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Unconditional basic income and social preferences: some evidence from the lab

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Abstract

The purpose of this article is to experimentally analyze the assumed links between individuals' social preferences and their support for a basic income, based on three possible types of preferences: efficiency-oriented, egalitarian, and maximin. To this end, we designed an original experimental protocol at the intersection of two strands of literature: one well-established, dealing with social preferences, and the other more recent and still emerging, focused on basic income. Our experiment yields two main findings. First, participants identified as having maximin-type social preferences significantly tend to choose a distribution including a basic income. Second, participants identified as efficiency-oriented or egalitarian deviate from their usual preference type in favor of the basic income whenever it provides a maximin type distribution. These two results clearly support a justification of basic income in maximin terms, thus following the theoretical argument put forward by Van Parijs.

Keywords— Basic income, social preferences, experimental economics, maximin, Philippe Van Parijs

JEL codes— B2, B4, D63, P4

1 Introduction

Unconditional Basic Income (UBI) is defined by Van Parijs and Vanderborght (2017, p. 4) as "a regular income paid in cash to every individual member of a society, irrespective of income from other sources and with no strings attached." In institutional terms, UBI constitutes a noncontributory and universally accessible transfer scheme that provides regular cash payments to individuals, independently of their labor market participation, household structure, or prior entitlements. The principles of universality and unconditionality imply, respectively, that benefits are extended to all members of society and that eligibility is not contingent upon means-testing or behavioral conditions such as employment or job search.

Notwithstanding its conceptual clarity, UBI remains institutionally and politically contentious. Public opinion is markedly divided: the 2016 Swiss referendum, for example, revealed that 76.9% of voters opposed its adoption. Yet, the institutional disruptions triggered by the COVID-19 crisis have renewed interest in UBI as a potential mechanism for strengthening income security. This resurgence of attention has been accompanied by a gradual shift in both policy discourse and academic debate toward reconsidering UBI's feasibility and its place within our contemporary societies (Nettle et al. 2021).

From a theoretical standpoint, the justification for UBI rests on a variety of normative and institutional arguments. In the tradition of Van Parijs (1995), UBI is often defended as a realization of real freedom for all, ensuring that individuals possess the material means to pursue life choices independent of market participation. A basic income has the potential to reduce economic inequalities, which in turn could strengthen fairness, cooperation, and the overall quality of institutions. Reducing inequality may help rebuild social trust and reinforce institutional legitimacy, creating a more stable and cohesive society. Numerous studies have highlighted the strong link between institutional quality and the level of inequality within a country (see in this journal Bennett and Nikolaev 2016, Holcombe and Boudreaux 2016, D'Amato et al. 2022). Broader research in political economy also points to the same dynamic, showing that persistent inequality can erode democratic institutions and social cohesion (Acemoglu and Robinson 2012, Stiglitz 2012, Piketty 2014). From this perspective, a basic income can be viewed not only as a redistributive mechanism but also as a means of fostering more inclusive and resilient institutional frameworks.

However, the acceptance and long-term viability of UBI ultimately depend on the alignment between its institutional design and individuals' social preferences regarding fairness, efficiency, and redistribution. Understanding these preferences is therefore crucial to assessing both the political feasibility and the normative legitimacy of a universal and unconditional income scheme.

The existing body of literature has identified a range of factors associated with individual preferences toward UBI. Shin et al. (2021) found that in countries with generous unemployment benefits, workers are less likely to support UBI schemes, while those in temporary employment generally have positive attitudes towards UBI. Similarly, Kangas et al. (2021) found in Finland that individuals in insecure job positions are more likely to support UBI. They also noted that perceptions of societal problems impact UBI preferences, with those attributing issues to personal actions (individual blame) being skeptical of UBI, while those attributing issues to societal factors (social blame) tend to support it. Delsen (2019) provides an overview of various studies on this topic, noting, for example, similar to Andersson and Kangas (2002), that no gender effect was observed in support for UBI. Yet an essential dimension remains insufficiently addressed in this line of research—namely, the potential link between individuals' normative conceptions of social justice and attitudes towards UBI. Given the enduring theoretical and ethical connection between UBI and notions of fairness,[1] it becomes particularly relevant to investigate how individuals perceive and evaluate social justice in income distribution.

In this paper, we seek to address this gap by bridging two distinct strands of literature concerned with the study of preferences for UBI. The first is the emerging experimental literature on UBI, and more specifically on the normative issues underpinning it, which sheds light on the conception of social justice and fairness that UBI embodies. The second is the extensive literature on laboratory experiments investigating social preferences. By connecting these two areas of research, our study aims to establish an analytical and empirical link between UBI and social preferences, thereby proposing an original laboratory experiment whose results are likely to shed light on the potential relationships between social preferences and support for basic income (Jacob 2025a).

On the one hand, there already exists a substantial body of experimental work on social preferences, as summarized by Cooper and Kagel (2017). This literature demonstrates that individuals' decisions are not solely guided by self-interest or personal welfare but are also influenced by the outcomes experienced by others. Hence, individuals cannot be viewed merely as purely rational agents; they are also motivated by social sentiments such as altruism, inequity aversion, and reciprocity (Levitt and List 2007). For the purposes of our analysis, this literature is particularly relevant, as it offers a framework for understanding why individuals may favor one income distribution over another within a simplified allocation game. This approach makes it possible to design an experimental game incorporating UBI as a distributive mechanism and to identify the types of preferences associated with its selection. Such preferences may stem from

[1] See, for example, Van Parijs and Vanderborght (2017, Chapter 4) on the history of UBI.

efficiency motives—seeking to maximize total payoffs—from a maximin perspective—aiming to improve the position of the least advantaged—or from egalitarian concerns oriented toward reducing inequality as a whole.

On the other hand, following the plea by Noguera and De Wispelaere (2006) for the use of laboratory experiments to study UBI, a limited but growing number of empirical studies have been conducted. Most of these experiments have examined the behavioral effects of UBI on individuals, particularly with respect to labor supply responses (Haigner et al. 2012, Kawagoe 2019, Jokipalo 2019, Palermo 2019, Jokipalo 2023). The findings are heterogeneous: while several studies suggest that UBI has no significant impact on labor supply (Haigner 2012, Jokipalo 2019, 2023), others find either a positive effect (Kawagoe 2019) or a negative one (Palermo 2019). Moreover, Delsen et al. (2019) report that the introduction of UBI does not significantly alter individuals' risk-taking behavior.

Beyond behavioral outcomes, a smaller number of studies have examined how individuals perceive UBI and form preferences toward it. For instance, Legein et al. 2018 investigate opinion formation regarding UBI through framing effects, showing that minor changes in the wording of UBI descriptions can substantially influence subjects' perceptions and evaluations of the policy. Similarly, Kederer et al. (2017) and Palermo (2019) explore preferences for UBI under a Rawlsian veil of ignorance, thereby engaging directly with questions of social justice. Interestingly, the two studies yield contrasting results: while Palermo (2019) finds that UBI is the least preferred option in two out of three experimental stages, Kederer et al. (2017) report unanimous support for UBI under the veil of ignorance.

By proposing to link these two strands of research through an experimental approach, our study seeks to offer preliminary empirical insights into a largely unexplored question: the extent to which the justification of unconditional basic income can be grounded in the maximin criterion. Indeed, following one of the main theorists of basic income, Philippe Van Parijs, this criterion is often regarded as the most compelling normative basis for explaining and justifying the implementation of UBI within a society (Van Parijs and Vanderborght 2017, Jacob 2025b). The experimental protocol we propose is specifically designed to examine this crucial issue in the literature on basic income. Its results could thus contribute both to validating or challenging Van Parijs's advocacy for UBI and to providing additional empirical support for its normative justification.

With respect to our research question, our experiment yields two main findings. First, participants identified as having maximin-type social preferences significantly tend to choose a distribution that includes a basic income. Second, participants identified as efficiency-oriented or egalitarian deviate from their typical preference type in favor of a basic income whenever it provides a maximin-type distribution. Together, these results provide strong support for a maximin-based justification of basic income, in line with the theoretical argument advanced by Van Parijs.

The following section presents our experimental protocol. Section three will report the results, which will be discussed in section four. Section five offers some concluding remarks.

2 Experimental Design

The aim of our experimental protocol is to compare individuals' social preferences with their support for the basic income principle. Following Guichardaz et al. (2019), we set up a three-stage protocol involving 30 players. Mainly based on a simple distribution game proposed by Engelmann and Strobel (2004), the first stage aims to identify the conceptions of social justice (or type) endorsed by the players according to their preference for one of the three proposed distributions: egalitarian, maximin, or efficient. The 30 players are randomly divided into 10 groups of 3 players and successively confronted with 5 matrices of distributions, the groups being reformed at each stage in such a way that the players cannot know the identity of the other players in their group, let alone their decisions. These matrices are offered to players at random to avoid any anchoring bias. An example of a distribution matrix is shown in Table 1.

Table 1: Example of distribution matrix from Stage 1

	Society A	Society B	Society C	Society D
Player 1	12	7	4	7
Player 2	13	13	13	13
Player 3	25	38	22	14
Total	50	58	39	34

Thus, if a player chooses society or distribution A, he will be identified as being of the maximin type, since this is the society that maximizes the gain of the most disadvantaged individual (in this case, player 1, who receives 12 in society A versus 7 in B and D, and 4 in C). If a player chooses society B, he will be identified as efficient, since this is the society that maximizes collective utility (understood here as corresponding to total gain; in fact, society B's total gain is 58, compared with 50 in A, 39 in C and 34 in D). Finally, if a player chooses societies C or D, he will be identified as an egalitarian, given that these two societies minimize the differences in gains between the 3 individuals.[2] For the first two stages of the experimental protocol, it is clearly stated to each of the players that: "Your payoff will depend on your role as Player 1, Player 2, or Player 3. To determine your payoff, only the decision made by the player designated as Player 2 will be applied. If your role is that of Player 1 or Player 3, your choice will have no impact on your own payoff or on the payoff of the other members of your group. However, if your role is that of Player 2, your decision will determine your own payoff as well as that of the other members of your group." No indication is given of the probabilities of being designated player 1, 2, or 3, thus more or less reproducing the famous Rawlsian "veil of ignorance".

The second stage of our protocol involves 10 distribution matrices, each successively presented to groups of three players, with the composition of the groups changing for each matrix. This stage now introduces the issue of basic income. This time, subjects are invited to choose between two distributions or societies, A and B: one where it is clearly stipulated that all players receive a basic income; the other where there is no redistribution system. Specifically, players receive the following information in step 2: "Societies A and B are different. In Society A, no basic income is in place, whereas Society B applies a tax-funded basic income. According to the terminology of the most recognized authors on the subject, basic income is defined as a regular income, ideally of the same amount, paid in cash to every individual within a society, regardless of their other sources of income, and whose payment is not subject to any conditions. Administrative costs are introduced to ensure the redistribution of the basic income. Experiments on basic income show that it has varying effects on players' labor supply and, consequently, on their earnings. For example, basic income may increase players' labor supply and thus their earnings, as it encourages entrepreneurship. Conversely, basic income may lead players to reduce their labor supply and therefore their earnings, as it allows them to prioritize voluntary activities or leisure over employment."

An example of a distribution matrix for this second stage is shown in Table 2.

[2] Society C satisfies the definition of fairness proposed by Bolton and Ockenfels (2000), according to which the fairest distribution for individuals is the one that minimizes the difference between their payoff and the average payoff. Society D satisfies the definition of Fehr and Schmidt (1999), who assume that individuals disapprove of the difference between their earnings and those of others.

Table 2: Example of distribution matrix from Stage 2

	Society A	Society B
Player 1	17	10
Player 2	20	21
Player 3	23	40
Total	60	71
Comment	No basic income	All players receive a basic income

The matrix presented in Table 2 therefore offers a choice between society A, with no basic income, and society B, where players receive a basic income financed by taxes. Furthermore, society A is egalitarian and maximin, while society B is efficient. Indeed, the presence or absence of a basic income necessarily modifies the effective amounts distributed to players and therefore the type of distribution (efficient, egalitarian, or maximin). We thus modulate among the 10 matrices of stage 2 the respective position of the basic income and the three possible types of distribution. The aim of this second stage is therefore twofold: first, we will determine whether one type of social preference uncovered in stage 1 is more likely to be in favor of a basic income. For this first analysis, we will thus concentrate on the *framing* aspect of our protocol only, i.e., whether individuals are choosing a society with or without UBI. Then, taking into account the fact that the basic income is likely to vary the type of distributions, we will determine whether the presence of a basic income offering a distribution of a particular type is likely to cause players to *deviate* from their type previously defined. For example, does an individual defined as "efficient" in stage 1 tend to opt for a different type of distribution in the presence (or absence) of a basic income?

Finally, a third stage concludes our experimental protocol with a Social Value Orientation test (SVO) to determine whether players are more individualistic or prosocial (Murphy et al. 2011), as well as a declarative questionnaire on basic income adherence and different scenarios in which participants must decide, based on the information given, if a person should receive a basic income or not.[3] The questionnaire also includes sociodemographic and risk aversion questions. Following this third stage, the players' earnings are determined as follows: a distribution is drawn at random for each of the three stages, with stage 3 corresponding to the SVO, and the average of the earnings

[3] See Appendix for the SVO details, and for the details of the questionnaire.

achieved by the players for these three distributions is their earnings for the experiment (the conversion factor is one euro for one point).

3 Results

We repeated the experiment 8 times with 240 students from various disciplines at the University of Strasbourg (France) in the spring of 2024. The results will be presented in three steps. First, we use the distribution matrices from stage 1 to categorize the players according to their type: maximin, efficient, or egalitarian. Second, we present the results of stage 2 in terms of the players' positions for or against the basic income, according to their type. The third step, again based on the data from stage 2, is to determine the extent to which participants are encouraged to deviate from their type when confronted with the question of basic income.

In order to aggregate the information gathered in the first stage and derive a coherent classification, we use the Principal Component Analysis (PCA) method. The aim of this method is to synthesize several pieces of qualitative information relating to each individual, enabling easier categorization. Each subject can thus be represented in a multi-dimensional space, with each dimension corresponding to a piece of information collected in the first stage. The resulting scatterplot is then summarized on the basis of the two or three axes that explain most of the differences between subjects. The analysis can then focus on the main dimensions that synthesize the observed variations.[4]

Figure 1 shows the distribution of the players in the experiment according to the principal component analysis. We observe that the majority have maximin social preferences (48%), followed by a high percentage of efficients (38.1%), while a smaller proportion demonstrate egalitarian social preferences (13.9%). Note that these results are consistent with those obtained by Guichardaz et al. (2019) with high proportions of maximin and efficient players (around 40% for both types) and a lower presence of egalitarians. Despite the use of PCA to classify our subjects, some uncertainty remains for a number of players categorized as "undetermined" (38 out of our 240 players). For these individuals, the method does not allow us to determine their type of social preferences. Moreover, two individuals are of undetermined gender, and thus are not included in the subsequent analysis. The following regressions are therefore based on 200 individuals.

Based on the classification of subjects according to their conception of social justice or type, we can now examine whether the latter is correlated with their choice made in favor of or against unconditional basic income. More precisely, we are trying to determine whether or not their types

[4] The details of the methodology and the intermediate results are provided in the appendix.

of social preferences are correlated with their choices for a society with or without basic income. Table 3 thus describes the "choice for the distribution with basic income" variable, taking into account all matrices from stage 2 and the 200 players. We can clearly see that the

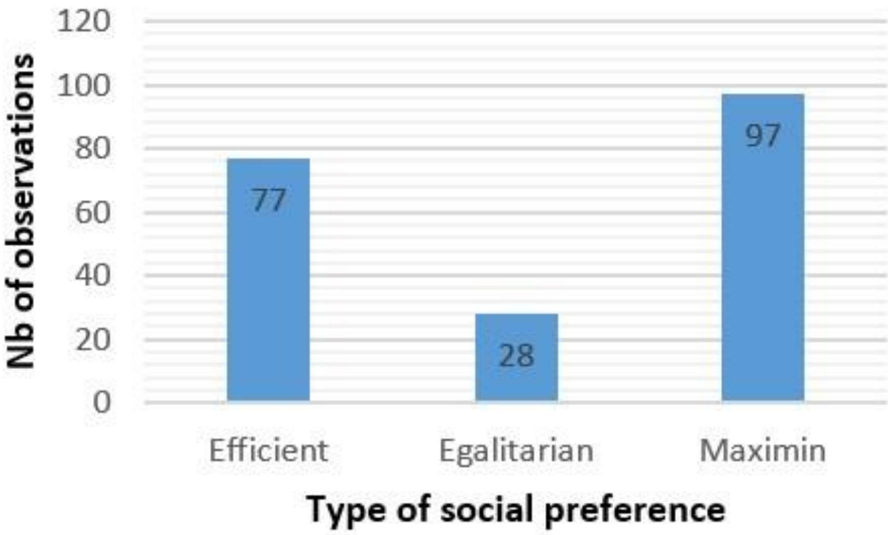

Figure 1: Stage 1 (PCA): Distribution of individuals by social preferences

distribution with basic income is chosen by a majority, in over 55% of cases. The explanatory variables available to us to explain this choice are also described in Table 3. In addition to the proportion of the three types (egalitarian, efficient, maximin) of our players, we can also base our analysis on sociodemographic data, questions relating to basic income perception, and the social value orientation test. We use all of these control variables in every following regression. Given the student population tested, certain results are standard (a very large majority of students of French nationality and a strong presence of so-called left-wing players). We can also see that most students are in favor of a basic income (80.5%), and find it fair or rather fair (74%). Furthermore, a majority are pro-social according to the SVO results.

We continue our examination with a regression analysis of society choice (with or without UBI) via a binary logit model (choosing/not choosing basic income). The explanatory variables in this analysis are the conception of social justice endorsed by subjects in stage 1 (type), gender, nationality, political tendency,[5] and objective risk preference,[6] as well as subjects' appreciation of basic income and the social value orientation test. Only a few of these are shown in Table 4.

[5] Participants were asked to indicate their political position on a scale from 0 (extreme left) to 100 (extreme right).

[6] Participants were asked to assess their risk aversion on a scale from 0 to 10 (see Vieider et al. 2015).

Table 3: Choice in favor of (or against) basic income and explanatory variables

Variables	Modality	%
Stage 1: Determination of social justice conceptions		
Type	Efficiency	38.5
	Maximin	47.5
	Egalitarian	14.0
Stage 2: Choice in favor of or against a society with basic income		
Choice of distribution including basic income	No	44.4
	Yes	55.7
Stage 3: Socio-demographic data and SVO questionnaire		
Gender	Female	63.5
	Male	36.5
Nationality	French	84.5
	Other	15.5
Political orientation	Right	13.0
	Left	56.0
	Center	31.0
Basic income: For or against	Rather against	19.5
	Rather for	80.5
Basic income: Just or unjust	Rather unjust	26.0
	Rather just	74.0
Objective risk	Risk-seeking	8.5
	Risk-averse	54.0
	Neutral	37.5
SVO	Individualistic	46.5
	Prosocial	53.5

In Table 4, we first analyze the propensity to choose the society with or without basic income. We here use all the matrices, so the sample contains 2,000 observations. We can see that the propensity to choose the society with basic income is significantly higher for maximin subjects than for egalitarian players, while the effect is not significant for efficient players. Specifically, maximin players are 1.3 times more likely to choose the basic income distribution than egalitarian players. With the exception of this type, no other variable mobilized here is significant for the choice of distribution with basic income. On the other hand, the Receiver Operating Characteristic (ROC) for this regression is only 0.54, which is still not very discriminating and may argue in favor of a weakly conclusive result regarding the preference of maximin subjects for basic income. But the following analysis relative to the deviation of players in the presence of a maximin, egalitarian, or efficient basic income provides additional information, corroborating our initial results.

Table 5 shows the three variables we wish to explain, i.e., the deviation in favor of unconditional basic income when the latter is respectively of the efficient, maximin, or egalitarian type; the explanatory variables are similar to those in Table 3. The notion of deviation here combines the type of basic income with the type of player who chooses whether or not to deviate from the social preference established in stage 1. Compared with the previous analysis, which simply analyzed the choice in favor of or against the basic income, this is a more detailed examination of players' preferences.

	LOGIT
Dependent variable:	Choice in favor of basic income
Social preferences:	
Egalitarian	Ref.
Maximin	** (1.3)
Efficient	NS (1.1)
Demographic characteristics:	
Nationality: French	NS (0.9)
Gender: Female	NS (1.0)
Basic income attitude: "I am against basic income"	NS (0.9)
Risk attitude: "Risk-averse"	NS (1.1)
N	2,000

Table 4: Regression analysis of society choices

Note: Odds ratios are shown in parentheses and indicate the propensity to choose an event—here, support for basic income—depending on the player's group affiliation. NS indicates variables that are not statistically significant.

This time the results of these three regressions are indeed robust, with an ROC of 0.62 (deviation towards an efficient basic income), 0.74 (deviation towards a maximin basic income), and 0.8 (deviation towards an egalitarian basic income). The results are given in Table 6.

While the sensitivity of players to an efficient basic income is not proven here, players (of the efficient and egalitarian types) do tend to deviate significantly when faced with a basic income that maximizes the situation of the most disadvantaged (maximin). Indeed, the former are 5.5 times more likely to deviate from their type, and the latter up to 7.7 times more. The results for an egalitarian basic income are also noteworthy. In this case, the odds ratios are lower than 1, indicating lower chances of deviating from the reference behavior (in this case, that of the egalitarians, set at 1). When the basic income is egalitarian, the tendency of maximin and efficient players to deviate is significantly lower. What is more, while sociodemographic characteristics are never significant in Table 6 (column 1 and 2), some such characteristics are significant in the case of an egalitarian basic income (column 3). Women and people with leftwing sensibilities are respectively 2.2 and 2.6 times more likely to deviate than men or centrists when basic income is associated with egalitarianism.

Variables	**Modality**	%
Deviation in favor of basic income according to its characteristics		
When basic income is efficient, is there deviation in its favor?	No	51.0
	Yes	49.0
When basic income is maximin, is there deviation in its favor?	No	51.5
	Yes	48.5
When basic income is egalitarian, is there deviation in its favor?	No	66.5
	Yes	33.5

Table 5: Deviation in favor of basic income

In a nutshell, we showed that when UBI is associated with maximin, individuals with egalitarian- or efficiency-oriented preferences tend to switch in favor of UBI. Conversely, when UBI is associated with egalitarianism, the tendency to switch is very low among maximin and efficient types. Looking at matrices where two preferences are combined allows us to better understand how individuals behave in more complex settings, and whether one preference dominates the other when UBI is not aligned with their own. We focus here on Matrices 9 and 11, in which UBI is associated respectively with Maximin+Egalitarian and Maximin+Efficient preferences. For each of these two matrices, we assess whether individuals change their choices when unconditional basic income is not aligned with their social preference. For example, in Matrix 9 we examine whether individuals identified as efficient choose the society without UBI or deviate to the society with a maximin and egalitarian UBI.

Table 6: Determinants of Choice Between Basic Income Types

	(1) Choice in favor of efficient BI	**(2) Choice in favor of maximin BI**	**(3) Choice in favor of egalitarian BI**
Social preferences			
Egalitarian	NS (0.5)	*** (7.7)	Ref.
Maximin	NS (1.0)	Ref.	*** (0.012)
Efficient	Ref.	*** (5.5)	*** (0.008)
Demographic characteristics			
Nationality: French	NS (0.9)	NS (1.2)	NS (0.9)
Gender: Female	NS (0.7)	NS (0.7)	* (2.2)
Political orientation			
Right-wing	NS (2.3)	NS (2.6)	NS (0.96)
Left-wing	NS (0.9)	NS (1.0)	** (2.6)
N	200	200	200
ROC	0.62	0.74	0.80

Notes: NS = not significant. Ref. = reference category. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

In Table 9, we estimate the probability of deviating from one's preferences when UBI is associated with maximin and another preference. In Matrix 9, those we consider as deviants are efficient individuals who choose the society with UBI, and maximin or egalitarian types who choose the society without UBI. Table 7 shows in yellow that 86 individuals (43%) match these criteria. In Matrix 11, those we consider as deviants are egalitarians who choose the society with UBI, and maximin or efficient types who choose the society without UBI. Table 8 shows in green that 43 individuals (21.5%) match these criteria.

Matrix 9 choice **UBI = Max+Ega**	**Type**	
	Efficient	Max or Ega
A	37	46
B (UBI)	40	77

Table 7: Stage 2: Cross-tabulation of choices by social preference (Matrix 9)

Matrix 11 choice **UBI = Max+Eff**	**Type**	
	Egalitarian	Max or Eff
A	5	20
B (UBI)	23	152

Table 8: Stage 2: Cross-tabulation of choices by social preference (Matrix 11)

This last analysis shows interesting and robust trends, with an ROC of 0.66 for the deviation toward a maximin and egalitarian UBI, and an ROC of 0.84 for the deviation toward a maximin and efficient UBI. As shown in Table 9, individuals referred to as efficient are 1.9 times more likely to deviate from their type when unconditional basic income is associated with both maximin and egalitarianism. In the previous analysis (Table 6 columns 2 and 3), we had observed that efficient individuals are 5.5 times more likely to deviate from their type when UBI is associated with maximin, whereas they are less likely to deviate when UBI is egalitarian. This complementary analysis proves to be consistent with the previous results, as it shows that efficient individuals still have a positive chance of deviating toward a maximin-egalitarian UBI, but this chance is reduced compared with situations when UBI is associated with maximin only. This suggests that, although efficient individuals still deviate, this deviation is mitigated by the incorporation of an egalitarian dimension.

Table 9 (column 2) shows us that egalitarians are more likely to deviate from their type when UBI is associated with both maximin and efficiency. In the previous analysis (Table 6 columns 1 and 2), egalitarians did not significantly deviate toward an efficient UBI and were 7.7 times more likely to deviate from their type toward a maximin UBI. Here, the effect is significant and even higher (although 48.8 should be interpreted with caution due to the small number of egalitarian observations in our sample). This suggests that the combination of maximin and efficient types works well on egalitarians, who are more likely to deviate compared with an unconditional basic income that is only maximin or only efficient. Thus, egalitarians seem to be interested in societies that maximize both the situation of the worst-off, and the total gain.

To sum up, our analyses show that there are strong correlations between conceptions of justice and the positioning of subjects in favor of or against basic income: i) maximin subjects favor a society with basic income in all circumstances, ii) egalitarian and efficient subjects tend to deviate from their type in favor of a maximin basic income, iii) efficient and maximin players are unlikely to deviate from their type in favor of an egalitarian basic income, iv) efficient individuals are less inclined to deviate in favor of a maximin-egalitarian basic income than a purely maximin one, and finally v) egalitarian individuals are particularly likely to deviate in favor of a basic income that combines maximin and efficiency.

Table 9: Determinants of Choice Between Mixed Basic Income Types

	(1) Choice in favor of Max+Ega UBI	**(2) Choice in favor of Max+Eff UBI**
Social preferences		
Efficient	** (1.9)	–
Maximin or Egalitarian	Ref.	–
Egalitarian	–	*** (48.8)
Maximin or Efficient	–	Ref.
Demographic characteristics		
Gender: Female	* (1.8)	NS (1.2)
Basic income attitude		
UBI judged rather unjust	NS (0.9)	* (3.6)
Risk preferences		
Risk-seeking	* (2.9)	NS (1.8)
Risk-averse	NS (1.2)	NS (0.9)
N	200	200
ROC	0.66	0.84

Notes: NS = not significant. Ref. = reference category. – = not applicable.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

4 Discussion

Our analyses highlight a crucial result in that they clearly confirm the theory of unconditional basic income as developed by Van Parijs. On the one hand, individuals who were defined as maximin significantly support the choice of a society with UBI over one that offers no redistribution system. The justification for UBI based on the maximin criterion is very clearly the one favored by Van Parijs throughout his work (Jacob 2025a,b). More precisely, the objective of UBI is to maximize the real freedom of the most disadvantaged individuals (maximin real freedom) through a fairer distribution of material goods, these being precisely those likely to increase real freedom: "Strictly speaking, what our conception of distributive justice requires is not maximin real freedom—although we shall keep using this expression for convenience—but rather the maximinning of the gifts that form the substratum of this freedom—that is, the maximization of what is received by those who receive least by way of material basis for the exercise of their real freedom" (Van Parijs and Vanderborght 2017, p. 105).

Moreover, the fact that the maximin criterion is particularly well-suited to justify the implementation of a basic income is also confirmed by the significant deviation of efficient and egalitarian players in its favor, whenever the basic income corresponds to a distribution that satisfies this criterion. Thus, despite their conception of social justice being of a different type, as identified in stage 1 of our protocol, these individuals do not hesitate to change their preference in favor of the basic income if and only if it meets the maximin criterion. Beyond this important insight regarding how a basic income can be justified to members of a society regardless of their social preferences, this also highlights the central role of framing or context in such basic income experiments (Legein et al. 2018, Palermo 2019, Jacob 2025b).

Finally, the low appeal, or even the rejection, that an unconditional basic income of egalitarian type offers to subjects identified as maximin or efficient should also be emphasized. This overlaps with some of Van Parijs' statements regarding the goals of implementing UBI: "The granting of a basic income to everyone should therefore not be misunderstood as aiming to equalize outcomes or achievements. Rather, it aims to make less unequal, and distribute more fairly, real freedom, possibilities, and opportunities. Granting a basic income to all helps equalize what people are given—the material substratum of their real freedom—and only as a consequence, indirectly and more roughly, what they achieve with what they are given" (Van Parijs and Vanderborght 2017, p. 107). Our results fully support Van Parijs and Vanderborght's idea that unconditional basic income must not be confused with a form of radical egalitarianism that would simply equalize income levels or the material goods distributed to individuals without consideration of what individuals can actually achieve with those goods (Sen 1992). In addition, the appeal for individuals with an egalitarian type of a UBI that combines maximin and efficiency principles should also be emphasized. It aligns with Van Parijs's statement that acknowledges the compatibility of unconditional basic income with efficiency, in the sense that work incentives can be preserved. Beyond Van Parijs's thinking, this egalitarian preference can also be linked to Rawls's theory of justice (Rawls 1971). According to the Rawlsian difference principle, inequalities are only acceptable if they benefit the least advantaged. This principle takes precedence over efficiency, which becomes acceptable only insofar as it complies with the difference principle. Once this condition is met, efficiency may then be taken into account, suggesting that these individuals conceive of justice as a just distribution of real freedoms and opportunities, which may in turn enhance both social and economic efficiency.

It is also important to highlight certain limitations of our experimental protocol. In particular, the assumption that the social preferences identified in stage 1 have predictive power regarding the choices likely to be made by subjects when confronted with different matrices in stage 2 can be questioned. We thus assumed that stage 1 makes it possible to elicit "conceptions of justice" or types, and not merely to observe subjects' preferences among the different proposed distributions. Consequently, in addition to the contextual or framing effect related to the introduction of basic income in stage 2—which underpins our results—a potential effect due to the change in distribution matrices between stages 1 and 2 might also come into play. However, we argue that if such an effect does exist, it is likely to be minimal: on the one hand, the matrices used in both stages reflect the same social preferences (maximin, efficient, egalitarian) within reasonably similar distribution schemes; on the other hand, assuming the existence of such an effect does diminish the consistency and significance of the results observed both among maximin-type individuals and in favor of a basic income offering a maximin-type distribution.

5 Concluding remarks

This experiment confronts individuals' social preferences with their support for or opposition to unconditional basic income; which, to our knowledge, is a first. To do so, we developed an original, financially incentivized experimental protocol situated at the intersection of two strands of literature: one well-established, dealing with social preferences, and the other, more recent, aiming to capture individuals' perceptions of unconditional basic income. More specifically, this protocol seeks to determine whether unconditional basic income is consistent with the maximin principle, as theorized by Van Parijs.

We found that individuals of the maximin type consistently favor a society that includes a basic income. Egalitarian- and efficiency-oriented individuals, for their part, significantly deviate from their initial preference to support a maximin-oriented basic income. In contrast, efficiency-driven and maximin participants show little inclination to move away from their respective positions in favor of an egalitarian basic income. Finally, egalitarian participants appear particularly willing to rally behind a basic income that brings together both maximin and efficiency principles.

This paper thus provides empirical support for Van Parijs's theoretical proposition that UBI can be justified through the maximin criterion. By placing individuals' social preferences at the center of the analysis, and by comparing these preferences with their stance on unconditional basic income, we demonstrate that those who systematically support unconditional basic income are indeed those who exhibit maximin preferences. This alignment between theory and observed behavior reinforces the normative foundations of Van Parijs's argument: unconditional basic income can serve as a concrete institutional embodiment of the maximin principle, aimed at maximizing the real freedom of the least advantaged.

A universal basic income can be seen as a powerful means to foster greater opportunities for all and, in turn, to strengthen and stabilize our institutions. By providing every individual with a guaranteed financial foundation, it helps reduce economic insecurity and social fragmentation—two factors that often undermine institutional trust and legitimacy. Thus, in addition to a powerful redistributive mechanism, the universal basic income functions also as a stabilizing force that nurtures social cohesion and fortifies the institutional framework upon which a fair and resilient society depends.

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Appendix

Appendix 1: Principal component analysis

In order to determine each individual's preferences and to study their impact on basic income choice behavior, we first aim to establish whether individuals' preferences are predominantly egalitarian, maximin, or efficient. To this end, we perform a principal component analysis (PCA) on all possible choice behaviors of individuals across the first four matrices.

We first identified 11 distinct response behaviors. For example, one typical behavior corresponds to an individual who has 4 responses associated with a maximin behavior, 0 responses associated with an efficient behavior, and 0 responses associated with an egalitarian behavior. These responses are standardized.

The PCA results are summarized in Tables 10 to 11 and Figures 2 to 3.

The two eigenvalues (information contained in each axis) are greater than 1, indicating that the principal components (the axes) adequately represent the variance (Table 10).

Table 10: PCA: Eigenvalues (information contained in the axes)

	F1	F2
Eigenvalue	1.87	1.13
Variability (%)	62.24	37.76
Cumulative %	62.24	100

The PCA thus allowed us to group the 11 behaviors according to two dimensions (Figure 2): the first dimension (horizontal axis) distinguishes whether individuals exhibit predominantly maximin or efficient behavior, while the second dimension (vertical axis) discriminates between maximin and egalitarian behavior.

The representation of the various behaviors relative to preferences (Figure 3) and the standardized typical behaviors (Table 11) allow for the classification of behaviors.

Table 11 shows the table of standardized behaviors, allowing us to characterize each of the 11 behaviors listed in the first column based on the various responses identified as maximin, efficient, or egalitarian. For each preference, the table indicates the number of responses given by each typical individual (i.e., corresponding to one behavior), with these numbers being standardized. The last column indicates, following the PCA, the single preference associated with each typical behavior.

Thirty-eight individuals remain unclassifiable. They predominantly chose option D in the control matrix.

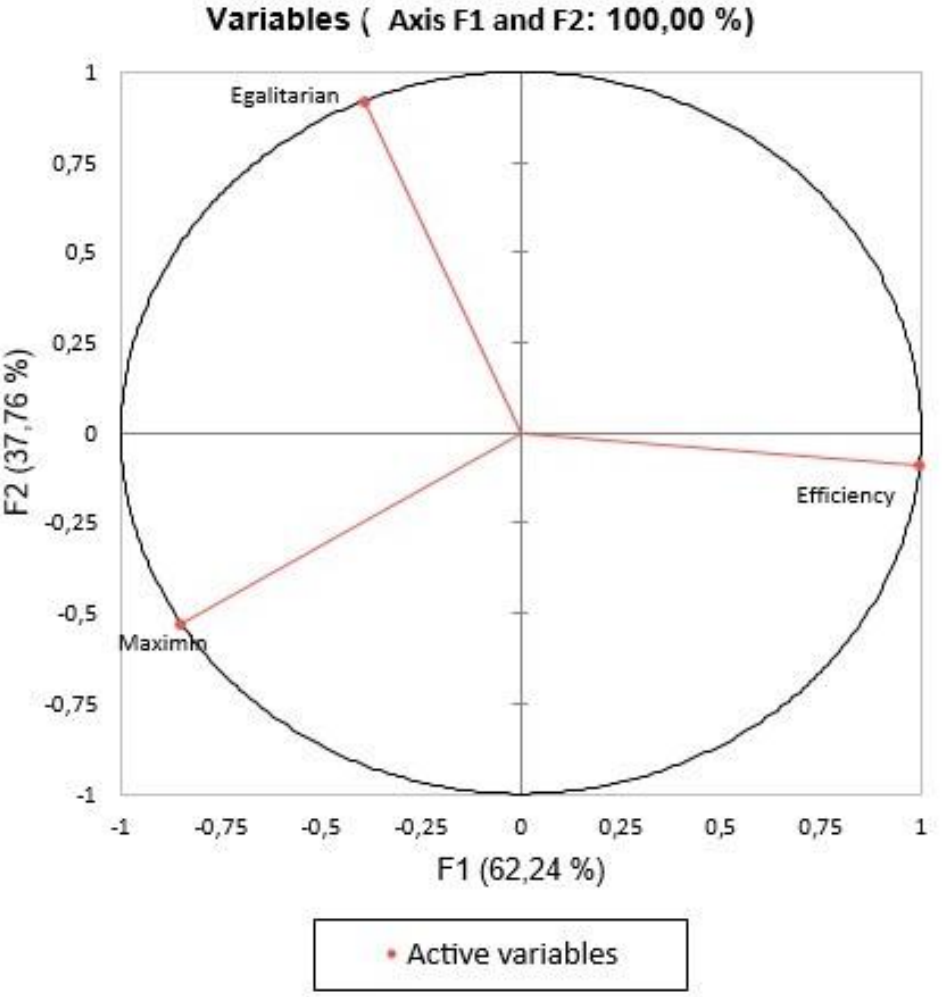


Figure 2: Correlation circle

Table 11: Standardized centered typical behaviors and PCA-based conclusion

Behavior	Maximin	Efficiency	Egalitarian	Conclusion
1	1.79	−1.01	−0.83	Maximin
2	1.00	−0.32	−0.83	Maximin
3	1.00	−1.01	0.19	Maximin
5	0.21	0.38	−0.83	Efficiency
6	0.21	−1.01	0.19	Maximin
8	0.21	−1.01	1.20	Egalitarian
10	−0.57	0.38	0.19	Efficiency
11	−0.57	1.07	−0.83	Efficiency
13	−1.36	1.77	−0.83	Efficiency
14	−0.57	−0.1	2.22	Egalitarian
15	−1.36	1.07	0.19	Efficiency

Appendix 2: Calculation of SVO

We compute the social value orientation for each individual using the method proposed by Murphy et al. (2011). For each participant, we calculate the following:

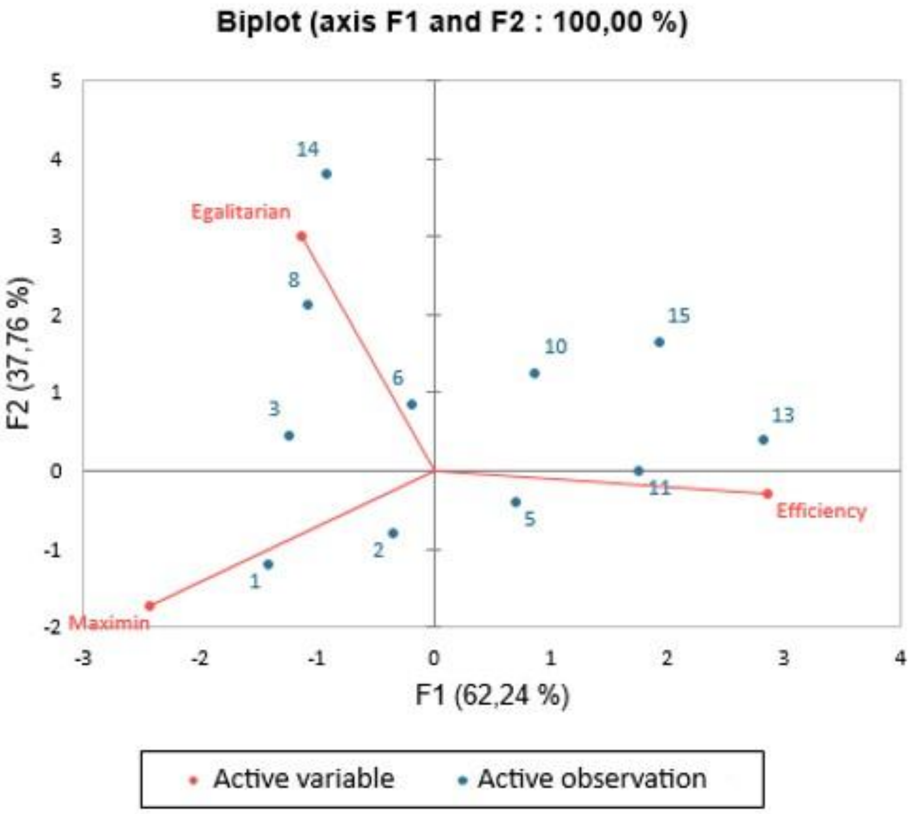


Figure 3: Typical behaviors according to PCA

- $\bar{A}_S$ = the average amount allocated to the self across the six SVO items
- $\bar{A}_O$ = the average amount allocated to the other person across the six SVO items

Then, the individual's SVO angle is computed as:

$$SVO^{\circ} = \arctan\left(\frac{\bar{A}_O - 50}{\bar{A}_S - 50}\right)$$

This value, expressed in degrees, is used to determine the type of social orientation of individuals:

- $SVO^{\circ} > 57.15$: Altruistic
- $22.45 < SVO^{\circ} < 57.15$: Prosocial

- $-12.04 < SVO^{\circ} < 22.45$: Individualistic

- $SVO^{\circ} < -12.04$: Competitive

The altruistic orientation is characterized by a preference for maximizing the other person's payoff, with no regard for one's own gain. The prosocial orientation reflects a desire to maximize both one's own payoff and that of the other, often seeking mutually beneficial outcomes. The individualistic orientation is defined by a focus on maximizing one's own gain, with little or no concern for the outcome of the other person. The competitive orientation aims to maximize the relative advantage over the other, in other words, the individual prefers outcomes where the difference in their favor is greatest, even if it means receiving a lower absolute payoff. As illustrated in Figure 4, 54% of participants are categorized as prosocial, while 46% are individualistic. No participants showed either a competitive or altruistic social orientation.

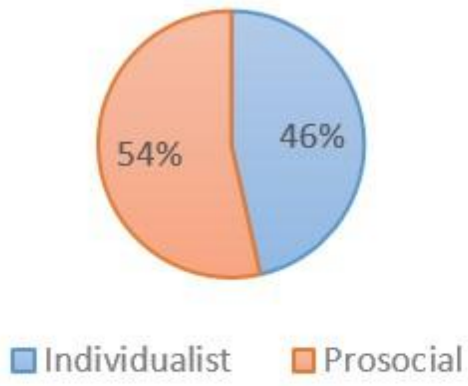


Figure 4: SVO results

Appendix 3: Questionnaire

Part 1: General Opinion on Unconditional Basic Income

In the terminology of the most recognized authors on the subject, basic income is defined as a regular income, ideally of the same amount, paid in cash to each individual within a society, regardless of their other sources of income, and whose payment is subject to no conditions.

Q1: Are you familiar with the concept of basic income? Have you heard of it before this experiment?

- Yes

- No

Q2: Are you for or against basic income?

- Rather for
- Rather against

Q3: Do you think that basic income is just for society?

- Rather just
- Rather unjust

Q4: If you answered "rather just" to the previous question, rank the following justifications in order of importance (1 = most important, 4 = least important):

1. Basic income is just because it increases individual freedom and provides more opportunities for everyone.
2. Basic income is just because it helps combat poverty by ensuring that everyone's basic needs are met.
3. Basic income is just because it is unconditional, which reduces administrative procedures for benefit payments while benefiting everyone—it is efficient.
4. Basic income is just because it leads to a less unequal society.

Q5: If you answered "rather just" to question 3, are there other reasons that, in your opinion, justify basic income? If so, which one(s)?

Q6: If you answered "rather unjust" to question 3, rank the following justifications in order of importance (1 = most important, 4 = least important):

1. Basic income is not just because it reduces incentives to participate in the labor market and encourages laziness—it is an inefficient measure.

2. Basic income is not just because its financing is unclear and could itself be unjust and/or inefficient.

3. Basic income is not just because it provides money to everyone, even though individuals from the wealthiest classes do not need it.

4. Basic income is not just because it provides money to everyone, even to individuals who do not deserve it (e.g., those who do not actively seek work, who already benefit from existing aid, etc.).

Q7: If you answered “rather unjust” to question 3, are there other reasons why, in your opinion, basic income is not justified? If so, which one(s)?

Q8: Would you be in favor of receiving a basic income yourself?

- Yes
- No

Q9: Are you in favor of others receiving a basic income?

- Somewhat in favor
- Somewhat against

Q10: In your opinion, in France, do most people support granting a basic income?

- Yes
- No
- I don’t know

Q11: Do you think that basic income should be financed by a tax on labor income?

- Yes
- No

- I don’t know

Q12: Do you think that basic income should be financed by a tax on wealth income?

- Yes
- No
- I don’t know

Q13: Do you think that basic income should be financed by an inheritance tax?

- Yes
- No
- I don’t know

Q14: Do you think that basic income should be financed by a consumption tax (such as the French TVA)?

- Yes
- No
- I don’t know

Part 2: Basic Income Scenarios

In this section, you will be presented with several scenarios where you must decide, based on the available information, whether a person should receive a basic income or not.

Scenario 1: Dominique has a disability. Are you in favor of Dominique receiving a basic income?

- Somewhat in favor
- Somewhat against

Scenario 2: Alex is pursuing higher education. Are you in favor of Alex receiving a basic income?

- Somewhat in favor
- Somewhat against

Scenario 3: Camille has a job. Are you in favor of Camille receiving a basic income?

- Somewhat in favor
- Somewhat against

Scenario 4: Claude is unemployed. Are you in favor of Claude receiving a basic income?

- Somewhat in favor
- Somewhat against

Scenario 5: Sacha does not have any paid professional activity. Are you in favor of Sacha receiving a basic income?

- Somewhat in favor
- Somewhat against

Scenario 6: Noa does not have any paid professional activity. Noa does volunteer work that benefits society. Are you in favor of Noa receiving a basic income?

- Somewhat in favor
- Somewhat against

Scenario 7: Sam does not have any paid professional activity. Sam spends their time engaging in personal hobbies. Are you in favor of Sam receiving a basic income?

- Somewhat in favor
- Somewhat against

Part 3: Sociodemographic Information Q15:

What is your gender?

- Female
- Male
- Other

Q16: What is your age?

Q17: What is your nationality?

- French
- Other

Q18: Do you work?

- Yes
- No

Q19: What is your monthly income (from job, government aid, parents' support)?

I do not wish to answer

Q20: What is your highest level of education?

- No diploma
- Below BAC
- BAC
- Between BAC+1 and BAC+3
- Above BAC+3

Q21: What field of study have you pursued or are you currently pursuing?

- Biology
- Health/Medicine

- Chemistry
- Physics and Astronomy
- Engineering
- Mathematics/Computer Science
- Earth Sciences
- Education Sciences
- Political Science
- Arts and Humanities
- History/Geography
- Philosophy
- Economics/Management/Finance
- Sociology
- Other (please specify)

Q22: What is your father's occupation?

- Farmer
- Artisan, merchant, business owner
- Senior executive and intellectual profession
- Intermediate profession
- Employee
- Worker
- I don't know

Q23: What is your mother's occupation?

- Farmer
- Artisan, merchant, business owner
- Senior executive and intellectual profession
- Intermediate profession
- Employee
- Worker
- I don’t know

Q24: What is your father’s highest level of education?

- No diploma
- Below BAC
- BAC
- Between BAC+1 and BAC+3
- Above BAC+3
- I don’t know

Q25: What is your mother’s highest level of education?

- No diploma

Below BAC

- BAC
- Between BAC+1 and BAC+3
- Above BAC+3
- I don’t know

Q26: Where do you live as a student?

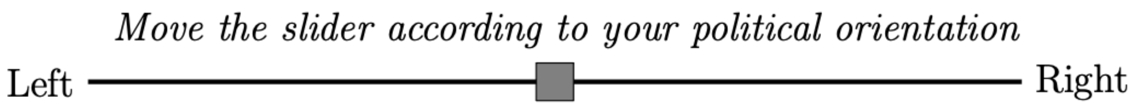
- Rural area
- Urban area
- Suburb

Q27: Where did you live when you were with your parents?

- Rural area
- Urban area
- Suburb
- I still live with my parents

Q28: Which political tendency do you feel closest to?

Move the slider according to your political orientation



- None

Q29: Are you generally a person who takes risks, or do you try to avoid them? Please check a box on the scale below, where 0 means “risk-averse” and 10 means “willing to take risks.”

Always seeks to avoid risks Willing to take risks

○ 0 ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ 9 ○ 10

Q30: Please consider what you would do in the following situation: Imagine that you have won 100,000 euros in the lottery. Almost immediately after collecting your winnings, you receive the following financial offer from a reputable bank. The conditions are as follows: there is a chance to double your money in two years. However, there is also a possibility that you may lose half of the invested amount. You have the option to invest all of your money, a portion of it, or to decline the offer. How much of your lottery winnings are you willing to invest in this lucrative yet risky investment?

- 20,000
- 40,000
- 60,000
- 80,000
- 100,000
- Nothing, I would decline the offer