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Unconditional Endowment and Acceptance of Taxes: A Lab-in-the-Field Experiment on UBI with Unemployed

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Abstract: A universal basic income (UBI) would be a guaranteed income floor for both the employed and the unemployed, from which economic theory predicts a gain in bargaining power and a disincentive to work. For high earners, the increase in taxes necessary to fund this program would decrease their motivation to earn. To assess these aspects, we conducted a lab-in-the-field experiment at a State Employment Service office in Spain. The unemployed participants received either an initial unconditional endowment, framed under the logic of the solidarity condition of UBI (UBI treatment) – to examine the taxes' effect – or as a participation fee (FEE) or no initial endowment (NONUBI). Subsequently, they faced one default randomized task from a set of four paid real-effort tasks. To study bargaining power, they could change the task up to three times and/or skip all tasks and conclude the experiment. In the FEE treatment, they yielded the highest earnings. While we did not find a statistically significant difference in earnings between the FEE and the NON-UBI treatments, the UBI differed from the NON-UBI and FEE. A likely reason could be a crowding-out of motivation by the pressure to reciprocate without believing in other participants' deservingness of the UBI. In addition, the results reveal that females change tasks more frequently than males.

Keywords: universal basic income; lab-in-the-field experiment; real-effort experiment; labor supply; prosocial behavior; house money effect

JEL Classification: J2; O21; D64

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1 Introduction

In 2017, the United Nations warned about the threat of increased economic instability to human rights. They proposed the introduction of a Universal Basic Income (UBI) as a supplement or replacement for welfare systems' programs (United Nations Human Rights Council 2017). The UBI is a redistributive mechanism consisting of an unconditional income paid periodically and individually to all political community members to cover all their basic needs. It would substitute all subsidies lower than its amount, and one of the proposed ways to finance it is progressive taxation (van Parijs and Vanderborght 2017). Three years later, the unprecedented situation in modern history produced by COVID-19 accelerated the introduction of a similar alternative in Spain: the guaranteed minimum income (Arnold 2020). Unlike the UBI, this scheme is limited to citizens meeting specific requirements, leaving many in need behind (Raventós 2021). One of the coalition parties in the government had the UBI in their program, and half of the population of Spain has a positive attitude towards it (Lee 2018). However, many sustainability questions that arise about the UBI, hindered its implementation.

Raventós (2021) propose a progressive taxation system to finance the UBI, which they describe as fair and rational. Nonetheless, it is dependent on labor supply.[1] According to economic theory, whether and how a person decides to work is determined by the trade-off between the benefits – the income – and the costs – the disutility in working (Haigner et al. 2012). If leisure is considered a normal good, the increase in unearned income would reduce labor supply (Salehi-Isfahani and Mostafavi-Dehzooei 2018). The UBI would provide an income floor at the low-earned income spectrum of labor, increasing workers' bargaining power to improve labor conditions and embark on riskier ventures, such as self-employment. Meanwhile, the taxes for those working would be higher to support the UBI. This solidarity condition could also disincentive the labor supply of the higher earners, whose tax contributions would be greater than what they obtain from the UBI itself (van Parijs and Vanderborght 2017).

We conducted a lab-in-the-field experiment to shed light on how the introduction of a UBI would transform labor. Specifically, we analyze the effect that the increase in bargaining power and its solidarity feature would entail. For it, we invite users of a State Employment Office in Spain to participate in a 15-min computer session. Three treatments constitute the experiment. The common process for all is first to answer some preferences questions. We introduce the treatments before instructing the participants on the 8 min paid task series: They either received a €3

1 With labor supply, we refer to work in exchange for an income.

unconditional endowment under the UBI's logic (UBI) – the €3 source is partly other participants' earnings and they can choose to contribute with half of their future earnings – or without it (FEE), or no endowment at all (NON-UBI). Afterward, a default random task starts, which can be changed at any time for another unknown task for a total of three times or skipped to the final part, a socio-demographic questionnaire. We measure the effort exerted on the task series with the earnings and under which conditions they changed the task. We observe a statistically significant difference in earnings between those not receiving the unconditional amount with those who did with the solidarity condition. The difference between the two groups with the unconditional amount is weakly significant. A crowd-out effect, induced by the pressure to contribute without believing that the UBI's receiver deserves the payment, could explain the result. Similar to results obtained in the field, when receiving some sort of UBI female workers switched their occupations more than males did.

Researchers face limitations when executing field experiments on UBI on the scope of participants and the duration. These limitations prevent observing the overall labor market implications when introducing UBI. Our experiment closes this gap by offering multiple labor options. Lab experiments samples are mainly university students. However, the effect that the UBI will have on the unemployed is more relevant, therefore, we conducted our experiment with the unemployed. Unlike students, they have experience working and are actively seeking a job. Moreover, UBI's solidarity aspect is central to the distribution system's acceptance. Hence, we explore it through the experiment's design.

The next [2] section overviews the empirical literature on UBI. It centers on lab experiments and also presents related findings from prosocial literature. Section 3 describes the experimental design. Section 4 introduces the hypotheses. The results are analyzed in Section 5 and discussed in the last [6] section.

2 Related Literature

The empirical research on the universal basic income (UBI) is very challenging due to its universal and infinite duration conditions. Given its political, cultural, and economic implications, no political community has completely introduced it. The assessment of its feasibility in terms of labor supply has used different approaches: the empirical analysis of life-long income lottery winners, un- or conditional cash transfers, simulations, and field as well as lab experiments. All empirical studies leave some questions unanswered but complement each other to attain a more comprehensive understanding of its impact (Widerquist 2018). The reasons and mechanisms behind the success or failure of a UBI policy are as important as

knowing that it works. Thus, empirical studies are necessary to gain a broader perspective for evaluating the UBI as a policy proposal (Noguera and de Wispelaere 2006). This section presents an overview of relevant empirical studies on the trade-off between leisure and work generated by UBI. The last subsection includes insights from the literature on prosocial behavior, which offer a theoretical framework for behaviors under the prosocial setting of the UBI.

2.1 The Empirical Study of the UBI's Effect on Labor Supply

2.1.1 Natural Experiments

Lotteries of high amounts or life-long income present an analogy to the experience of the income floor that the UBI provides. Cesarini et al. (2017) and Picchio, Suetens, and van Ours (2018) analyze winners earned income levels and observe a modest decrease. Likewise, the employment choices that they indicate in surveys infrequently imply a reduction in labor supply (Arvey, Harpaz, and Liao 2004; Marx and Peeters 2008).

The Direct Distribution Mechanisms (DDM) present a similar context – states provide their citizens with unconditional cash transfers in compensation for using the area's resources. The Cherokee Nation and the population of Alaska have experienced the DDM with no major changes in employment. Jones and Marinescu (2022), Marinescu (2018) and Akee et al. (2010) found only a 1.8 percent (statistically significant) increase in part-time work among the Alaskan population. In Iran, the overall employment grew, aside from that of the young, who probably studied longer (Salehi-Isfahani and Mostafavi-Dehzooei 2018).

2.1.2 Field Experiments

One of the earliest field experiments related to UBI is the introduction of the Negative Income Tax (NIT) in Manitoba, Canada, and four other places during the '70s in the USA. The NIT targets those below a certain income to provide them with the difference up to a cutoff income through tax contributions. It was stopped abruptly in Canada due to a change in the political party governing, and until Forget (2011), nobody had analyzed them. The results are similar to DDMs, the young and mothers with children worked less, but the rest of the population even increased their participation and hours worked. Robins (1985) reports on the labor supply effect of the NIT in the United States. The youth reduced their labor supply the most by the equivalent of four weeks of full-time employment. Wives and single females follow them with three weeks reduction in labor supply and husbands the least with two.

The most prominent field experiment on UBI in Europe took place in 2017 and 2018 in Finland, under the government's effort to improve the social security system to incentivize work. The UBI treatment group, 2000 unemployed, received a monthly UBI of €560. They were active for 6.63 days more than the control group. More significant than the labor supply effect were increases in well-being: decreasing anxiety, improving trust, and escaping the bureaucracy trap (Kangas et al. 2019).

In low-income countries, field experiments testing a UBI have a more ambitious agenda because funding is cheaper. The first randomized control trial was in Kenya from 2011 to 2013 in the Rarieda District. The treated poor received an unconditional cash transfer. The consequences were positive for the labor supply and even more meaningful in social welfare, like food security and education attainment (Haushofer and Shapiro 2016).

In the case of the RCT executed in India and Namibia, the value of the UBI they implemented was only 2 % and 4 %, respectively, of the per capita GDP. When usually UBI proposals advocate payments of at least 25 % of the countries' per capita GDP (van Parijs and Vanderborght 2017). Both increased productive work (de Paz-Báñez et al. 2020).

All field experiments target only a specific part of the population. Hence, they fail to observe the overall effect on the demand for labor. Our lab-in-the-field experiment tackles this by providing participants with different labor opportunities, namely different effort tasks.

2.1.3 Laboratory Experiments

Although many authors have promoted the use of laboratory experiments (Füllbrunn, Delsen, and Vyrastekova 2019; Noguera and de Wispelaere 2006) to study the effects of the UBI on labor supply, only four address the same question as the experiment here presented with monetary incentives. This subsection presents an overview of these experiments to illustrate the current state of the literature.

The first field experiments mentioned considered the NIT distribution scheme. Kawagoe (2008) used a between-subject lab experiment to compare the expected labor supply under the NIT and UBI schemes. Sixty undergraduate students participated in the experiment following an A-B-A design. The treatments' difference lies in the marginal change: while the UBI stays constant – the subsidy and the tax level do not vary – in the NIT, once achieved the targeted income, they have to start paying taxes that depend on the difference between the earned income and the targeted income. The task they completed was 25 multiplication exercises per round, 4 s each. For every correct answer, they received four points, and each point's economic value is ¥ 4 (€0.03). In total, there were 15 rounds. The first five were under condition A1: no scheme and the subjects received a payoff for each correct solution. The subjects

were divided into the NIT and UBI schemes from the 6th to the 10th round (B). The last five rounds were under the baseline condition A2. A learning effect occurred, increasing the income steadily from the first round to the last. Thus, the solved exercises from conditions B and A2 are compared to measure the impact of the scheme's introduction. The NIT did not yield significant differences. Nevertheless, the UBI leads to a rise in the number of correctly solved exercises, suggesting an increase in labor supply. The results from Kawagoe (2008) suggest that even when paying taxes to finance the UBI, the effort does not decrease. This illustrates that paying more taxes alone might not be a disincentive to exert effort. In a second study, Kawagoe (2019) further examines personality traits' influences on exerting effort. Participants had to solve sudokus correctly during four trials. The payment method changed in the second and fourth trials, in which they received an unconditional amount of 500 points (=¥500), representing the UBI. He assessed participants' conscientiousness (from the Big 5), risk aversion (with the Multiple Price List), cognitive abilities (with Raven's test), and social value orientation (with the Triple-Dominance Measure). The UBI had no effect on the effort exerted, while competitiveness and individualism positively affected it.

In Haigner et al. (2012)'s experiment, work was optional, as in our design presented here. They used a between-subject design with three different treatments. For the eight periods of 5 min each that the experiment lasted, they allocated the 18 subjects randomly in groups of three without revealing anybody's identity. At each period's beginning, the participants had to decide between three options: 1. generating income individually, 2. working for the group and sharing the income with the three members, or 3. spending the period freely surfing the internet, on leisure. Those who chose options 1 or 2 faced a real-effort task of adding as often five 2-digit integers as possible for a piece rate of €0.30 each. After each period, the subject learns about the option chosen and the output achieved. The control is the baseline treatment in which participants did not pay taxes, while in the other two treatments, Tax and UBI, there is a taxation rate of 50 %. However, their collected tax money differs: in the Tax treatment, it was redistributed among the group participants, and in the UBI, it funds the unconditional endowment of €15 that they received upfront.

Even if their results were insignificant, it is worth noting that the individual option was the preferred choice in all the treatments, 85 % in the control and 80 % in Tax and UBI. Only 4 % chose the leisure option and only in the Tax and UBI treatments. They solved more questions under the control than the UBI treatment. Nevertheless, the significant income distribution result indicated a lower income inequality under the UBI. The Gini coefficient was 0.118 in contrast to 0.193 in the control at about a 12 % loss of productivity. The funding of the UBI was almost reached from the taxes contribution with €14.43 on average.

Jokipalo (2019) presents an adaptation of the gift exchange experiment to study the effect of a simulated basic income (BI) on wages and offers. She proposed a framework based on an employer-employee relationship. The employer decides on the employee's salary for completing an encryption task over eight rounds. The author compares the differences between a baseline treatment with no welfare system, a BI with a fixed pay of either 10 or 20, and an unemployment benefits treatment in which, if the participant receives no offer or rejects it, earns either 10 or 20. Her results demonstrate reciprocal behavior, with the BI treatment and higher offers leading to more significant employee effort.

A proposition to tackle automation's impact on the labor market is the introduction of a universal basic income (UBI). Cabrales, Hernández, and Sánchez (2020) studied this topic through a lab experiment. They examined how introducing taxes on robots and the UBI affects productivity. Their nine treatments included four different factors: whether or not the decision to have a robot is either exogenous or endogenous. In the first case, participants' productivity is compared to that of robots, if it is lower, the robots substitute them. Certain participants act as managers for the endogenous treatment and decide whether to hire a robot or person after assessing their productivity. Under the endogenous condition, some managers had to pay a tax to substitute humans for robots, and in one group they could offer part-time work. A basic income is introduced in three groups: an exogenous, an endogenous with taxes, and one without taxes. The basic income, as well as the threat of robot substitution or taxes, do not lead to decreases in labor.

The existing experimental literature, while insightful, leaves questions open. Our experiment tries to tackle them by studying the bargaining power and acceptability of the prosocial aspect of the UBI in a controlled environment. In contrast to all other lab experiments, the participants will have the alternative to change their job, the effort task, and the receiver of the optional taxes will be anonymous, simulating the real market.

2.2 The Prosocial Aspect of the Universal Basic Income

There is robust evidence that people would continue working if they received an unconditional income. However, other UBI aspects also influence the provision of labor, such as the increase in taxes. If part of people's income goes into funding the UBI, would they work less? We include this altruistic facet of the UBI in the experiment's setting.

Experimental literature on taxes (Torgler 2004) reveals how considering citizens' tax use preferences enhances compliance. Hence, those who accept UBI and are averse to income inequality might be more supportive of paying higher taxes to

finance it. However, current welfare systems only support those deserving in terms of their working contribution. The UBI challenges this conviction with its unconditionality and provides a new imaginary. On the one hand, not believing in the deservedness of the receivers might hinder the decision to donate. On the other hand, knowing that members of society contribute to the possibility of the UBI, encourages reciprocity.

From the literature on incentives, we know that quantity also plays a role in motivating specific behavior. If the reward amount is too low, it could reduce the intrinsic motivation towards the prosocial condition when performing the task (Gneezy and Rustichini 2000): the crowd-out effect. The contrary effect, an increase in intrinsic motivation, would be expected from the public environment in which the participant decides. The option to share is an opportunity to demonstrate their level of altruism (Bénabou and Tirole 2006) or comply with donating as what others await of them – an image concern from the experimenter effect. In dictator and ultimatum games, part of the reason why senders cooperate is the experimenter effect (Hoffman et al. 1994). We expect similar outcomes if the decision to cooperate is salient or if starting the task is the default. Also, guilt avoidance might motivate sharing (Battigalli and Dufwenberg 2022).

Finally, lab experiments (Boylan 2010; Bühren and Kundt 2014) have demonstrated how the source of the money taxed influences compliance. If the money is endowed, a windfall, one does not feel at first entitled to it and is more risk-seeking. People evade more taxes when they invest effort and time in their earnings. They follow the same logic in the decision to donate or not. In dictator games, when the participant earns the endowment, the amount sent is lower than when it is a windfall (Carlsson, He, and Martinsson 2013). The UBI in our experiment provides an ambiguous situation as both cases occur. The participant receives an unconditional amount and at the same time can earn their income from the task, the latter connected to the opportunity to contribute with half of their earnings.

3 Experimental Design

For two months,[2] we invited the users of a Public State Employment office in Vigo, Spain, to participate in the lab-in-the-field experiment. The experiment was conducted using oTree (Chen, Schonger, and Wickens 2016) and followed a between-subject design. They participated one by one using the public computer from the office. Each participant took around 15 min to complete the experiment, which comprised three parts: It began with a pre-questionnaire, which interrogated the

2 We executed the experiment from the 24th of February until the 23rd of April 2021.

participants regarding their altruism, life satisfaction, risk attitudes, self-rated computer familiarity, and urgency (whether the participant was in a hurry to complete the experiment).

The second part involved a series of real-effort tasks. The participants had 8 min to carry them out. They did not know the potential gain, which according to the pilot could vary from 0 to around 5 euros. These were the tedious and repetitive task of counting zeros in a table with 75 zeros and ones (Abeler et al. 2011), the cognitive loaded task of finding the two numbers that add to 10 from a matrix of 12 one decimal numbers (Ariely, Bracha, and Meier 2009), the memory task of indicating the number of spotted differences between two images (Ho et al. 2016) and the monotonous sliders task (Gill and Prowse 2019). The order of the four tasks was randomized at the individual level. Each task's payoff was adapted to reach an equal time/income ratio. They started with a randomized default task, and within 8 min, they could switch to the next task up to three times (equivalent to the four tasks) or skip to the end survey at any time. The performance of any of these tasks was optional. At each task series' stage, participants answered control questions to ensure they understood it.

Lastly, the participants had to complete an end survey. We asked them whether they had done similar tasks before and if they found the performed tasks easy, stressful, or fun. We also asked them about why they had or had not changed tasks. The experiment ended with socio-demographic questions about their age, gender, education, household income, and labor status.

The experiment consisted of three treatments, which varied in two factors: "endowment" and "UBI-frame." Introducing the treatments' factors preceded the explanation of the task series information. Hence, the participants at this stage did not know what exactly the series of tasks were. The "endowment" factor entailed €3[3] given unconditionally to the participants. The "UBI-frame" factor informed how other selected participants partly contributed to the unconditional amount of money they had received (the endowment). As a control, subjects answered whether they agree to give half of the future tasks' earnings[4] with future participants of the study. The neutral terminology aimed to avoid the moral implications of paying taxes. Participants in the FEE treatment group had the "endowment" but not the

3 The €3 account for the 75 % of the hourly minimum inter-professional salary in Spain of €31.66/day (RD231/2020).

4 This assessed the acceptability of the redistribution aspect of the universal basic income, which would include progressively higher taxes to finance the UBI. One receives the amount of the universal basic income and at the same time cooperates through taxes to raise the money for it. We base the decision to apply a cooperation rate of half of the earnings was based on the financial plan presented by Raventós, Torrens, and Arcarons (2017) to introduce a UBI in Spain, in which the authors present a flat tax rate of 49 % as an alternative.

"UBI-frame" factor. Participants in the UBI treatment had all the factors "endowment" and "UBI-frame", whereas, in the NON-UBI treatment, participants had none.

For the randomization process, a list of codes (Ids) served as keys to distribute treatments and tasks' orders, which were unknown to the researcher executing the experiment. Moreover, the experimenter applied the code to the program, unaware of who would participate next. This double-blind setting limited the potential experimenter effect. All participants agreed to take part in the study, and the office agents made sure that, at the time, they were in a stable emotional state and uncertain about their employment situation.

4 Hypotheses

Our experiment aims to elicit the direction of the effect that the unconditional endowment (i.e. UBI and FEE) has on labor supply. We measure labor supply in terms of earnings from the tasks. According to economic theory, the participants will balance the trade-off between the benefits of overcoming the task (i.e. the earnings) and the cost (i.e. the effort) (Haigner et al. 2012). Therefore, our *first (1) hypothesis is that those under the FEE treatment, who receive an unconditional endowment, exert different effort levels than those under the NON-UBI treatment, who do not get any initial endowment*.

Apart from the reception of an unconditional endowment in the FEE and UBI treatments, the frame of the UBI treatment can affect labor supply. Firstly, participants must exert more effort to achieve the same earnings when contributing as those under the FEE treatment. Secondly, the source of the unconditional endowment is more salient to participants, and they get a chance to reciprocate (Dörrenberg and Peichl 2018). According to the theory on intrinsic motivation (Lindenberg 2001), the prosocial aspect is a normative frame, which sets sharing as the appropriate behavior. Thus, our *second (2) hypothesis refers to a difference in the medians from the overall earnings (including the amount shared) between the FEE and UBI treatments*.

Both the unconditional endowment and frame factors vary between the UBI and NON-UBI treatments. The reasons stated for the previous hypotheses also apply in this case. Either factor or a combination of both can lead to disparate earnings. Thus, *our third (3) hypothesis proposes a difference in median earnings between the NON-UBI and UBI treatments*.

One element of our design closer to reality than previous lab experiments is that participants can choose the work they want. They do so in exchange for time, what we define as the bargaining process. We simulate this by offering the participants in our experiment a series of ordered tasks. Other empirical evidence, from field

experiments (Forget 2011; Kangas et al. 2019) and data from lifelong lottery winners (Cesarini et al. 2017; Picchio, Suetens, and van Ours 2018), reveal that some recipients of unconditional cash transfers change their occupation – from low-skills jobs to studying, to caring for the elderly or newborns, or to more risky job positions such as entrepreneurs. We infer that these changes demonstrate increased bargaining power from the recipients' side. To evaluate this assumption, the experiment includes the option to change tasks as a bargaining power measure. The unconditional amount offers the UBI and FEE participants a margin to look for a task of their liking.

Hence, we hypothesize that they change tasks more frequently in the treatments with the windfall endowment than under the NON-UBI treatment.

5 Results

Two hundred fifty-three visitors participated in the experiment. We analyzed the data of the 214 visitors who correctly answered all the control questions. The gender distribution is even, and the average age was 43 years.[5] The average task series' earnings in the three treatments was €1.93: the highest in the FEE treatment, €2.08, the lowest in the UBI treatment, €1.69, and the NON-UBI treatment in the middle with €2.04. Of all the participants, 39 % decided to change the task from the default.

As displayed in Table 1, if the first default task was the "Find the Differences" task, 29 (52.73 %) out of 55 participants changed the task. For the other default tasks, on average, a third of the participants per default task changed: 36.54 % with the "Matrix", 33.93 % with "Sliders", and 31.37 % with "Count the 0" task. When marking the reason why they changed task, the most popular reason was either to improve performance (35 %) or out of curiosity (33.7 %). Only 3.61 % marked money as their incentive to change. However, we see that under the Matrix task the earnings were low when they changed task, averaging €0.39. Also, under the Find the Difference task, although the average earnings was €1.3, half of the participants who changed made no money from the task. The same situation happened in the Matrix and in the Sliders, where half of the participants earned nothing, 52.6 % and 47 % respectively. The opposite was the case under the Count 0 task, in which only two people made no earnings and the average was €1.77, although with a large standard deviation of 1.86. The treatments do not seem to affect changing task, being the larger number of

5 When applying the Pearson X^2 test to see the distribution of the different variables between the treatments, we observe that the randomization process worked but for the equivalent household income. It was higher than €1,500 for nine participants in the UBI treatment and only for five participants each in the FEE and NON-UBI treatments.

Table 1: Performance in the default task by task changers.

	Find differences	Matrix	Count 0	Sliders
First task	54	52	51	56
Participants changing	29	19	16	19
%	53.70 %	36.54 %	31.37 %	33.93 %
Average earnings	1.30	0.39	1.77	1.32
SD	2.06	0.70	1.86	1.68
0 earners	16	10	2	9
%	55.17 %	52.63 %	12.50 %	47.37 %
>0 earners	13	9	14	10
%	44.83 %	47.37 %	87.50 %	52.63 %

changers in the UBI (44.29 %), followed by the NON-UBI (39.13 %), and the least in the FEE (33.33 %). Of the 70 participants under the UBI treatment, 52 (74.29 %) decided to contribute with half of their future earnings and earned on average €1.85, while 18 (25.71 %) did not, and earned on average €1.21.

Table 2 exhibits the Success Rate (SR) variable we created to examine their behavior while performing the task in more detail. The success rate encompasses the number of correct attempts divided by the total number of attempts, giving us the percentage of correct attempts on average for all tasks. The success rate was higher under the FEE treatment followed by the NONUBI and finally the UBI, which correlates with earnings. The number of attempts under the UBI is 2 units lower than in the other two treatments, suggesting that less effort was exerted.

Figure 1 illustrates the distribution of earnings from the task. It exhibits a slight difference between the treatments: the FEE boxplot is taller and higher, and the median and average are close to that of the NON-UBI treatment. While the UBI boxplot reveals that at least 25 % of the participants did not execute any effort to earn anything in addition to the unconditional income of €3. Although the average in the UBI is relatively close, the median is rather low compared to the other two treatments.

Table 2: Sucess rate per treatment.

	NON UBI	FEE	UBI
Success rate	85 %	88 %	78 %
N° attempts	14.17	14.36	12.40

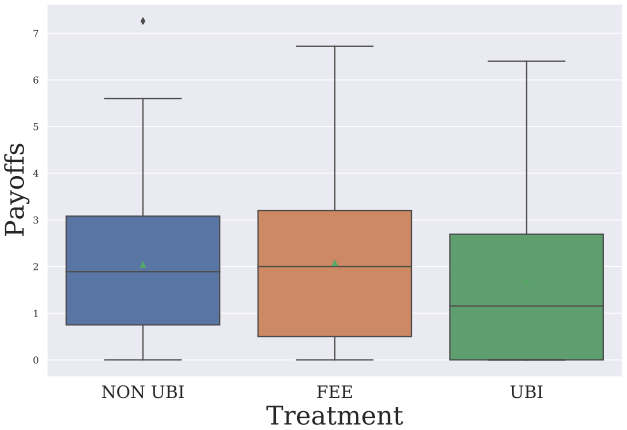

Figure 1: Boxplot of the earnings from the task by treatment.

At first sight, there is no difference between earnings from the NON-UBI and FEE treatments. The result of a two-sided Mann-Whitney Test, $p = 0.5$, confirms it. Consequently, we fail to reject the first null hypothesis, and hence, there is no evidence of a decrease in motivation to work when receiving an unconditional payoff. The result also confirms that there is no house money effect on exerting effort.

When comparing the two treatments with an unconditional endowment, we find a weakly significant difference between the participants under the FEE and the UBI treatments (two-sided Mann-Whitney Test $p = 0.053$). We cannot reject the second null hypothesis. Given that the average earnings are €2.08 and €1.69 respectively, we postulate that the UBI frame could generate a crowd-out effect on exerting effort.

The NON-UBI and UBI treatments are the most distant, differing both on the endowment and sharing factors. A two-sided Mann-Whitney test returns a significant statistical difference, $p = 0.040$, between the medians on earnings from the task.

To better understand the difference between the treatments, we analyze the behavior among the UBI participants. We observe that participants who accepted contributing with half of their earnings before performing the tasks earned more than those who did not, on average, €1.85 versus €1.21. The difference in medians is not statistically significant (Mann-Whitney Test, $p = 0.103$), and only 25.71 % did not contribute. We consider whether the reason not to contribute is a self-selection issue – they might decide not to if they doubt their abilities to face the task. When the participant cannot make any earnings, neither can they contribute. However, we test their perceived computer abilities and time spent on the task between the two groups and we find no differences (Mann Whitney Test $p = 0.96$ and $p = 0.46$, respectively).

The standard theory of labor supply anticipates the effect of the introduction of UBI to be systematically heterogeneous (Bitler, Gelbach, and Hoynes 2006). Thus, we use quantile regression to explore the earnings determinants at different distribution levels. We also include an OLS regression for comparison. The regression, Table 3, incorporates the most relevant variables: the treatments, age, gender, and perceived computer ability. Compared to the UBI treatment, the FEE treatment has a statistically significant effect on the median and average earnings. We also find that older age had a small but statistically significant negative effect for those earning the average, the median, or in the 75 percentile. Those participants who reported good computer abilities among the average and the 50 and 25 percentiles earnings earned significantly more. We do not find this effect with the participants on the fourth quantile, which could indicate how improving the skills of the lower earners in the distribution impact their income.

Participants start with one random default task from the four different options. They can then change tasks in exchange for the time used to read the new task's instructions and answer its specific control questions. We predicted that the UBI and FEE participants would change tasks more. Nonetheless, we find no evidence of it: Fisher Exact Tests comparing the differences in task changing frequency between the treatments return no significant results. It is possible that our sample size is not large enough to detect the effect. Neither when looking only at the particular initial default

Table 3: Quantiles and OLS regressions of the payoff from the task.

Variables	Quantile 25 Task payoff	Quantile 50 Task payoff	Quantile 75 Task payoff	OLS Task payoff
NON-UBI	0.383	0.487	0.353	0.312
	(0.410)	(0.447)	(0.571)	(0.278)
FEE	0.296	**0.940****	0.431	**0.468***
	(0.253)	(0.384)	(0.546)	(0.272)
Age	−0.0115	**−0.0321***	**−0.0543*****	**−0.0310*****
	(0.0118)	(0.0175)	(0.0206)	(0.0104)
Female	−0.362	−0.251	−0.370	−0.294
	(0.308)	(0.368)	(0.356)	(0.225)
Perceived computer ability	**0.122***	**0.244****	0.178	**0.205*****
	(0.0690)	(0.104)	(0.108)	(0.0755)
Constant	0.257	1.343	**4.329*****	**1.957*****
	(0.700)	(1.313)	(1.577)	(0.687)
Adjusted R-squared	0.0445	0.0630	0.0758	0.092
Observations	214	214	214	214

Standard errors are reported in parentheses. ***, **, * indicate significance at the 99 %, 95 % and 90 % level, respectively. The bold values indicate the statistically significant coefficients.

task. Distinct characteristics of the participants might contribute to the participants' decision whether to change the task or not. Through a probit regression, see Appendix B, we detect that the gender of the participant affected changing. We obtain a significant difference ($p = 0.014$) when testing through a Fisher's Exact Test. Those who changed tasks earned 12.6 % less than those who did not.

6 Discussion

The present lab-in-the-field experiment emulated a labor market without – the NON-UBI treatment – and with a universal basic income. It took the form of a €3 unconditional endowment. Either the participant just received it, the FEE treatment, or it also included the UBI frame – the endowment's source is salient, and participants accept or not to contribute with half of the effort task's future earnings – the UBI treatment. Afterward, for up to 8 min, they could carry from one to a series of real-effort paid tasks. They also answered some preferences and socio-demographic questions.

Our paper contributes to the literature in several ways. Firstly, no significant difference exists between the FEE and NON-UBI treatments on effort. Unconditional endowments not influencing the effort incurred in the task align with the field and natural recurring data. Secondly, the same finding represents no evidence of the House Money Effect with effortful tasks, although empirical literature has pointed out this effect on risk-taking Thaler (1999); Davis, Joyce, and Roelofs (2010); Rosenboim and Shavit (2012) and cooperation Clark (2002); Cherry, Kroll, and Shogren (2005); Dannenberg et al. (2012). Thirdly, the UBI frame appears to lead to a crowd-out effect on exerting effort. Subjects under the UBI treatment earned less than those under the FEE and NON-UBI treatment. Fourthly, the results indicate a difference in changing tasks between the genders. Females are more likely to change tasks, which correlates with the increased gender gap within the household in paid work hours in Spain Blázquez, Herrarte, and Moro Egido (2022).

Working is optional, and participants could skip to the end of the experiment at any time. As in Haigner et al. (2012), we observe that only 26 participants, a 12 % of the total 214, spent less than half of the time, 4 min, on the task. Unlike in the lab, in which participants purposely go to perform the experiment, in the lab-in-the-field setting, the engagement in the experiment is improvised. Participation costs are lower since participants do not incur extra travel costs, hence the motivation to have pecuniary outcomes is not as large as in the lab. However, we also observe a high level of engagement in the effortful task. The randomization of the task's order avoided any influence on the participant's aspiration level in the task.

Regarding the earnings, the FEE treatment yields the most productive results, which is in line with the UBI treatment in Kawagoe (2008) – the taxes and earnings stayed constant–, the control treatment in Haigner et al. (2012) in which they do not have to pay taxes, and Jokipalo (2019)'s BI treatment, where they received a steady income. In all previous lab experiments, the effort incurred when having to pay taxes did not decrease, which is the opposite of our experiment's result. The optionality to contribute and the anonymity of the receivers of the unconditional income are also new factors in the lab settings.

The experiment's external validity is limited – the UBI involves higher amounts given on continuously – but it provides insights into the response behavior to certain mechanisms of the redistribution system (Levitt and List 2007). The results suggest that the provision of labor would stay constant for those whose earnings from the UBI are larger than the taxes they have to pay. In the opposite case, the labor supply would decline with higher taxes than the UBI's amount. Subjects receiving an unconditional endowment, partly collected from other participants' earnings, and with the opportunity to contribute, giving half of their future task's earnings, earned less than those without the sharing factor.

On average, participants who did not contribute earned only 68.5 % of those who did. Shame or guilt (Battigalli and Dufwenberg 2022) of not contributing might have led to a lower effort in the task. A possible reason not to contribute is whether they find other participants deserving of receiving the money. The institutionalized common conviction that state benefits are attached to a contribution might trigger this belief. This group of participants might also capture the free riders, who do not contribute and do not want to make any effort.

Reciprocity can be one of the explanations for the high compliance to contribute by 73.49 % of the participants since the received money comes partly from other participants' earnings. Unlike in Jokipalo (2019), where the employees were directly affected by the employer's decision, in this setting, participants under the UBI treatment have an anonymous relationship with the other participants, and the only knowledge of them is that they are unemployed. If the subject believes that the study's procedure should be equal to all the participants, inequity aversion, she has the motivation to contribute. Further analysis is needed to discern the effect of contributing information – knowing that other participants' earnings partly fund the unconditional endowment – from that of the possibility – contributing with half of the future earnings.

Although a veil of ignorance exists on the experiment's goal, participants are aware that they are participating in a study. The invitation to participate involves two likely opposing motivations, on one side, the possibility of earning money from participating, and on the other, the prosocial act of helping with the study – instead of sorting out from an environment with an attached pro-social-act (Lazear, Malmendier,

and Weber 2012). Individuals who participate might share or have some antagonistic attributes.

To determine the universal basic income feasibility, we suggest further research on the psychological dimension of its framework (de Wispelaere and Noguera 2012; Legein et al. 2017). When a person's status changes from unemployed to retired, the unemployment stigma dilutes, and their well-being increases. Similarly, introducing the UBI would provide new perceptions that would influence social norms, and consequently, people's behavior. Either the attitudes toward the state might change inspired by reciprocity or the opposite, depending on how the UBI is framed.

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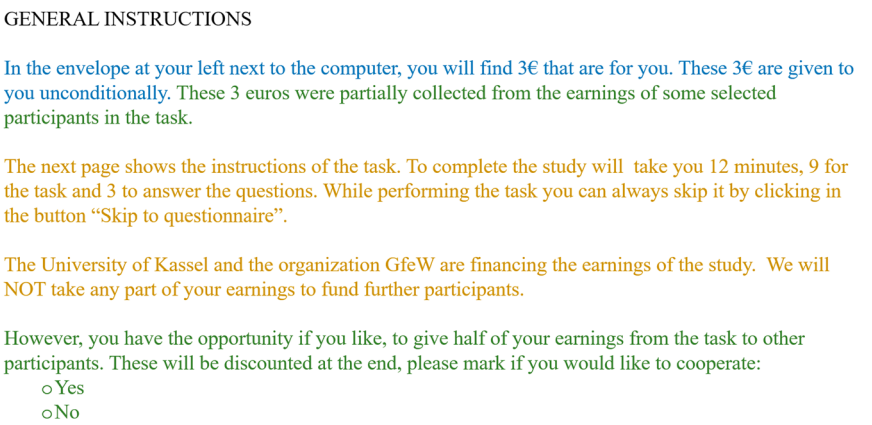
Competing interests: None.

Appendix A: Experimental Design Details

A.1 Treatments' Differences

Figure A1 presents the differences between the treatments. The base text is the one of the NON-UBI treatment in yellow, which was present in all treatments. The next addition was in the FEE treatment, blue color. The text indicated to the participants that the €3 in the envelope next to the computer belonged to them. Finally, the green part was the addition of the UBI treatment, in which a collaboration aspect was added to the experiment and participants could self-select themselves to be part of it.


GENERAL INSTRUCTIONS

In the envelope at your left next to the computer, you will find 3€ that are for you. These 3€ are given to you unconditionally. These 3 euros were partially collected from the earnings of some selected participants in the task.

The next page shows the instructions of the task. To complete the study will take you 12 minutes, 9 for the task and 3 to answer the questions. While performing the task you can always skip it by clicking in the button "Skip to questionnaire".

The University of Kassel and the organization GfeW are financing the earnings of the study. We will NOT take any part of your earnings to fund further participants.

However, you have the opportunity if you like, to give half of your earnings from the task to other participants. These will be discounted at the end, please mark if you would like to cooperate:

○ Yes
○ No

Figure A1: Instruction's screen with the differences between the treatments.

A.2 Tasks' Screens

The following figures present a screenshot of the tasks from the experiment. In the upper part of the screen, the timer indicated how much time the participant had left to complete the tasks. Under it was the task followed by a button to skip the task and another to skip to the questionnaire.

The count the zeros task, Figure A2, consisted of a table of 75 zeros and ones from which the participant had to count how many zeros were there and type it into the indicated box. For every correct answer, the participant earned 0.25€. They had a total of three chances to guess the correct answer before the table changed directly to a new one.

The sliders task, Figure A3, consisted of moving sliders to the center of the bar (50). For every slider in the position 50, the participant earned €0.07. The page displayed 28 sliders at the same time, as soon as all sliders were in the position 50 of the bars, the page updated to a new one with 28 other bars.

The find the differences task, Figure A4, consisted of two images partly covered. The objective was to write the number of differences between the visible parts of the two images. For every correct answer, the participant earned €0.8. Participants had a total of three attempts to answer the correct answer, before the images were updated to new ones.

The matrix task, Figure A5, consisted of a table of three by four one decimal numbers. The goal was to find the two numbers that added to 10 and write them in the box. For every correct answer, the participant earned €0.25. There was a total of three attempts to answer the correct answer before a new table appeared.

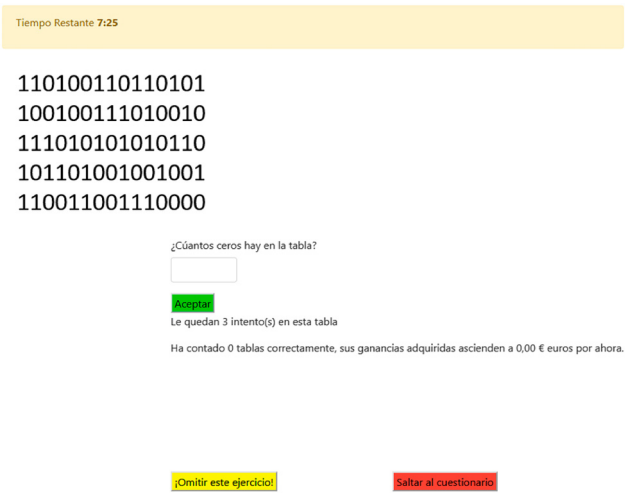


Figure A2: Example of the screen under the count 0 task.

Figure A3: Example of the screen under the sliders task.

Figure A4: Example of the screen under the find the differences task.

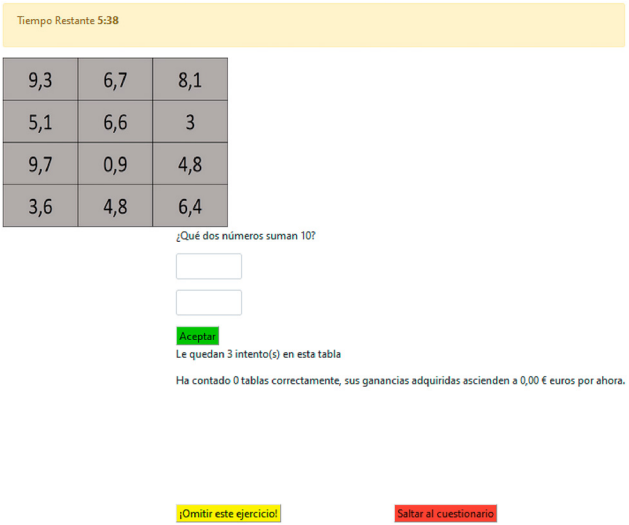


Figure A5: Example of the screen under the matrix task.

A.3 A Detailed Description of the Experiment's Process

The process was the following: the officers attending the users did a preselection of those on an unemployment status and whom they considered could participate, based on their emotional state and computational skills. Once their meeting was over, she announced to them that the university was conducting a study at the entrance and that the person in charge would explain it to them in more detail. Then, the researcher approached them and said: "Hello, we are conducting a study for the university, it involves a series of questions and tasks, one can earn some money according to how one does in the tasks. It is voluntary and anonymous. It is carried here via the computer and it takes a maximum of 15 min. Would you like to participate?" When they accepted and sat in front of the computer, the researcher indicated to them the table where she would be while they were completing the experiment, so that in case they had questions, they could call her, and she would answer them. The researcher sat at a table some meters away, hidden by a column from the participant's view. She could track the stage of the experiment the participants were at and their earnings. Once it was over, she approached them with their payoff and a confirmation form to sign.

A.4 Variables' Index

A.4.1 Preferences

Altruism 0, …, 1,000: Imagine the following situation: Today you unexpectedly received 1,000 Euro. How much of this amount would you donate to a good cause? (Values between 0 and 1,000 are allowed).

Perceived computer abilities 1, …, 7. In a range from 1, "totally disagree", to 7, "totally agree", indicate to which extent you agree with the following statement: I feel very comfortable using the computer".

Hurry 1, 2, 3, 4: How much time do you have now to dedicate to this study? 1. From 0 to 5 min 2. From 5 to 10 min 3. From 10 to 20 min 4. From 20 to 30 m.

Life satisfaction 0, …, 35: Please indicate to which extent you agree with the following statements by clicking on the appropriate number (only one per statement). [1, "totally disagree", to 7, "totally agree"]:

- In most ways, my life is close to my ideal.
- The conditions of my life are excellent.
- I am satisfied with my life.
- So far I have gotten the important things I want in life.
- If I could live my life over, I would change almost nothing.

Risk-taking 1, …, 10: How do you see yourself: are you a person who is generally willing to take risks, or do you try to avoid taking risks? [Indicate it on a scale from 0 to 10, where 0 means "not willing to take risks" and 10 is "very willing to take risks"].

A.4.2 Task Feedback

In a range from 1, "totally disagree", to 7, "totally agree", indicate to which extent you agree with the following statement.

Did not change task:

- **Familiarity with the default task** 1, …, 7: I was familiarized with the task
- **Monetary perception** 1, …, 7: The monetary incentive motivated me to carry out the task
- **Fun Perception** 1, …, 7: I had fun carrying the task
- **Stress Perception** 1, …, 7: I got very stressed while doing the task
- **Easy Perception** 1, …, 7: The task was very easy

Changed task:

- **Familiarity with the default task** 1, …, 7: Were the tasks familiar to you?

- Yes, the counting 0 task
- Yes, the add to 10 task
- Yes, the find the difference task
- Yes, the sliders task
- None

In a range from 1, "totally disagree", to 7, "totally agree", indicate to which extent you agree with the following statement.

- **Monetary perception** 1, …, 7: The monetary incentive motivated me to carry the task
- **Fun Perception** 1, …, 7: I had fund doing the task
- **Stress Perception** 1, …, 7: I got very stressed while doing the task
- **Easy Perception** 1, …, 7: The task was very easy
- **Reason**: "Why did you change to a new task?
- I was curious to know what the other task was
- I did not like the task that I had to carry
- I was bored
- I was doing badly and I wanted to see if there was something I could do better
- I wanted to see if I could get more money.

A.4.3 Socio-Demographic Questions

Age: 2021-the year of birth: What is your year of birth?

Gender: With which gender identity do you identify more? Female, Male or Other.

Civil Status: Please, indicate your civil status:

- Single
- Living together
- Married
- Divorced, or separated living
- Widowed
- Not specified

Equivalent Household Income: Average income range/(1 + ((*No of adults* − 1) * 0.5 + (*No of children* (≤18) * 0.3))).

- How many people live in their home, including yourself and children?
- How many of them are younger than 18 years old?
- Please, indicate the monthly net earnings from your home (earnings after taxes and the contribution to social security?)

- under 499 Euro
- 500 to 999 Euro
- 1,000 to 1,499 Euro
- 1,500 to 1,999 Euro
- 2,000 to 2,499 Euro
- 2,500 to 2,999 Euro
- 3,000 to 4,999 Euro
- 5,000 Euro or more
- Not specified

Education Level: 1, …, 7 What is your maximum level of studies completed?

- No school leaving certificate
- Lower secondary school leaving certificate
- Secondary school leaving certificate
- General higher education entrance qualification
- Technical college degree
- Bachelor degree
- Master Degree/Diploma
- Not specified
- Miscellaneous:

Unemployment:

Unemployed last 2 years: In the last 2 years, how many months have you been unemployed?

Unemployed last week: Have you been unemployed during last week until now? *Yes/No*.

Unemployment Benefits: Are you receiving unemployment benefits? *Yes/No*.

If yes: A.1–A.2 – B//If no: B.

A.1 **Months Subsidized:** For how many months have you been receiving unemployment benefits? XXX Months.

A.2 **Subsidy Amount**: How much money do you receive monthly from the unemployment benefits? XXX€

B **Type Subsidy**: Do the benefits that you are receiving fall in one of the following categories?

- Unemployment subsidy (PARO)
- Temporary employment regulation record (ERTE)
- Subsidy to returned emigrants
- Subsidy to people freed from prison
- Subsidy to people older than 45 years old without family burden

- Subsidy to people older than 52 years old
- Subsidy for unemployment to people with family charged
- Subsidy for disabled persons
- Subsidy for victims of gender violence
- Subsidy for housekeepers
- Subsidy for Artists
- No

Appendix B: Further Analysis

In this appendix we have included the regression tables of the OLS when sharing earnings and the Probit regression when changing task.

The Ordinary Least Square regression on sharing earnings includes all the participants under the treatment UBI. As it can be seen in Table B1, the age is always negatively statistically significant on the earnings. This could be explained by a difference in computer abilities with age, thus the older participants performed worse. Nevertheless, the perceived computer abilities of the participants and the age are not correlated.

Table B1: Ordinary least square regression on sharing earnings.

	OLS
Variables	**Task payoff**
Share earnings	1.029**
	(0.502)
Age	−0.0452**
	(0.0194)
Gender	−0.158
	(0.412)
Constant	2.912***
	(0.831)
Observations	70
R-squared	0.101

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

The Probit regression, Table B2, illustrates how none of the treatments had an effect on participants changing task. Only if participant's gender was female, it is significantly statistically more likely that she would change task than if it was male.

Table B2: Probit regression on changing the default task.

	Dependent variable: change task	
	Marginal effect	**Standard error**
FEE	−0.30	(0.22)
NON-UBI	−0.13	(0.22)
Age	−0.01	(0.01)
Female	0.44**	(0.19)
Default task: base find the differences		
Count 0	0.23**	(0.10)
Matrix	0.13	(0.10)
Sliders	0.12	(0.10)
Observations	214	
R-squared	0.04	

Notes: Standard errors in brackets. *Significant at 10 %, ** significant at 5 %, ***significant at 1 %.

References

Abeler, J., A. Falk, L. Goette, and D. Huffman. 2011. “Reference Points and Effort Provision.” *American Economic Review* 101 (2): 470–92.

Akee, R.K.Q., W.E. Copeland, G. Keeler, A. Angold, and E.J. Costello. 2010. “Parents’ Incomes and Children’s Outcomes: A Quasi-Experiment.” *American Economic Journal: Applied Economics* 2 (1): 86–115.

Ariely, D., A. Bracha, and S. Meier. 2009. “Doing Good or Doing Well? Image Motivation and Monetary Incentives in Behaving Prosocially.” *American Economic Review* 99 (1): 544–55.

Arnold, C. 2020. “Pandemic Speeds Largest Test Yet of Universal Basic Income.” *Nature* 583 (7817): 502–3.

Arvey, R.D., I. Harpaz, and H. Liao. 2004. “Work Centrality and Post-Award Work Behavior of Lottery Winners.” *Journal of Psychology* 138 (5): 404–20.

Battigalli, P., and M. Dufwenberg. 2022. “Belief-Dependent Motivations and Psychological Game Theory.” *Journal of Economic Literature* 60 (3): 833–82.

Bénabou, R., and J. Tirole. 2006. “Incentives and Prosocial Behavior.” *American Economic Review* 96 (5): 1652–78.

Bitler, M.P., J.B. Gelbach, and H.W. Hoynes. 2006. “What Mean Impacts Miss: Distributional Effects of Welfare Reform Experiments.” *American Economic Review* 96 (4): 988–1012.

Blázquez, M., A. Herrarte, and A.I. Moro Egido. 2022. “Has the Covid-19 Pandemic Widened the Gender Gap in Paid Work Hours in Spain?” *Journal of Demographic Economics* 90 (2): 313–48.

Boylan, S.J. 2010. “Prior Audits and Taxpayer Compliance: Experimental Evidence on the Effect of Earned versus Endowed Income.” *Journal of the American Taxation Association* 32 (2): 73–88.

Bühren, C., and T.C. Kundt. 2014. “Does the Level of Work Effort Influence Tax Evasion? Experimental Evidence.” *Review of Economics* 65 (2): 137–58.

Cabrales, A., P. Hernández, and A. Sánchez. 2020. “Robots, Labor Markets, and Universal Basic Income.” *Humanities and Social Sciences Communications* 7 (1): 1–8.

Carlsson, F., H. He, and P. Martinsson. 2013. “Easy Come, Easy Go.” *Experimental Economics* 16 (2): 190–207.

Cesarini, D., E. Lindqvist, M.J. Notowidigdo, and R. Östling. 2017. "The Effect of Wealth on Individual and Household Labor Supply: Evidence from Swedish Lotteries." *American Economic Review* 107 (12): 3917–46.

Chen, D.L., M. Schonger, and C. Wickens. 2016. "Otree – An Open-Source Platform for Laboratory, Online, and Field Experiments." *Journal of Behavioral and Experimental Finance* 9: 88–97.

Cherry, T.L., S. Kroll, and J.F. Shogren. 2005. "The Impact of Endowment Heterogeneity and Origin on Public Good Contributions: Evidence from the Lab." *Journal of Economic Behavior & Organization* 57 (3): 357–65.

Clark, J. 2002. "House Money Effects in Public Good Experiments." *Experimental Economics* 5 (3): 223–31.

Dannenberg, A., T. Riechmann, B. Sturm, and C. Vogt. 2012. "Inequality Aversion and the House Money Effect." *Experimental Economics* 15 (3): 460–84.

Davis, L.R., B.P. Joyce, and M.R. Roelofs. 2010. "My Money or Yours: House Money Payment Effects." *Experimental Economics* 13 (2): 189–205.

de Paz-Báñez, M.A., M.J. Asensio-Coto, C. Sánchez-López, and M.-T. Aceytuno. 2020. "Is There Empirical Evidence on How the Implementation of a Universal Basic Income (Ubi) Affects Labour Supply? A Systematic Review." *Sustainability* 12 (22): 9458.

de Wispelaere, J., and J.A. Noguera. 2012. "On the Political Feasibility of Universal Basic Income: An Analytic Framework." In *Basic Income Guarantee and Politics: International Experiences and Perspectives on the Viability of Income Guarantee*, edited by R.K. Caputo, 17–38. New York: Palgrave Macmillan US.

Dörrenberg, P., and A. Peichl. 2018. "Tax Morale and the Role of Social Norms and Reciprocity. Evidence from a Randomized Survey Experiment." *CESifo Working Paper Series No. 7149*, https://doi.org/10.2139/ssrn.3237993.

Forget, E.L. 2011. "The Town with No Poverty: The Health Effects of a Canadian Guaranteed Annual Income Field Experiment." *Canadian Public Policy* 37 (3): 283–305.

Füllbrunn, S., L. Delsen, and J. Vyrastekova. 2019. *Experimental Economics: A Test-Bed for the Unconditional Basic Income?*, edited by L. Delsen. Cham: Springer International Publishing.

Gill, D., and V. Prowse. 2019. "Measuring Costly Effort Using the Slider Task." *Journal of Behavioral and Experimental Finance* 21: 1–9.

Gneezy, U., and A. Rustichini. 2000. "Pay Enough or Don't Pay at All." *The Quarterly Journal of Economics* 115 (3): 791–810.

Haigner, S., W. Höchtl, F.G. Schneider, F. Wakolbinger, and S. Jenewein. 2012. "Keep on Working: Unconditional Basic Income in the Lab." *Basic Income Studies* 7 (1), https://doi.org/110.1515/1932-0183.1230.

Haushofer, J., and J. Shapiro. 2016. "The Short-Term Impact of Unconditional Cash Transfers to the Poor: Experimental Evidence from Kenya." *The Quarterly Journal of Economics* 131 (4): 1973–2042.

Ho, C.-J., A. Slivkins, S. Suri, and J.W. Vaughan. 2016. "Incentivizing High Quality Crowdwork." *SIGecom Exchanges* 14 (2): 26–34.

Hoffman, E., K. McCabe, K. Shachat, and V. Smith. 1994. "Preferences, Property Rights, and Anonymity in Bargaining Games." *Games and Economic Behavior* 7 (3): 346–80.

Jokipalo, V.A. 2019. "Basic Income, Wages, and Productivity: A Laboratory Experiment." *Basic Income Studies* 14 (2): 20190016.

Jones, D., and I. Marinescu. 2022. "The Labor Market Impacts of Universal and Permanent Cash Transfers: Evidence from the Alaska Permanent Fund." *American Economic Journal: Economic Policy* 14 (2): 315–40.

Kangas, O., S. Jauhiainen, M. Simanainen, and M. Ylikännö. 2019. *The Basic Income Experiment 2017–2018 in Finland: Preliminary Results*. Helsinki: Ministry of Social Affairs and Health.

Kawagoe, T. 2008. "An Experimental Study of Basic Income Guarantee." In *Far East and South Asia Meeting of the Econometric Society*. Future University Hakodate.

Kawagoe, T. 2019. "Experimental and Game Theoretical Analyses of the Unconditional Basic Income." In *Empirical Research on an Unconditional Basic Income in Europe*, edited by L. Delsen, 201–20. Cham: Springer International Publishing.

Lazear, E.P., U. Malmendier, and R.A. Weber. 2012. "Sorting in Experiments with Application to Social Preferences." *American Economic Journal: Applied Economics* 4 (1): 136–63.

Lee, S. 2018. "Attitudes toward Universal Basic Income and Welfare State in Europe: A Research Note." *Basic Income Studies* 13 (1): 20180002.

Legein, T., A. Vandeleene, P. Heyvaert, J. Perrez, and M. Reuchamps. 2017. *The Basic Income Debate in Belgium: An Experimental Study on the Framing Impact of Metaphors on the Opinion Formation Process: "Sixth Edition of the Conference Belgium: The State of the Federation", Brussels (21/12)*. http://hdl.handle.net/2078.1/193660.

Levitt, S.D., and J.A. List. 2007. "What Do Laboratory Experiments Measuring Social Preferences Reveal about the Real World?" *Journal of Economic Perspectives* 21 (2): 153–74.

Lindenberg, S. 2001. "Intrinsic Motivation in a New Light." *Kyklos* 54 (2–3): 317–42.

Marinescu, I. 2018. *No Strings Attached: The Behavioral Effects of U.S. Unconditional Cash Transfer Programs* (Working Paper No. 24337). National Bureau of Economic Research.

Marx, A., and H. Peeters. 2008. "An Unconditional Basic Income and Labor Supply: Results from a Pilot Study of Lottery Winners." *The Journal of Socio-Economics* 37 (4): 1636–59.

Noguera, J.A., and J. de Wispelaere. 2006. "A Plea for the Use of Laboratory Experiments in Basic Income Research." *Basic Income Studies* 1 (2). https://doi.org/10.2202/1932-0183.1044.

Picchio, M., S. Suetens, and J.C. van Ours. 2018. "Labour Supply Effects of Winning a Lottery." *The Economic Journal* 128 (611): 1700–29.

Raventós, D. 2021. *La renta básica: ¿por qué y para qué?* Madrid: Catarata.

Raventós, D., L. Torrens, and J. Arcarons. 2017. *Renta básica incondicional. una propuesta de financiación racional y justa.* https://www.researchgate.net/publication/330224103 (accessed July 15, 2020).

Robins, P.K. 1985. "A Comparison of the Labor Supply Findings from the Four Negative Income Tax Experiments." *The Journal of Human Resources* 20 (4): 567.

Rosenboim, M., and T. Shavit. 2012. "Whose Money Is it Anyway? Using Prepaid Incentives in Experimental Economics to Create a Natural Environment." *Experimental Economics* 15 (1): 145–57.

Salehi-Isfahani, D., and M.H. Mostafavi-Dehzooei. 2018. "Cash Transfers and Labor Supply: Evidence from a Large-Scale Program in Iran." *Journal of Development Economics* 135: 349–67.

Thaler, R.H. 1999. "Mental Accounting Matters." *Journal of Behavioral Decision Making* 12 (3): 183–206.

Torgler, B. 2004. "Cross-Culture Comparison of Tax Morale and Tax Compliance: Evidence from Costa Rica and Switzerland." *International Journal of Comparative Sociology* 45 (1–2): 17–43.

United Nations Human Rights Council, ed. 2017. *Report of the Special Rapporteur on Extreme Poverty and Human Rights* (Tech. Rep.). United Nations General Assembly. https://undocs.org/Home/Mobile?FinalSymbol=A.

van Parijs, P., and Y. Vanderborght. 2017. *Basic Income: A Radical Proposal for a Free Society and a Sane Economy.* Cambridge, MA and London, England: Harvard University Press.

Widerquist, K. 2018. *The Devil's in the Caveats: A Critical Analysis of Basic Income Experiments for Researchers, Policymakers, and Citizens*. Berkeley: Bepress. https://works.bepress.com/widerquist/86/ (accessed July 20, 2020).