Employees	
	(1)	(2)	(3)	(4)
	Performance	Fee take-up	Performance	Fee take-up
By choice	0.687	0.109	1.003	0.165
	(2.005)	(0.276)	(0.939)	(0.147)
Imposed	2.315	-0.00264	2.116	0.0705
	(1.764)	(0.240)	(1.466)	(0.228)
Opposite task	2.012	-0.249	0.675	0.101
	(1.630)	(0.222)	(0.954)	(0.149)
By choice × Opposite task	-2.324	-0.0450	-0.677	-0.136
	(2.526)	(0.347)	(1.747)	(0.272)
Imposed × Opposite task	-6.185**	-0.00729	-1.866	-0.145
	(2.343)	(0.318)	(1.617)	(0.251)
Covariates	No	Yes	No	Yes
N	51	51	86	86
F	1.201	1.219	1.147	1.770
R2	0.253	0.278	0.146	0.225

Notes: This table presents the OLS estimation of the performance in the second stage (Columns 1 and 3) and the willingness to pay for playing alone in the third stage (Columns 2 and 4). *By choice* is a dummy that indicates the participant takes part in the *By-choice* mechanism. *Imposed* is a dummy that indicates the participant takes part in the *Imposed* mechanism. *Opposite task* is a dummy that indicates whether participant performed their non-preferred task. In all models, I control for participants' age, gender, high school education, and whether they experimented on a laptop or used a mouse. Additionally, I control for the inclusion of information. I also controlled for the proposed fee size in columns 2 and 4. In round brackets are presented standard errors. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Effect of the preference about the task to be made (workers' sample)

	Self-employed		Employees	
	(1)	(2)	(3)	(4)
	Performance	Fee take-up	Performance	Fee take-up
Opposite task	-0.972	-0.262**	0.0159	-0.0180
	(1.002)	(0.125)	(0.588)	(0.0911)
+ Information	1.041	0.00783	0.171	0.0535
	(1.038)	(0.130)	(0.650)	(0.101)
Covariates	Yes	Yes	Yes	Yes
N	51	51	86	86
F	0.780	1.968	1.507	2.518
R2	0.113	0.273	0.119	0.207

Notes: This table presents the OLS estimation of the performance in the second stage (Columns 1 and 3) and the willingness to pay for playing alone in the third stage (Columns 2 and 4) for each sub-sample within the workers' sample. *Opposite task* is a dummy that indicates whether participant performed their non-preferred task. In all models, I control for participants' age, gender, high school education, and whether they experimented on a laptop or used a mouse. In columns 2 and 4, I also controlled for the proposed fee size. In round brackets are presented standard errors. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

4 Concluding remarks

I conducted an online experiment that emulates a couple's work environment where two tasks are assigned within team members. I introduce treatment variations in the way these tasks are assigned. For instance, I have people who assign the task to him and the other, people in a non-autonomous role who have to perform the task the other team member imposed, and people randomly assigned to the task. This scenario allows us to measure people's responses to different procedures of assigning a task they might want to do or not. More precisely, I measure the productivity in each scenario and the willingness to pay a random fee to switch to a scheme where they can have autonomy or control and do the task they want.

I find that both the assignment mechanism –procedure– and the result of the assignment –whether the task is the preferred one– had a heterogeneous effect on people's productivity and on the willingness to pay for taking control of the decision in the next round. People randomly assigned to be autonomous in the second stage are more willing to pay for a scheme change where they can control what to do in the next stage. For participants in the *Imposed* mechanism, there is a differential effect according to preferences for the task to be made. On the one hand, participants assigned to the task preferred to perform better. On the other hand, participants assigned to the less preferred task decreased their performance. The same

did not happen to participants assigned randomly by the computer (controls), which means that the effects observed result from the complementarity of the two dimensions analyzed. Finally, these effects seem to be greater for self-employed workers. Although the result on scheme change is suggested in the descriptive analysis, I did not observe any effect in the regression analysis. This is possibly related to a power issue when splitting the sample.

The previous results seem to point to the existence of factors beyond outcomes to which people respond, either with changes in their behavior or with a greater willingness to give up a part of the results to guarantee processes that they like more. First, the results on the fee take-up for playing alone for those in the *By-choice* mechanism reveal that people are not only interested in the outcomes (payoff in this case) and indicate that there are other sources of utility for participants, such as having the control of their participation. Second, the result before might be affected by an income effect. People with worse performance and a restricted budget are probably less interested in paying for autonomy, even when they feel worse in a group scheme. However, as I do not observe any effect on participants in the *Imposed* mechanism who do what they want, on the whole, these results highlight that there is a bigger fee take-up for retaining control than for winning it. Third, regardless of the economic incentives, people imposed to do an unwanted task decreased their productivity.

This paper contributes to the literature on procedural preferences and the discussion about the characteristics of self-employed people. I studied one specific procedure channel about preferences related to control and autonomy. The design allows us to measure whether procedural preferences could impact people's productivity and whether people are willing to give up a piece of their earnings (compensating effect) to be in a better-valued process. Also, I could measure whether self-employed people differ in these preferences compared to other workers or students in the Lab. I could not conclude whether this result is due to job selection (i.e., preferring jobs with more autonomy) or if the job shapes the desire for more or less autonomy. However, this is a step in understanding one of the biggest labor problems in developing countries like Colombia. People value other aspects of jobs besides salary, and whether people like or dislike these other aspects might influence how and where they work. Thus, although I abstracted from more complex elements of people's work reality in this design, the results I find might be helpful for better labor market programs. For instance, it might be essential to have a better allocating mechanism that allows people to have a job that matches their preferences. While this is not always possible, another option is to have

a better incentive design that favors people staying motivated, even if they cannot do what they prefer, to avoid a lack of productivity.

Finally, additional research is still needed to disentangle the effects on workers. Although the results I find for this sample are coherent with those found for the pooled sample, they are limited by the reduced sample size. Also, given the lack of autonomy that most scheme works necessarily represent, further research is needed to understand mechanisms to mitigate the effect on productivity or the dropping out of the group scheme of work.

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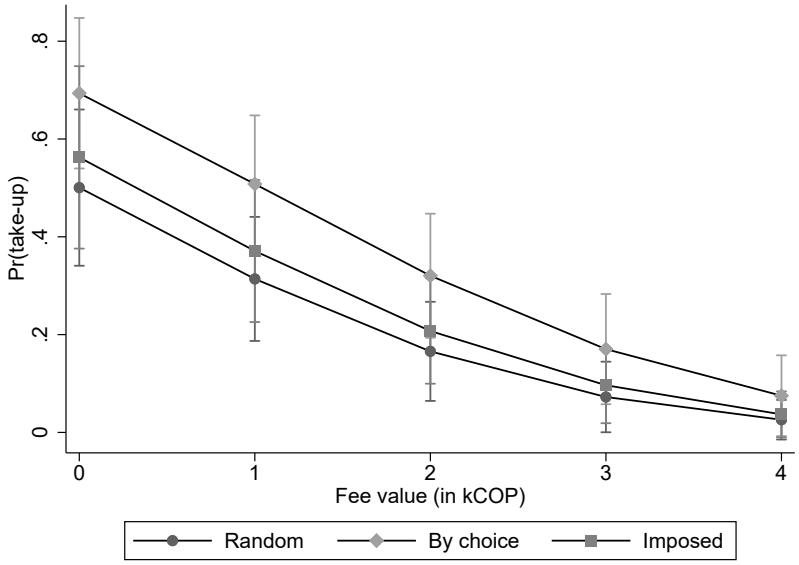
Appendix

A Additional tables and figures

Figure A1: Predictive margins of fee size with 95% CIs



Note: Predictive margins of a probit regressing the scheme change on the fee size. Errors bars show 95% confidence intervals

Table A1: Effect by fee

	Fee take-up for playing alone				
	$\geq$ 0 kCOP	$\geq$ 1 kCOP	$\geq$ 2 kCOP	$\geq$ 3 kCOP	$\geq$ 4 kCOP
By choice	0.248**	0.209**	0.0428	0.0627	-0.00972
	(0.0953)	(0.0824)	(0.0579)	(0.0516)	(0.0307)
Imposed	0.175	0.240**	0.157	0.0433	-0.0474
	(0.130)	(0.119)	(0.104)	(0.0776)	(0.0328)
Opposite task	0.0733	-0.00233	0.00237	0.00218	0.00447
	(0.102)	(0.0729)	(0.0629)	(0.0426)	(0.0428)
By choice $\times$ Opposite task	-0.249*	-0.0770	-0.107	-0.103	-0.0412
	(0.147)	(0.133)	(0.0844)	(0.0678)	(0.0538)
Imposed $\times$ Opposite task	-0.235	-0.214*	-0.221**	-0.0758	0.00860
	(0.154)	(0.128)	(0.111)	(0.0780)	(0.0441)
+ Information	-0.0124	-0.0575	0.0116	0.0187	0.0274
	(0.0730)	(0.0726)	(0.0527)	(0.0447)	(0.0248)
Covariates	Yes	Yes	Yes	Yes	Yes
N	194	194	194	194	194
F	10.13	2.179	1.217	0.676	0.250
R2	0.267	0.0950	0.122	0.0904	0.0767

Notes: This table presents the OLS estimation of the willingness to pay for playing alone at each fee size on the pooled sample. *By choice* is a dummy that indicates the participant takes part in the *By-choice* mechanism. *Imposed* is a dummy that indicates the participant takes part in the *Imposed* mechanism. *Opposite task* is a dummy that indicates whether participant performed their non-preferred task. In all models, I include individual covariates. I include the participants' age, gender, high school education, and whether they experimented on a laptop or used a mouse. Additionally, I control for the inclusion of information and the sample type (i.e., workers or students). In round brackets are presented clustered robust standard errors at pair level. Pairs correspond to the pairs composed for participation in the second stage. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A2: Logit regressions for the fee take-up

	Pooled sample		Workers sample	
	(1)	(2)	(3)	(4)
	Fee take-up for playing alone			
By choice	1.073**	1.712***	0.462	1.460
	(0.461)	(0.655)	(1.616)	(1.042)
Imposed	0.405	1.422	-0.161	1.297
	(0.502)	(0.970)	(1.278)	(1.545)
Opposite task		0.609	-1.719	1.051
		(0.724)	(1.444)	(1.100)
By choice× Opposite task		-1.819*	-0.557	-1.238
		(1.014)	(2.234)	(1.701)
Imposed × Opposite task		-1.830*	-0.0910	-1.941
		(1.109)	(1.948)	(1.800)
Covariates	Yes	Yes	Yes	Yes
N	194	194	50	86

Notes: This table presents the Logit estimation of the willingness to pay for playing alone in the third stage for the pooled sample (columns 1 and 2), the self-workers sample (columns 3), and employees sample (column 4). *By choice* is a dummy that indicates the participant takes part in the *By-choice* mechanism. *Imposed* is a dummy that indicates the participant takes part in the *Imposed* mechanism. *Opposite task* is a dummy that indicates if participant performed their non-preferred task. Column 1 estimates the effect of the mechanisms as in 4 column 4. Columns 2, 3, and 4 also include the mechanism's interaction with the preferences about the task. All models include individual covariates, information inclusion, and fee size. I include the participants' age, gender, high school education, and whether they experimented on a laptop or used a mouse. In columns 1 and 2, I also control for the sample type (i.e., workers or students). In the pooled sample standard errors are clustered at pair level. Pairs correspond to the pairs composed for participation in the second stage. In the workers' sample, standard errors were used. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A3: Information effect

	Performance at 2nd stage	Fee take-up
By choice	0.692	0.235**
	(0.693)	(0.100)
Imposed	1.736	0.147
	(1.059)	(0.158)
Opposite task	0.755	0.0730
	(0.463)	(0.102)
By choice × Opposite task	0.364	-0.202
	(1.131)	(0.171)
Imposed × Opposite task	-2.501**	-0.192
	(1.145)	(0.199)
+ Information	-0.297	0.0257
	(0.845)	(0.126)
+ Information × Opposite task	-0.432	-0.0817
	(1.046)	(0.171)
Constant	16.22***	0.420**
	(1.182)	(0.201)
Covariates	Yes	Yes
N	194	194
F	4.184	10.10
R2	0.218	0.268

Notes: This table presents the OLS estimation of the performance in the second stage (Column 1) and the willingness to pay for playing alone in the third stage (Column 2). *By choice* is a dummy that indicates the participant takes part in the *By-choice* mechanism. *Imposed* is a dummy that indicates the participant takes part in the *Imposed* mechanism. *Opposite task* is a dummy that indicates whether participant performed their non-preferred task. In all models, I include individual covariates. I include the participants' age, gender, high school education, and whether they experimented on a laptop or used a mouse. Additionally, I control for the inclusion of information and the sample type. In column 2, I also controlled for the proposed fee size. In round brackets are presented clustered robust standard errors at pair level. Pairs correspond to the pairs composed for participation in the second stage. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A4: Differential effect among treated participants

	Performance at stage 2		Fee take-up	
	(1)	(2)	(3)	(4)
Imposed	1.147	1.203	-0.0515	-0.0659
	(0.784)	(0.811)	(0.127)	(0.132)
Opposite task	0.553	0.814	-0.159	-0.176
	(0.873)	(0.880)	(0.113)	(0.112)
Imposed × Opposite task	-2.669*	-2.839**	-0.00407	0.00539
	(1.398)	(1.400)	(0.158)	(0.161)
+ Information=1	-0.277	-0.497	-0.0318	-0.00996
	(0.615)	(0.671)	(0.0731)	(0.0755)
Covariates	No	Yes	No	Yes
N	123	123	123	123
F	4.629	3.273	13.52	11.71
R2	0.126	0.180	0.254	0.300

Notes: This table presents the OLS estimation of the performance in the second stage (Columns 1 and 2) and the willingness to pay for playing alone in the third stage (Columns 3 and 4). *Imposed* is a dummy that indicates the participant takes part in the *Imposed* mechanism. *Opposite task* is a dummy that indicates whether participant performed their non-preferred task. In all models, I control for the inclusion of information and the sample type. Additionally, in columns 2 and 4, I include the participants' age, gender, high school education, and whether they experimented on a laptop or used a mouse. In columns 3 and 4, I also controlled for the proposed fee size. In round brackets are presented clustered robust standard errors at pair level. Pairs correspond to the pairs composed for participation in the second stage. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A5: Mechanism effect on performance and fee take-up for playing alone (workers' sample)

	Performance at 2nd stage		Fee take-up	
	(1)	(2)	(3)	(4)
By choice	0.462	0.389	0.145	0.126
	(0.855)	(0.878)	(0.115)	(0.121)
Imposed	0.492	0.549	0.0402	0.0238
	(0.854)	(0.844)	(0.121)	(0.120)
Self-employed	0.344	0.781	0.104	0.0994
	(0.774)	(0.757)	(0.121)	(0.126)
By choice × Self-employed	0.0205	0.0719	-0.163	-0.154
	(1.303)	(1.459)	(0.195)	(0.192)
Imposed × Self-employed	-0.475	-0.961	-0.134	-0.121
	(1.287)	(1.316)	(0.179)	(0.190)
+ Information=1	0.431	0.217	-0.0126	0.00839
	(0.716)	(0.726)	(0.0904)	(0.0906)
N	137	137	137	137
F	0.273	1.071	4.526	4.951
R2	0.0168	0.0985	0.166	0.200

Notes: This table presents the OLS estimation of the performance in the second stage (Columns 1 and 2) and the willingness to pay for playing alone in the third stage (Columns 3 and 4) in the workers' sample. *By choice* is a dummy that indicates the participant takes part in the *By-choice* mechanism. *Imposed* is a dummy that indicates the participant takes part in the *Imposed* mechanism. *Self-employed* is a dummy that indicates whether the participant self-denominated as self-employed. In all models, I control for the inclusion of information. Additionally, in columns 2 and 4, I include the participants' age, gender, high school education, and whether they experimented on a laptop or used a mouse. In columns 3 and 4, I also controlled for the proposed fee size. In round brackets are presented clustered robust standard errors at pair level. Pairs correspond to the pairs composed for participation in the second stage. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A6: Balance by treatment status

	Obs	Mean controls	Obs	Mean treated	*p-value*
Panel A: Workers sample					
Woman	52	0.52	85	0.60	(0.358)
Age	52	31.40	85	30.86	(0.587)
Self-employed	52	0.38	85	0.36	(0.817)
High school	52	0.04	85	0.06	(0.603)
Technician	52	0.17	85	0.13	(0.486)
Undergraduate	52	0.58	85	0.72	(0.092)
Postgraduate	52	0.21	85	0.09	(0.054)
Subsidized regime	52	0.12	85	0.19	(0.263)
Contributory regime	52	0.81	85	0.78	(0.667)
Social security (none)	52	0.08	85	0.04	(0.286)
Used laptop	52	0.79	85	0.81	(0.742)
Used mouse	52	0.50	85	0.59	(0.317)
Performance practice task 1	52	4.90	85	5.15	(0.370)
Performance practice task 2	52	5.77	85	6.20	(0.134)
Verification Question 1	52	0.77	85	0.85	(0.256)
Verification Question 2	52	0.96	85	0.98	(0.618)
Verification Question 3	52	0.81	85	0.79	(0.786)
Made opossite task	52	0.46	85	0.46	(0.976)
Prefers vowels	52	0.54	85	0.54	(0.976)
Random fee scheme change	52	2000.00	85	1988.24	(0.962)
Satisfaction group game	52	5.90	85	5.92	(0.953)
Prefers group game	52	0.19	85	0.21	(0.786)
Group relationship	52	2.13	85	2.08	(0.720)
Panel B: Students sample					
Woman	19	0.68	38	0.37	(0.024)
Age	19	21.16	38	20.39	(0.243)
Self-employed	19	0.05	38	0.00	(0.159)
High school	19	0.42	38	0.34	(0.568)
Technician	19	0.05	38	0.05	(1000)
Undergraduate	19	0.47	38	0.61	(0.354)
Postgraduate	19	0.05	38	0.00	(0.159)
Subsidized regime	19	0.16	38	0.21	(0.642)
Contributory regime	19	0.63	38	0.50	(0.356)
Social security (none)	19	0.21	38	0.29	(0.532)
Used laptop	19	0.95	38	0.89	(0.517)
Used mouse	19	0.42	38	0.45	(0.854)
Performance practice task 1	19	6.21	38	6.50	(0.580)
Performance practice task 2	19	7.00	38	7.05	(0.879)
Verification Question 1	19	0.89	38	0.89	(1000)
Verification Question 2	19	1.00	38	1.00	(.)
Verification Question 3	19	0.84	38	0.79	(0.642)
Made opposite task	19	0.47	38	0.47	(1000)
Prefers vowels	19	0.47	38	0.45	(0.854)
Random fee scheme change	19	1578.95	38	1868.42	(0.463)
Satisfaction group game	19	6.00	38	5.92	(0.810)
Prefers group game	19	0.05	38	0.37	(0.010)
Group relationship	19	2.42	38	2.16	(0.298)

Notes: This table presents the balance test for treated and control participants. In round brackets is presented the *p-value* after performing a t-test for mean comparison within groups.

Table A7: Balance by working status

	Obs	Mean Employees	Obs	Mean Self-employed	*p-value*
Woman	86	0.60	51	0.51	(0.282)
Age	86	30.66	51	31.75	(0.282)
High school	86	0.07	51	0.02	(0.200)
Technician	86	0.14	51	0.16	(0.783)
Undergraduate	86	0.64	51	0.71	(0.430)
Postgraduate	86	0.15	51	0.12	(0.586)
Subsidized regime	86	0.14	51	0.20	(0.387)
Contributory regime	86	0.85	51	0.69	(0.024)
Social security (none)	86	0.01	51	0.12	(0.006)
Used laptop	86	0.79	51	0.82	(0.643)
Used mouse	86	0.59	51	0.49	(0.245)
Performance practice task 1	86	4.94	51	5.25	(0.261)
Performance practice task 2	86	5.92	51	6.24	(0.273)
Verification Question 1	86	0.80	51	0.84	(0.553)
Verification Question 2	86	0.98	51	0.96	(0.595)
Verification Question 3	86	0.80	51	0.78	(0.802)
Made opposite task	86	0.42	51	0.53	(0.211)
Prefers vowels	86	0.56	51	0.51	(0.586)
Random fee scheme change	86	2093.02	51	1823.53	(0.274)
Satisfaction group game	86	5.87	51	5.98	(0.643)
Preference group game	86	0.20	51	0.22	(0.802)
Group relationship	86	2.17	51	1.98	(0.184)

Notes: This table presents the balance test for employees and self-employed participants. In round brackets is presented the *p-value* after performing a t-test for mean comparison within groups.