WORKING PAPER

N° 2026-2

THE EFFECT OF MONETARY INCENTIVES ON PARTICIPATION AND BEHAVIOR : AN ONLINE EXPERIMENT

NGOC-THAO NOET, SERGE BLONDEL

www.tepp.eu

TEPP – Theory and Evaluation of Public Policies - FR CNRS 2042

The Effect of Monetary Incentives on Participation and Behavior: An Online Experiment

Ngoc-Thao Noet*, Serge Blondel†

January 12, 2026

Abstract

We conducted an online experiment (5,006 email invitations; 10.03% questionnaire open rate; 7.03% final response rate), in which participants played a Prisoner's Dilemma game under three different conditions: hypothetical high, hypothetical small, and real small incentives. Students are less cooperative than professionals in a real payment context, but this is due to their lower level of education. Real incentives increased student participation, but not that of professionals. For the latter, high hypothetical incentives were similarly effective. This suggests that hypothetical high-stakes incentives can be used to study professionals in experimental economics.

Keywords: Incentives, Online experiments, Prisoner's Dilemma.

JEL: C72, C90

*Univ Gustave Eiffel, ERUDITE (EA 437), TEPP (FR 2042), F-77454, Marne-La-Vallée, France, ngoc-thao.noet@univ-eiffel.fr

†Univ Angers, GRANEM-TEPP, SFR CONFLUENCES, F-49000 Angers, France. We thank the Faculty of Law, Economics and Business Studies for funding the experiments and Colette Lemaitre and Pierre Secoué for their logistical help. The authors thank Nikos Georgantzis for his suggestions. Lastly,and Moussa Kheddache for econometric codes and parameters.

1 Introduction

Assuming that agents maximize utility, experimental economics reproduces this aspect of real-world decision-making through the use of monetary incentives (Smith, 1976; Azrieli et al., 2018; Voslinsky and Azar, 2021). Incentives, defined as the element without which the desired action would not occur (Grant, 2015), address two main challenges: participant recruitment (Slonim et al., 2013; Weigel et al., 2021) and performance in decision tasks (Mengel, 2018; Rabin, 1993; Fehr and Schmidt, 1999). Real payments remain the norm, justified because they compensate participants for their time and, ethically, for contributing to socially valuable research (Grant, 2015; Voslinsky and Azar, 2021). They also help to ensure that the choices reflect actual beliefs (Cohn et al., 2015; Smith, 1976).

Most economists advocate real monetary incentives, while psychologists tend to be more indifferent[1]. Yet, several studies (Camerer and Hogarth, 1999; Gneezy and Rustichini, 2000; Bowles and Polanía-Reyes, 2012) have found that monetary incentives often have little effect on average performance and can even backfire. The effectiveness of incentives thus remains debated, both within economics (Asulin et al., 2024; Camerer and Hogarth, 1999; Read, 2005) and across disciplines such as psychology.

While experiments were traditionally conducted in laboratories with subjects paid according to their choices (Smith and Walker, 1993), the past decade has seen a rapid growth of online methods, especially after Covid-19, increasing acceptance (Fréchette et al., 2022; Harrison et al., 2021). Online experiments reduce costs and expand participant pools, allowing researchers to reach more diverse samples than those of students. However, recruiting professionals remains challenging (Huber et al., 2024; Weigel et al., 2021): executives, managers, and business owners have high opportunity costs and require meaningful engagement and substantial compensation, as in Cohn et al. (2015), where professional traders earned up to $546. This raises a key question: How should incentives be defined when targeting professionals rather than students?

Considering the recruitment of professionals in online experiments, three factors need to be taken into account: their opportunity costs, their performance-based efforts, and their interests in academic research[2]. We might ask whether all the requirements that characterize laboratory experiments apply to online experiments with professionals. What is the purpose of monetary incentives in online experiments with this type of sample?

This paper aims to contribute to the ongoing debate on the effectiveness of monetary incentives in experimental economics, in light of the growing prevalence of online experiments compared to traditional laboratory settings. Following the work of Fréchette et al. (2022), Read (2005) and Reuben et al. (2022), we conducted a meta-analysis of 117 articles that included online experiments. Our analysis focused on experimental design, sample characteristics, recruitment methods, and the amount of compensation. We then

[1] Kahneman and Tversky (1979) to experiments with large hypothetical payments, the most cited paper in economics (31,968 citations as of August 2025, Web of Science)

[2] This distance would echo the idea of the non-pecuniary benefits of Slonim et al. (2013)'s participation, which is therefore different from intellectual curiosity and social preferences.

conducted an online experiment in June 2024, at the University of Angers to assess the behavior of professionals and students under real and hypothetical incentive conditions. Our sample includes 352 participants, exposed to three types of payment schemes: hypothetical small, real small, and hypothetical high.

Our findings confirm the existing literature and indicate that students tend to show lower levels of cooperation compared to professionals. Although professionals tend to exhibit behavior closer to the standard *homo œconomicus* model under hypothetical high incentives, students maintain this standard economic behavior only under real monetary incentives. We argue that, in some contexts, hypothetical high stakes may offer a methodologically valid and cost-effective alternative, especially when the recruitment of professionals presents practical constraints.

The paper is organized as follows. Section 2 reviews the literature on monetary incentives in experimental economics, contrasts student and professional behavior, and introduces our meta-analysis of recent trends. Section 3 outlines the experimental design, including a simplified Prisoner's Dilemma. Section 4 presents the statistical and econometric results. Section 5 concludes.

2 A historical perspective

Since the beginning, experimental economics has used hypothetical or real payments, as well as a wide variety of subjects, although mainly students (A). Moreover, the question of the external validity of the results with students quickly led to comparisons with professionals (B).The Internet has changed all of this, with the possibility of developing experiments online (C).

2.1 The debate on real or hypothetical incentives in experimental economics

While Roth (1993) traces the origins of experimental economics to Thurstone's work (1931) on individual indifference curves, it is arguably Allais's contributions that laid the true foundation for behavioral economics. The Allais paradox, based on the choices between hypothetical lotteries with large monetary outcomes, was the first to reveal a violation of the expected utility theory. Unlike Thurstone (1931), who used preferences over goods, Allais (1953) introduced a design involving monetary stakes—even if hypothetical—highlighting how individuals systematically prefer certainty over probabilistic gains. This early insight, along with later findings such as the Ellsberg paradox (1961) and the preference reversal phenomenon documented by Lindman (1971) and Lichtenstein and Slovic (1971), all relied on hypothetical scenarios. Collectively, these foundational results show that the development of behavioral economics is deeply rooted in the use of hypothetical choices to uncover systematic deviations from normative theories of decision making.

In 1979, two landmark articles were published. The first, by psychologists Kahneman and Tversky (1979), revisited the Allais paradox through hypothetical games with the stakes

of achieving a month's salary, and proposed both new anomalies and a theory to explain them. The second, by Grether and Plott (1979), introduced real payments in an attempt to demonstrate the artificiality of the psychologists' findings. Their results surprised them: despite a series of experiments explicitly designed 'to discredit the work of psychologists as applied to economics' (p. 623), the preference reversal phenomenon was nevertheless confirmed. This persistence of results obtained through hypothetical questions appears to be widespread. As Thaler (2016) observes: "In the nearly 40 years since Grether and Plott's seminal paper, I do not know of any findings of 'cognitive errors' that were discovered and replicated with hypothetical questions but then vanished as soon as significant stakes were introduced." (p. 1585).

Despite this persistence, hypothetical-choice designs have long faced significant criticism. From the outset, many questioned the artificiality of such experimental settings, arguing that participants may not behave as they would in real-life situations (Cohn et al., 2015). A central concern involves decisions under financial risk: Some economists contend that responses could differ substantially if choices entail real monetary consequences. In response, the dominance principle articulated by Smith (1976) marked a turning point in experimental economics, leading to the systematic use of real monetary incentives. Since then, protocols have adhered to rigorous design principles, i.e., 'the laboratory becomes a place where real people earn real money to make real decisions' (Smith (1976), p. 275).

Although real monetary incentives offer advantages, such as compensating participants for opportunity costs (Abeler and Nosenzo, 2015) and improving engagement (Voslinsky and Azar, 2021), they also raise two interrelated questions. The first pertains to the effectiveness of incentive-based performance; the second concerns the appropriate magnitude of such incentives. Voslinsky and Azar (2021) provide a synthesis of arguments supporting the role of incentives in improving performance, referencing contributions such as Harrison (1994) and Clot et al. (2018). At the same time, they also acknowledge studies commissioned by public institutions that are unpaid yet informative, as well as findings from Camerer and Hogarth (1999) and Read (2005), who argue that "monetary incentives are not an experimental magic bullet" (Read, 2005, p.266). Finally, under the assumption that individuals may have an incentive to misreport in hypothetical contexts, real compensation must be sufficiently substantial to remove any strategic motivation to misrepresent preferences.

The issue of compensation magnitude is far from trivial, as it must be sufficiently substantial to function as an effective incentive (Azrieli et al., 2018). Moreover, to meet the criteria of robustness and external validity, experimental designs require adequately large sample sizes. The widespread reliance on student populations in laboratory experiments partly reflects this constraint: Students typically face lower opportunity costs due to their limited income and proximity to the experimental site, which reduces logistical and financial burdens. Consequently, modest monetary incentives are often sufficient, making the implementation of experiments more feasible. Clot et al. (2018) report that monetary compensation significantly improves student recruitment and that the pro-social behaviors observed among fully paid students and those remunerated only probabilistically (e.g., 1

in 10) do not differ meaningfully.

However, when extending experimentation to more heterogeneous populations, particularly professionals (Haigh and List, 2005; Charness et al., 2013), opportunity costs rise significantly (Cohn et al., 2015; Huber et al., 2024), rendering the provision of adequate monetary incentives more complex. Moreover, higher stakes are known to encourage deeper cognitive engagement (Camerer et al., 2004), as monetary incentives can encourage individuals to adopt reflective reasoning rather than relying solely on intuitive or affective responses (Holm and Nystedt, 2008).

Furthermore, hypothetical high-stakes scenarios may more accurately reflect real-world decision-making, where individuals rarely face choices involving small amounts (Laine et al., 2020). Although conventional wisdom has favored incentivized experiments, recent evidence has called into question the necessity of real monetary payments. Brañas-Garza et al. (2023) demonstrate that time discounting measures remain stable across payment conditions—whether fully incentivized, probabilistically incentivized (1 in 10), or hypothetical—across both laboratory and online settings. Similarly, Masclet and Rebière (2023) find that social and antisocial behaviors elicited under hypothetical versus real incentives show similar directional patterns, albeit with differences in magnitude. However, their sample consisted exclusively of students, albeit older (37 years old on average) and with some prior work experience.

2.2 Student and professional subjects

Plott (1982) emphasized the importance of replicating experimental findings with real businessmen, implicitly suggesting that behavioral responses may differ between subject groups. The question of whether student samples can yield externally valid behavioral insights has long been central to experimental economics. Since Chamberlin (1948), students have often been used as default participants due to their accessibility, low opportunity costs, and cognitive flexibility. These practical advantages have helped institutionalize students as the primary subject pool in laboratory experiments. However, concerns remain regarding the extent to which their behavior generalizes beyond the academic context (Belot et al., 2015).

Students may display cognitive and motivational profiles that systematically differ from those of the general population (Haigh and List, 2005; Huber et al., 2024). For instance, they are often less constrained by time and economic responsibilities, more responsive to incentives, and more familiar with analytical problem-solving frameworks. In the behavioral domain, such differences can bias the measurement of key constructs, including risk aversion, time preferences, social preferences, and strategic reasoning. Empirical studies reflect this tension. Belot et al. (2015) find that students behave more in self-interest than professionals, suggesting a potential overestimation of *homo œconomicus*-type behavior when relying exclusively on student samples. Similarly, Proestakis et al. (2024) report that students tend to outperform professionals on complex decision tasks and exhibit stronger aversion to risk - though not universally, alongside a lower inclination for cooperative behavior.

Conversely, some findings challenge this narrative. Depositario et al. (2009) find no significant difference in willingness-to-pay between students and residents of the towns of Los Baños and Bay in the Philippines in auction experiments, calling into question the presumed behavioral gap between the two groups. Zhou et al. (2025) conducted an incentivized online experiment with 206 students, explicitly acknowledging the internal validity rationale behind this sample choice. Yet they also note potential external validity concerns arising from demographic and experiential differences between students and the general population. To address this, they conducted robustness checks with an additional sample of 100 professionals, finding similar behavioral patterns, albeit with varying effect sizes.

While students remain widely used in experimental economics, the increasing availability of online platforms has facilitated access to more demographically and experientially diverse subject pools. This development supports the shift toward testing behavioral theories in broader populations, especially in contexts where validity and generalization are critical.

Our objective is not to adjudicate definitively between student and non-student subject pools[3], but rather to contribute to this ongoing debate by comparing the decision-making processes in online experiments. In this context, experiments are easier to run: geographic distance is not an obstacle, and the subjects can answer at the best time for them. This relaxes location and time constraints. Our goal is to inform the optimal adjustment of experimental designs while meeting the standards of both internal and external validity expected in behavioral economics research.

In line with the work of Reuben et al. (2022), and Fréchette et al. (2022), we produced a meta-analysis to document trends in online experimental practices, which helped shape the motivation behind our study.

2.3 Trend towards online experiments

The integration of online tools across various domains—including training (Jiang et al., 2025), social networking (Coker, 2012; Li and Mora, 2022), and recruitment (Brenner et al., 2020; Campos et al., 2018) has expanded considerably in recent years, generating growing interest among both researchers and practitioners (Brenner et al., 2020; Coker, 2012). Experimental economics is no exception to this trend, with online experiments[4] being used more frequently. To evaluate the magnitude of this shift, we conducted a meta-analysis in the Web of Science (WoS) database using the topic search: "online experiment*" OR "online survey*" AND "game*." This search returned a total of 4,353 publications. When restricting the results to articles classified under the "Economics" category and document

[3]For a review between professionals and students, the reader can refer to Huber et al. (2024)'s meta-analysis

[4]We define online experiments as all experiments that are generated by software and run remotely (i.e. outside a laboratory). Our definition is perhaps a little broader than that of Reuben et al. (2022), who define online experiments as typically those using subjects from online marketplaces such as Amazon MTurk.

type "Article", the sample reduced to 129 records[5]. We then removed 12 papers that we felt were not relevant to our research question. These papers are either surveys only[6] or pure methodology. The final number retained is 117 papers[7] (Meta-analysis flows in Appendix 3).

Although online and non-laboratory experimental designs began to appear in the early 2010s, their adoption remained limited and stable through 2019 (Figure 1). The Covid-19 pandemic, which disrupted access to traditional laboratories, marked a turning point: from 2019 onward, the number of online experiments increased sharply, while laboratory-based studies began to decline after 2021. Of the 117 papers, 11.11% explicitly cite Covid-19 in the title, abstract, or motivation as the reason for choosing an online design or a diversified sample[8], i.e., a sample different from the standard student population. Publication is also concentrated in a few journals: five of the fourteen account for 68.38% of studies. Figure 1 shows that this upward trend continues, with the number of co-authors per paper increasing in parallel (median of 3 co-authors in 2022). As the end of Covid-19 is still recent, the coming years will reveal whether the substitution of online experiments for laboratory studies is a lasting trend.

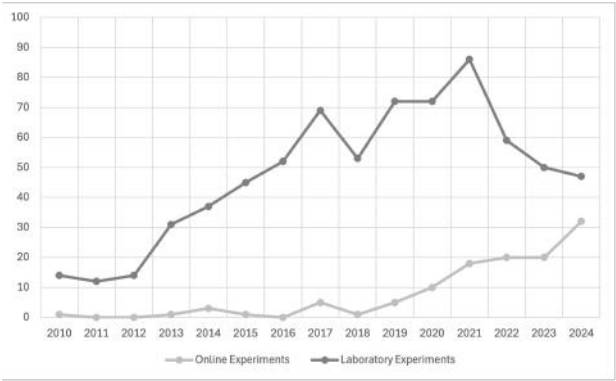

Figure 1: Trends since 2010

This rapid growth raises a natural question: who do online experiments actually reach? While these designs often aim to access non-student populations, most rely on

[5]A first total of 227 papers were identified. To streamline the analysis, we retained only the ten journals with the highest number of articles, as the remaining journals each contained between one and four papers. We included the two Top Five journals identified during the extraction process, as well as the Journal of the European Economic Association, which was considered in Reuben et al. (2022). Additionally, we retained another journal with the same score as one of the Top Five, bringing the total to 14 journals (Breakdown in Appendix). We acknowledge this simplification and apologize to the authors whose work was not included as a result. The data were extracted on November 6, 2024, and the final analysis was conducted on the resulting set of 129 papers.

[6]Survey means no decision, it's just information about preferences or habits. The selected papers are well defined as « an experiment », that is, one that forces the participant to decide one way or the other

[7]The papers selected are defined as online experiment, and thus answering our research question. The 117 papers could thus be divided by type of decision (choice, task and game), type of recruitment (MTurk, Prolific and others) and type of sample (platform workers (MTurk and Prolific), students, general population (e.g. ordinary citizens or households), specific population (e.g. professionals such as investors).

[8]Responses from 2020 onwards.

large online labor platforms—primarily MTurk and Prolific—which account for 61.54% of such studies (Table 10). In this sense, online designs are effective for reaching broad, heterogeneous samples. Yet, when the goal is to recruit narrowly defined or professional populations, the challenge remains largely unmet: only 4.27% of studies successfully recruit specific target groups.

Although platforms like MTurk and Prolific facilitate broad recruitment, this success highlights a trade-off between reach and meaningful compensation. While platforms offer logistical and financial advantages—lowering recruitment and payment transaction costs and providing standardized wages (Voslinsky and Azar, 2021)—they do not guarantee that participants receive genuine monetary incentives reflecting opportunity costs or performance-based effort. In practice, most experiments provide modest compensation, with a median of \$2.76 and a mean of \$4.72 per participant[9] (Table 10). These studies often involve large samples (median = 702; mean = 1,102), illustrating a common trade-off: broader reach comes at the expense of lower individual payments. This dynamic underscores the continued relevance of transaction costs in incentivized designs (Voslinsky and Azar, 2021), even as platforms help mitigate them.

This trade-off raises two key concerns. First, does such a system truly uphold the principle of performance-based incentives, as questioned by Reuben et al. (2022)? Second, for experiments involving professionals, compensation at platform rates may be insufficient to elicit effort or attention. For instance, in France, the average hourly wage is €29.2 for regular executives and €59.5 for top executives[10], implying that a 10-minute task would be valued at €4.80 or €9.90, respectively. Most experimental tasks last 15–20 minutes and pay significantly less, reducing the expected utility of participation (Read, 2005).

Although some authors defend platform compensation as adequate, arguing that it at least matches stated hourly rates (e.g., Chen et al., 2020; Metzger and Günther, 2019), others deliberately avoid monetary incentives altogether (Menkhoff et al., 2013; Bhanot, 2017). The debate over whether and how to compensate participants remains unresolved, particularly in online environments.

Amid this ongoing discussion, online experimentation continues to expand, although the temporary closure of laboratories during the pandemic suggests that the trend may be less pronounced than Figure 1 indicates. To explore this issue, we conducted an online experiment without using labor platforms, comparing students and professionals under three incentive conditions: hypothetical high (HH), hypothetical small (HS), and real small (RS). This design allows us to examine how incentive structures and sample types influence behavior in online settings.

[9] Almost all remunerated studies pay participants according to decisions with a show-up fee.

[10] `https://www.insee.fr/fr/statistiques/2381342`

3 Experimental design and predictions

We compare the behavior of professionals and students, under three different treatments. Our first hypothesis (H1) is that cooperation will be lower when incentives are real rather than hypothetical, reflecting more self-interested behavior, and lower among students than among professionals. Our second hypothesis (H2) posits that subjects will exhibit behavior more consistent with social preferences in real-stake settings than in hypothetical ones. This leads to our third hypothesis (H3), namely that response rates will be higher in real-stakes settings than in hypothetical ones. To test these hypotheses, we employed three payment conditions: high hypothetical, low hypothetical, and low real. It is unusual to propose small hypothetical amounts: we did so in order to compare them with large hypothetical amounts (effect of the size of the amounts) and with small actual amounts (effect of the actual payment). Combined with the use of two subject pools—professionals and students—this results in six distinct experimental treatments.

We first present the intuitive form of the Prisoner's Dilemma that we have constructed, recalling the predictions of the standard model and social preferences. Next, we describe the experimental design, the recruitment method, and our experimental procedures.

3.1 Prisoner's Dilemma and predictions

In terms of social interactions, the Prisoner's Dilemma game (later PD game) is widely used[11] to detect self-interest versus cooperation as a deviation from rationality (Chen et al., 2014; Mengel, 2018). We have constructed an intuitive version of the PD game, where the result is directly based on the actions of the two players: Each has €5 (in the small payment version, multiplied by 1,000 otherwise), which they can give to the other player or not. The amount given is multiplied by two; the other player receives €10. Everyone can give or keep the amount. The results of this PD game are as follows:

- if both keep, both have €5.
- if both give, both have €10.
- if one keeps and the other gives, the first wins €15, and the second wins €0.

		Player B	
		Keep	Give
Player A	Keep	(5, 5)	(15, 0)
	Give	(0, 15)	(10, 10)

Table 1: Prisoner's Dilemma game, gain in €

Considering the payoff matrix, our game is equivalent to any PD game, replacing 0, 15, 10, and 15, by 4 amounts in the same order. Keeping is a dominant strategy. The

[11] A check on WoS (January 2025) with the topic "prisoner's dilemma game*" returns 1785 results, compared with 424 for "public good game*" and 1216 for "trust game*".

Nash equilibrium (gray) is reached when neither gives, but is Pareto-dominated by the social optimum (light gray) when both give (Table 1). A selfish agent will keep whatever happens.

Each player indicated their belief about the other player and stated the anticipated gift:

- €0,
- €5,
- do not know.

Although standard models in economics assume that most individuals pursue their self-interest, social preferences take into account the behavior of other players. Here, anticipating a gift or not is not neutral. The deviation from self-interest is explained by various factors, such as altruism, warm-glow, and reciprocity (Andreoni, 1990; Andreoni and Miller, 1993), fairness equilibrium (Rabin, 1993), and even aversion to inequality (Fehr and Schmidt, 1999). Specifically, reciprocity in the sense of Andreoni and Miller (1993) presupposes a relationship with a counteraction in return, which is not possible to explore in our experiment since it was a one-shot game. Therefore, we focus on the models of Rabin (1993) and Fehr and Schmidt (1999), which are the most appropriate for this study.

These two models of social preferences each add an argument to *homo œconomicus*, which they retain as a valid model. Rabin (1993)'s fairness equilibrium is based on the premise that people like to help those who help them and to hurt those who hurt them. It means that players give to those who give and keep from those who keep. In the PD game, this model is consistent with keeping if the other keeps (reciprocity) and giving if the other gives (reciprocity), but not giving if the other keeps (no self-interest, no reciprocity). Fehr and Schmidt (1999) added inequity aversion to the standard model, which is stronger when the other player has more. This model excludes only giving when the other is keeping (no self-interest, greater inequity). Players seek to contribute as much as others, but not more. Note that both social preferences models have the same prediction for the PD game: to cooperate when the other defects is the only inconsistent strategy.

Given the simplicity of this PD game, issues related to task comprehension and cognitive load are largely neutralized (Camerer and Hogarth, 1999), allowing us to focus specifically on the effect of monetary incentives across two distinct samples. As shown earlier, economic experiments have increasingly sought to go beyond the traditional student subject pool, aiming for more diverse populations, motivated by evidence that student subjects often behave differently—typically in a more self-interested manner—than the general population in laboratory settings (Belot et al., 2015). Our first step is to test the following hypothesis:

H1: cooperation is lower (a) with students rather than with professionals, and (b) with real rather than with hypothetical payments.

From the perspective of utility maximization, our second objective is to assess how

monetary incentives influence decision-making in both samples. We draw on the models of Rabin (1993) and Fehr and Schmidt (1999) to evaluate the consistency of observed behavior with social preferences. Our second hypothesis is :

H2: Subjects exhibit greater consistency with social preferences under RS than under HS.

The method of payment has an impact on the subjects, who should participate more when the experiment is compensated.

H3: the response rate will be higher with RS (a). More precisely, we expect the highest potential participation with RS compared to HS-HH (b) and the highest drop-out rate with HS compared to HH (c).

3.2 Experimental design

The experiment was conducted online between June 4 and 18, 2024, with participants drawn from the University of Angers. The sample comprised two groups: students[12] This design combines the standard student pool in experimental economics with a broad spectrum of professionals.

While earlier studies compare students with specific occupations such as traders, investors, or farmers[13], our contribution is twofold. First, we include a wide range of professional roles rather than a single group. Second, all participants belong to the same institution, eliminating contextual heterogeneity across samples. The only systematic difference is whether individuals are students or employed by the university. Non-teaching staff are classified according to the French civil service scheme: Category A (senior managers, directors, high-level civil servants, and all teaching/research staff), Category B (intermediate staff, technicians, and supervisors), and Category C (administrative and operational staff). This structure ensures coverage of the full range of tasks and responsibilities within the university.

The email addresses were provided by the university administration. We removed research professors who were close to us to prevent them from influencing the results. Moreover, we used the pseudonym "Researchers XP-University of Angers" to prevent our students from identifying us. We sent a total of 5,006 emails: 2,579 to students (860 HH, 860 HS, and 859 RS) and 2,427 to staff (799 HH, 813 HS, and 815 RS). In the email object, we have indicated: "University of Angers - Paid online strategy game" for the RS version and "University of Angers - online strategy game" for the HH and HS versions. Only the word 'Paid' has been added. On opening the link, detailed explanations are presented to the participants. Each participant knows which type of player they are playing with (students with students, staff with staff). The content of the email is reproduced below, with elements exclusive to the paid version shown in square brackets:

[12]and university employees (faculty, researchers, and administrative staff). We invited roughly 2,500 students, randomly selected from the 3,000 enrolled in the Faculty of Economics, Management, and Law. The university enrolls about 27,000 students overall.

[13]See Hackethal et al. (2022), Grüner et al. (2022), Alevy et al. (2007), and Haigh and List (2005).

> Dear all,
> We are researchers in economics conducting a fully anonymous study with no commercial or political purpose. Participation takes less than five minutes and involves a strategic game. [You can earn up to €15 in vouchers, with an average reward of approximately €8.] Results can be shared with you upon request.
> To participate, please click here: LINK.
> Best regards.

Our budget being limited, but taking statistical power into account, our rule was to close the questionnaire as soon as the three treatments (RS, HS and HH) reached at least 50 participants, for students and professionals alike. The professional sample took one day to complete, while the student sample took three days. The final sample is 352 subjects (178 professionals and 174 students), excluding the 4 participants who did not give their consent (Table 3). The survey was implemented by LimeSurvey (Appendix B1) and consists of 4 parts: sociodemographic information, the PD game, a comment area, and a question about whether or not they would like to receive the results[14].

4 Results

After presenting the descriptive statistics, we analyze subject participation (B), examine responses within the framework of the Prisoner's Dilemma (C), and conclude with an econometric analysis (D).

4.1 Descriptive statistics

Table 2 reports descriptive statistics, which exhibit a balanced gender distribution, approximately 50% in both the student and the professional sub-samples. The students are much younger, with 96.0% under the age of 26. They also exhibit a substantially lower level of educational attainment. In addition, the students spent less time completing the questionnaire, although the average durations between groups remain relatively similar. Finally, the sample includes a broad representation of various socioeconomic categories.

Among the 10.03% who opened the questionnaire, our final sample comprised 352 participants, with a balance between 50.6% professionals and 49.4% students (Table 2). In the professional category, we have a majority of teaching staff (31.5% vs. 19.0% of support staff). In the support staff category, we have a wide variety of functions (Table 3). Although our sample differs in composition, it reflects similar proportions to the national sample: Category A represents 40.3% in our sample versus 55.3% nationally; Category B accounts for 19.4% versus 23.4%; and Category C comprises 14.9% compared to 20.0% in the national sample[15]. We have 62.3% of teacher-researchers in our non-student group, whereas there

[14]The main results, summarized on one page, were sent to the 223 subjects (63.35%) who requested them in February 2025.

[15]Source INSEE : https://www.insee.fr/fr/statistiques/8214842

are 58.2% overall at the University of Angers: participation rates were therefore similar.

%	Professionals	Students	Total
Men	51.1	48.9	50.0
Age :			
18-25	2.8	96.0	48.9
26-45	50.0	4.0	27.3
46 and up	47.2		23.9
Education :			
High School Level or lower	5.1	46.6	25.6
Associate Degree	7.9	27.6	17.6
Bachelor's Degree	7.3	23.6	15.3
Master's Degree 1	5.1	1.1	3.1
Master's Degree	24.7	1.1	13.1
PhD and beyond	50.0		25.3

In France, prior to the 2006 reform that established the Master's degree, students could obtain "a Maîtrise", equivalent to a Bac+4 level.

Table 2: Descriptive statistics

Observation	Cnsent	No consent	Total
Professionals:			
HH	73		73
HS	55	2	57
RS	50		50
Students:			
HH	48	2	50
HS	55		55
RS	71		71
Total	352	4	356

(a) By treatment

Socio-professional categories	**N=352**
Administrative Staff	$n = 67(19.0\%)$
Category A civil servants	27
Category B civil servants	13
Category C civil servants	10
Contractual Agent	17
Teaching staff	$n = 111(31.5\%)$
Lecturers	29
Researchers	9
Lecturers and researchers	62
Ph.D candidates	11
Students	$n = 174(49.4\%)$
Non-working students	144
Working students	30

Category A : Equivalent to GS-11 à GS-15, B: GS-6 à GS-10, C: GS-1 à GS-5 grades in the U.S. federal system.

(b) By job description

Table 3: Sample description

4.2 Participation of the subjects

Participation occurred in two distinct stages. Although 10.03% opened the questionnaire with the intention of participating, only 7.03% completed it, resulting in an attrition rate of 29.88%. This discrepancy highlights a key distinction between online and laboratory experiments. In laboratory settings, registered participants typically complete the experiment, having already incurred part of their opportunity cost and being assured of compensation. In contrast, online participation entails no such sunk costs, and dropout imposes no penalty. Individuals who complete an online questionnaire are likely to be intrinsically motivated by the content itself, a condition that cannot be systematically guaranteed in laboratory contexts.

Table 4 reveals a notable difference in participation behavior between students and professionals. Professionals not only responded more promptly, but also exhibited higher participation rates under hypothetical payment conditions. Specifically, the participation quota (at least 50 for each treatment) was fulfilled in less than 12 hours for professionals, whereas the same target among students required over two days to achieve. This finding stands in contrast to the existing literature, which generally assumes greater availability and responsiveness among student populations in experimental research.

Furthermore, the announcement of a monetary payment significantly increased student participation relative to professionals. The data suggest that students are more sensitive to the presence of an explicit financial reward, whereas hypothetical incentives appear to be more effective in eliciting participation from professionals. Table 4 also indicates that student participation increases significantly when a payment is announced, while no such effect is observed among professionals.

%	**Students**	**Professionals**
HH and HS[a]	8.29	10.71
RS[b]	12.77	9.42
Final sample	$n = 237$	$n = 265$

[a]p-value 0.0175, [b]p-value 0.0296

(a) Potential participation rate, in%

Response rate In seconds	**Students**	**Professionals**
HH	173.77	217.27
HS	184.92	179.47
RS	207.01	274.18

(b) Survey completion time

Table 4: Responses details

Table 4 shows a significant difference between students and professionals in potential participation, measured as the proportion of respondents who opened the questionnaire. Indicating payment had a strong positive effect on students (+54.04%, p = 0.00034, one-tailed test) but did not increase professional participation (-12.04%, an insignificant decrease). In other words, H3b is confirmed for students: monetary incentives attract them, whereas professionals are largely unaffected.

Beyond simply opening the questionnaire, it is important to examine final participation—the proportion of potential participants who completed the survey. Here, hypothetical payments at very high levels reveal further behavioral differences. Among students who wanted to participate, 83.33% completed the questionnaire with small sums compared to only 69.57% with high sums, suggesting that very large hypothetical payments may discourage them. In contrast, professionals were more likely to complete the questionnaire under high hypothetical payments (76.84% with HH versus 61.80% with HS; p = 0.0127, one-tailed test), confirming H3c: for hypothetical payments, the dropout rate is significantly lower when stakes are high.

Considering the overall final participation rates, professionals scored 6.26% in RS versus 6.77% in HS, which does not support H3a. Students, on the other hand, had final participation rates of 8.26% in RS versus 6.40% in HS, consistent with H3a (p = 0.0694, one-tailed test). These results indicate that the effect of incentives differs not only by stake size but also by sample type, with students responding more to monetary signals and professionals showing a more nuanced pattern depending on hypothetical stakes.

%	Students	Professionals
HH[a]	5.59	8.96
HS[b]	6.40	6.77
RS[c]	8.26	6.26
Total answers	6.74	7.33
Final sample	$n = 174$	$n = 178$

[a]p-value 0.0078, [b]p-value 0.7604, [c]p-value 0.1179

Table 5: Completion rate, in %

Amazingly, 26.76% of students and 16.00% of professionals in RS provided no usable contact details to allow us to track them and send them their Illicado voucher[16] (table 6), which puts the explanatory results of the three treatments into perspective. It is worth noting that the subjects' rate of remuneration was very high: they earned an average of €8.83 in an average questionnaire time of 3 minutes 26 seconds, i.e. a very high hourly rate of €154.31.

RS	Initial sample	Mean	No usable contact information	Sample to pay	Mean
Professionals	50	8.70 €	-8	42	8.93 €
Students	71	6.10 €	-19	52	8.75 €

Table 6: Real small sample earnings

4.3 Prisonner's dilemma

Table 7 presents the cooperation rates, based exclusively on individual contributions. This allows us to compare the behavior of students and professionals (H1a) and study the effect of real payment (H1b).

The cooperation (to give) rate across the three treatments is 63.2% for students and 69.1% for professionals, which confirms, but not significantly, the results found by Belot et al. (2015) in their lab experiments. The authors show that whatever the setting of the game (trust game, dictator game, and public goods game), the students behave more selfishly than others.

If we focus on RS treatment, the rate of cooperation is 74% with professionals compared with only 59.2% for students, who are significantly more selfish (p-value 0.0405, one-tailed test). Therefore, H1a is confirmed under the usual experimental conditions, RS. In high-stakes treatment, professionals were slightly less cooperative than students (61.6% vs. 66.7%). However, the opposite pattern emerges in low-stakes settings, where students display lower cooperation rates. Under HH and HS conditions, there is no significant difference.

[16]Of the 94 participants who provided their postal address, 12.77% received a 5€ voucher, 46.81% a 10€ voucher, 23.40% a 15€ voucher and 17.02% received 0€.

Real payment has no effect on the cooperation rate, whether for professionals or students: H1b is not validated. However, professionals exhibit lower levels of cooperation under HH compared to HS (61.6% versus 74.5%). Professionals seem to be more strategic with large sums of money, but this is not significant (p-value 0.1137, one-tailed test).

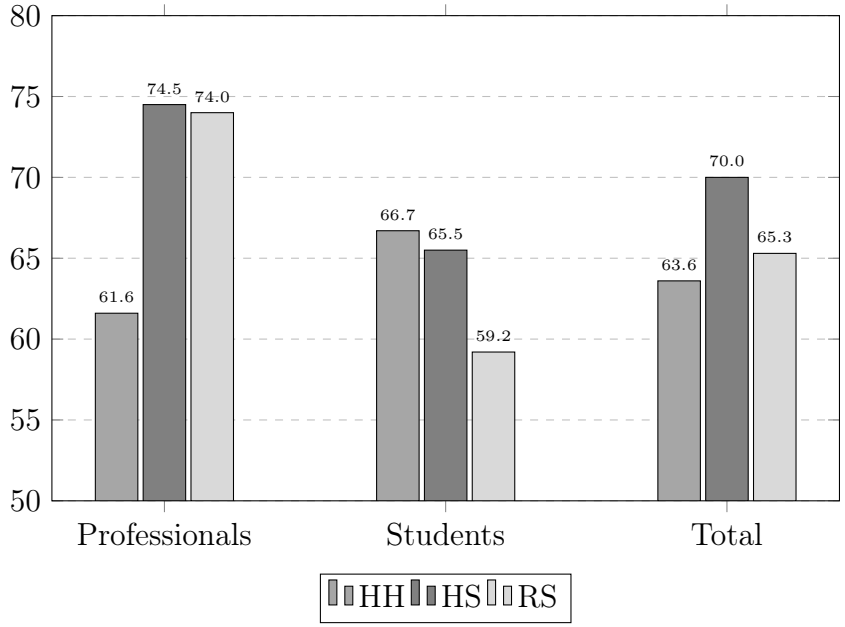

Figure 2: Cooperation rate in %

	HH		HS		RS	
	Professionals	Students	Professionals	Students	Professionals	Students
Gives	61,6%	66,7%	74,5%	65,5%	74,0%	59,2%
	(73)	(48)	(55)	(55)	(50)	(71)
Gives when the other keeps	11,8%	31,3%	21,4%	23,5%	12,5%	23,1%
	(17)	(16)	(14)	(17)	(8)	(26)

Table 7: Rate of cooperation, in % (number of subjects)

To test the consistency with social preferences (Rabin (1993) and Fehr and Schmidt (1999)), we focus on subjects anticipating that the other player will keep: the rate of inconsistency with social preferences will be the rate of subjects giving in this case. We exclude participants in two cases. First, if they report 'don't know' about the expected contribution of the other player; second, if they anticipate 'give', where both decisions are consistent with social preferences.

Professionals show greater consistency with social preferences. The inconsistency rate among them is 15.4%, compared to 25.4% for students. Although this difference is not statistically significant ($p = 0.1074$, one-tailed test), it is directionally consistent with Hypothesis (H2). No significant differences in consistency are found between treatments (HH, HS, RS), and the limited number of inconsistencies precludes stronger inference.

Preliminary evidence supports H1a: students are less cooperative than professionals in the RS condition. They also show less cooperation under real payment conditions,

although this does not support H1b. Their consistency with social preferences is lower, but the difference is not significant (H2). Real monetary incentives increase participation among them (supporting H3a), but not among professionals. These patterns may reflect demographic and experiential differences, as professionals are older and more experienced. Econometric analysis will allow for more robust testing of these patterns.

4.4 Econometric results

To test our hypotheses, we estimate binary probit models, with cooperation (give) equal to 1 if the subject cooperates and 0 otherwise. For hypothesis H1a, we estimate separate models for each incentive condition (HH, HS and RS). The key explanatory variable is a binary indicator of professional status (professional versus student), along with controls for gender, age (in years) and education (coded as 0 for high school or below, 1 for one year beyond high school and increasing thereafter). For H1b and H2, we add a variable for real payment and estimate over RS and HS. H3 is not tested here due to the lack of data on individual-level participation. The model specification is as follows:

For H1a:

$$Coop = \alpha + \beta_1 Professionals + \beta_2 Men + \beta_3 Age + \beta_4 Education + \epsilon \quad (1)$$

For H1b and H2:

$$SocialPref_i = \alpha + \beta_1 Professionals + \beta_2 Men + \beta_3 Age + \beta_4 Education + \gamma_i Real + \epsilon \quad (2)$$

Across most specifications, we find no statistically significant effects of professional status, gender, or age. Ceteris paribus, students exhibit cooperation levels comparable to those of professionals in the RS condition. Education, however, exerts a positive and statistically significant effect on cooperation under RS ($p = 0.017$), suggesting that the observed behavioral differences between students and professionals may reflect differences in educational attainment rather than professional status per se. Specifically, the higher cooperation among students appears attributable to their comparatively greater educational levels, consistent with H1a. The fourth column (RS+HS) indicates that real monetary payments do not reduce cooperation, contrary to H1b. Finally, we find no evidence that any individual-level characteristic, including professional status, significantly predicts consistency with social preferences, providing no support for H2.

5 Discussion and conclusion

While most experimental designs rely on student samples and compensate participants at levels covering their opportunity costs, such designs may be less suitable for online experiments with professional subjects. Our study highlights several points, some previously documented (1) and others novel (2).

	HH	HS	RS	RS+HS	H2
Professionals	0.044	0.983	-0.181	0.348	0.188
	(0.484)	(0.647)	(0.493)	(0.378)	(0.765)
	[0.927]	[0.129]	[0.714]	[0.357]	[0.805]
Men	-0.062	0.348	-0.202	0.005	0.267
	(0.237)	(0.265)	(0.242)	(0.174)	(0.371)
	[0.793]	[0.189]	[0.404]	[0.976]	[0.472]
Age	-0.006	-0.007	-0.006	-0.007	-0.045
	(0.014)	(0.019)	(0.018)	(0.012)	(0.034)
	[0.676]	[0.733]	[0.732]	[0.574]	[0.191]
Education	-0.007	-0.113	0.176**	0.033	0.085
	(0.051)	(0.069)	(0.074)	(0.046)	(0.109)
	[0.884]	[0.101]	[0.017]	[0.473]	[0.435]
Real				-0.107	-0.146
				(0.177)	(0.381)
				[0.547]	[0.702]
Constant	0.588	0.561	0.168	0.446	-0.023
	(0.374)	(0.479)	(0.423)	(0.0335)	(0.766)
	[0.116]	[0.242]	[0.692]	[0.184]	[0.976]
Pseudo R^2	0.004	0.038	0.064	0.018	0.049
N	121	110	121	231	65

Standard errors in parentheses, p-values in square brackets

* $p < 0.1$,** $p < 0.05$,*** $p < 0.01$

Table 8: Effects on cooperation

(1) Students are less cooperative than professionals in a real payment context (Table 7), a difference that is attributable to their lower levels of education. They also show a higher participation rate when the experiments are paid (Table 5).

(2) Compensating professionals did not increase their participation; in fact, sometimes it reduced their participation. In contrast, offering high hypothetical stakes proved to be more effective in encouraging professionals to complete online questionnaires. In this context, large hypothetical payments act as a nudge (Thaler and Sunstein, 2008), motivating commitment. Furthermore, participants exposed to high hypothetical amounts (HH) demonstrate a greater alignment with standard economic rationality—as conceptualized within the *homo œconomicus* framework—than those in RS or HS treatments (Figure 2 and Table 8). This suggests that the expression of rational behavior is more pronounced under elevated hypothetical incentives than under real monetary compensation.

Overall, these findings indicate that offering high hypothetical amounts is preferable for professional subjects, echoing the intuitions of early behavioral economists such as Richard Thaler. Nonetheless, this result warrants further investigation in contexts beyond the present study. Future experiments could explore more complex or longer-duration tasks, consider decisions beyond the Prisoner's Dilemma (e.g., other strategic games, risk preferences, or intertemporal choices), and be conducted in laboratory settings.

References

Abeler, J. and Nosenzo, D. (2015). Self-selection into laboratory experiments: pro-social motives versus monetary incentives. *Experimental Economics*, 18:195–214.

Alevy, J. E., Haigh, M. S., and List, J. A. (2007). Information cascades: Evidence from a field experiment with financial market professionals. *The Journal of Finance*, 62(1):151–180.

Allais, M. (1953). Le comportement de l'homme rationnel devant le risque: critique des postulats et axiomes de l'école américaine. *Econometrica*, 21:503–546.

Andreoni, J. (1990). Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving. *The Economic Journal*, 100(401):464.

Andreoni, J. and Miller, J. H. (1993). Rational Cooperation in the Finitely Repeated Prisoner's Dilemma: Experimental Evidence. *The Economic Journal*, 103(418):570.

Asulin, Y., Heller, Y., and Munichor, N. (2024). Comparing the effects of non-monetary incentives and monetary incentives on prosocial behavior. *European Economic Review*, 165:104740.

Azrieli, Y., Chambers, C. P., and Healy, P. J. (2018). Incentives in Experiments: A Theoretical Analysis. *Journal of Political Economy*, 126(4):1472–1503.

Belot, M., Duch, R., and Miller, L. (2015). A comprehensive comparison of students and non-students in classic experimental games. *Journal of Economic Behavior & Organization*, 113:26–33.

Bhanot, S. P. (2017). Cheap promises: Evidence from loan repayment pledges in an online experiment. *Journal of Economic Behavior & Organization*, 140:246–266.

Bowles, S. and Polanía-Reyes, S. (2012). Economic Incentives and Social Preferences: Substitutes or Complements? *Journal of Economic Literature*, 50(2):368–425.

Brañas-Garza, Pablo end Jorrat, D., Espín, A., and Sánchez, A. (2023). Paid and hypothetical time preferences are the same: lab, field and online evidence. *Experimental Economics*, 2:412–434.

Brenner, S., Aksin Sivrikaya, S., and Schwalbach, J. (2020). Who is on linkedin? self-selection into professional online networks. *Applied Economics*, 52(1):52–67.

Camerer, C. F., Ho, T.-H., and Chong, J.-K. (2004). A Cognitive Hierarchy Model of Games. *The Quarterly Journal of Economics*, 119(3):861–898.

Camerer, C. F. and Hogarth, R. M. (1999). The Effects of Financial Incentives in Experiments: A Review and Capital-Labor-Production Framework. *Journal of Risk and Uncertainty*, pages 7–42.

Campos, R., Arrazola, M., and de Hevia, J. (2018). Finding the right employee online: Determinants of internet recruitment in spanish firms. *Applied Economics*, 50(1):79–93.

Chamberlin, E. H. (1948). An experimental imperfect market. *Journal of Political Economy*, 56(2):95–108.

Charness, G., Gneezy, U., and Kuhn, M. A. (2013). Experimental methods: Extra-laboratory experiments-extending the reach of experimental economics. *Journal of Economic Behavior & Organization*, 91:93–100.

Chen, X., Hong, F., and Zhao, X. (2020). Concentration and variability of forecasts in artificial investment games: an online experiment on wechat. *Experimental Economics*, 23:815–847.

Chen, Y., Li, S. X., Liu, T. X., and Shih, M. (2014). Which hat to wear? Impact of natural identities on coordination and cooperation. *Games and Economic Behavior*, 84:58–86.

Clot, S., Grolleau, G., and Ibanez, L. (2018). Shall we pay all? an experimental test of random incentivized systems. *Journal of Behavioral and Experimental Economics*, 73:93–98.

Cohn, A., Engelmann, J., Fehr, E., and Maréchal, M. A. (2015). Evidence for countercyclical risk aversion: An experiment with financial professionals. *American Economic Review*, 105(2):860–885.

Coker, B. L. (2012). Seeking the opinions of others online: Evidence of evaluation overshoot. *Journal of Economic Psychology*, 33(6):1033–1042.

Depositario, D. P. T., Nayga Jr, R. M., Wu, X., and Laude, T. P. (2009). Should students be used as subjects in experimental auctions? *Economics Letters*, 102(2):122–124.

Ellsberg, D. (1961). Risk, ambiguity, and the savage axioms. *Quarterly Journal of Economics*, 75(4):643–669.

Fehr, E. and Schmidt, K. M. (1999). A Theory of Fairness, Competition, and Cooperation. *Quarterly Journal of Economics*, Vol. 114:817–868.

Fréchette, G. R., Sarnoff, K., and Yariv, L. (2022). Experimental economics: Past and future. *Annual Review of Economics*, 14:777–794.

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

Grant, R. W. (2015). Rethinking the ethics of incentives. *Journal of Economic Methodology*, 22(3):354–372.

Grether, D. M. and Plott, C. R. (1979). Economic theory of choice and the preference reversal phenomenon. *American Economic Review*, 69(4):623–638.

Grüner, S., Lehberger, M., Hirschauer, N., and Mußhoff, O. (2022). How (un) informative are experiments with students for other social groups? a study of agricultural students and farmers. *Australian Journal of Agricultural and Resource Economics*, 66(3):471–504.

Hackethal, A., Kirchler, M., Laudenbach, C., Razen, M., and Weber, A. (2022). On the role of monetary incentives in risk preference elicitation experiments. *Journal of Risk and Uncertainty*.

Haigh, M. S. and List, J. A. (2005). Do professional traders exhibit myopic loss aversion? an experimental analysis. *The Journal of Finance*, 60(1):523–534.

Harrison, G. W. (1994). *Expected utility theory and the experimentalists*. Springer.

Harrison, G. W., Hofmeyr, A., Kincaid, H., Monroe, B., Ross, D., Schneider, M., and Swarthout, J. T. (2021). A case study of an experiment during the covid-19 pandemic: Online elicitation of subjective beliefs and economic preferences. *Journal of the Economic Science Association*, 7(2):194–209.

Holm, H. and Nystedt, P. (2008). Trust in surveys and games–a methodological contribution on the influence of money and location. *Journal of Economic Psychology*, 29(4):522–542.

Huber, C., König-Kersting, C., and Marini, M. M. (2024). Experimenting with financial professionals. *Journal of Banking & Finance*, page 107329.

Jiang, J., Chen, Y., Yu, J., and Guan, J. (2025). Teacher's use of online computer-assisted learning and students' academic and non-cognitive outcomes: evidence and mechanisms. *Applied Economics*, pages 1–13.

Kahneman, D. and Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47(2):263.

Laine, T., Silander, T., and Sakamoto, K. (2020). What distinguishes people who turn into tax evaders when properly incentivized from those who don't? an experimental study using hypothetical scenarios. *Journal of Behavioral and Experimental Economics*, 85:101511.

Li, Y. and Mora, R. (2022). On the use of social networking services and the ability to socialize: evidence from chinese children aged 10 to 15. *Applied economics*, 54(49):5639–5654.

Lichtenstein, S. and Slovic, P. (1971). Reversals of preference between bids and choices in gambling decisions. *Journal of Experimental Psychology*, 89(1):46–55.

Lindman, H. R. (1971). Inconsistent preferences among gambles. *Journal of Experimental Psychology*, 89(2):390–397.

Masclet, D. and Rebière, T. (2023). Comparing real and hypothetical incentives in giving and money burning experiments. *Annals of Economics and Statistics*, 152:65–102.

Mengel, F. (2018). Risk and Temptation: A Meta-study on Prisoner's Dilemma Games. *The Economic Journal*, 128(616):3182–3209.

Menkhoff, L., Schmeling, M., and Schmidt, U. (2013). Overconfidence, experience, and professionalism: An experimental study. *Journal of Economic Behavior & Organization*, 86:92–101.

Metzger, L. and Günther, I. (2019). Is it what you say or how you say it? the impact of aid effectiveness information and its framing on donation behavior. *Journal of Behavioral and Experimental Economics*, 83:101461.

Plott, C. R. (1982). Industrial organization theory and experimental economics. *Journal of Economic Literature*, 20(4):1485–1527.

Proestakis, A., Marandola, G., Lourenço, J., and van Bavel, R. (2024). Testing a policy intervention in the lab: differences between students and non-students in switching bank accounts. *Journal of Economic Behavior & Organization*, 111:102220.

Rabin, M. (1993). Incorporating Fairness into Game Theory and Economics. *The American Economic Review*, 83(5):1281–1302.

Read, D. (2005). Monetary incentives, what are they good for? *Journal of Economic Methodology*, 12(2):265–276.

Reuben, E., Li, S. X., Suetens, S., Svorenčík, A., Turocy, T., and Kotsidis, V. (2022). Trends in the publication of experimental economics articles. *Journal of the Economic Science Association*, 8(1):1–15.

Roth, A. E. (1993). The early history of experimental economics. *Journal of the History of Economic Thought*, 15(2):184–209.

Slonim, R., Wang, C., Garbarino, E., and Merrett, D. (2013). Opting-in: Participation bias in economic experiments. *Journal of Economic Behavior & Organization*, 90:43–70.

Smith, V. L. (1976). Experimental Economics: Induced Value Theory. *American Economic Review*, 66(2):pp. 274–279.

Smith, V. L. and Walker, J. M. (1993). Monetary rewards and decision cost in experimental economics. *Economic Inquiry*, 31(2):245–261.

Thaler, R. H. (2016). Behavioral economics: Past, present, and future. *American Economic Review*, 107(7):1577–1600.

Thaler, R. H. and Sunstein, C. R. (2008). *Nudge: improving decisions about health, wealth, and happiness*. Penguin Books, New York, rev. and expanded ed edition.

Thurstone, L. (1931). The indifference function. *Journal of Social Psychology*, 2(2).

Voslinsky, A. and Azar, O. H. (2021). Incentives in experimental economics. *Journal of Behavioral and Experimental Economics*, 93:101706.

Weigel, C., Paul, L. A., Ferraro, P. J., and Messer, K. D. (2021). Challenges in Recruiting U.S. Farmers for Policy-Relevant Economic Field Experiments. *Applied Economic Perspectives and Policy*, 43(2):556–572.

Zhou, X., Yang, X., Jin, X., and Zhang, L. (2025). Enhancing optimal consumption: Experimental insights into nudging borrowing behavior via a life cycle model. *China Economic Review*, 90:102349.

Appendix

A Description of meta-analysis

Meta-analysis flows

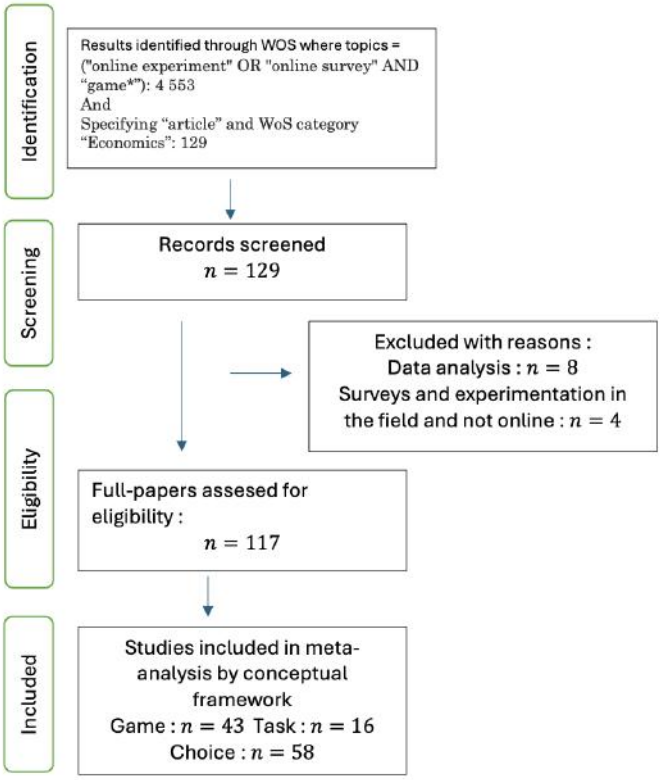

Figure 3: Description of meta-analysis flows

Journals breakdown

Journal	n=117
Journal of Behavioral And Experimental Economics	24.79
Journal of Economic Behavior & Organization	17.95
Journal of Economic Psychology	11.11
Economics Letters	7.9
Experimental Economics	6.84
Ecological Economics	5.98
European Economic Review	5.13
Journal of The Economic Science Association	5.13
Environmental & Resource Economics	4.27
Journal of Public Economics	4.27
Journal of Behavioral And Experimental Finance	2.56
Economic Journal[b]	2.56
American Economic Review[a]	1.71
Journal of The European Economic Association[b]	0.85

[a]Top-five journals
[b]Journals included in Reuben et al. (2022)

Table 9: Journals breakdown, in %

Meta-analysis information

	Mean	Median	Min	Max
Motivation because Covid-19	11.11%			
ype of recruitment :				
MTurk	31.62%			
Prolific	27.35%			
Others recruitment	41.03%			
ype of sample :				
MTurk and Prolific workers	61.54%			
Students	14.53%			
General Population	19.66%			
Specific Population	4.27%			
ype of decision :				
Choice Decision	49.57%			
Task Decision	13.68%			
Game Decision	36.75%			
Sample	1120.6	702	60	8861
Payoff in USD[a]	4.72	2.76	0.24	26.67
Lottery Payment	8.55%			

[a] As not all articles explicitly indicated compensation per individual, our calculation is based on n=80, and a conversion into US dollars for other currencies (exchange rate on Nov., 2024) .

Table 10: Descriptive meta-analysis information

List of the 117 articles processed

1. Adena, M., & Harke, J. (2022). COVID-19 and pro-sociality: How do donors respond to local pandemic severity, increased salience, and media coverage?Experimental Economics, 25(3), 824–844.
2. Aksoy, B., Chadd, I., & Koh, B. H. (2023). Sexual identity, gender, and anticipated discrimination in prosocial behavior.European Economic Review, 154 Article 104370.
3. Aksoy, B., & Krasteva, S. (2020). When does less information translate into more giving to public goods? Experimental Economics, 23(4), 1148–1177.

4. Alfonso-Costillo, A., Brañas-Garza, P., & López-Martín, M. C. (2022). Does the die-under-the-cup device exaggerate cheating? Economics Letters, 214.

5. Alós-Ferrer, C., & Granic, G. D. (2023). Does choice change preferences? An incentivized test of the mere choice effect. Experimental Economics, 26(3), 499–521.

6. Amador-Hidalgo, L., Brañas-Garza, P., Espín, A. M., García-Muñoz, T., & Hernández-Román, A. (2021). Cognitive abilities and risk-taking: Errors, not preferences. European Economic Review, 134.

7. Apffelstaedt, A., Freundt, J., & Oslislo, C. (2022). Social norms and elections: How elected rules can make behavior (in)appropriate.Journal of Economic Behavior & Organization, 196 148–177.

8. Atalay, K., Bakhtiar, F., Cheung, S., & Slonim, R. (2014). Savings and prize-linked savings accounts. Journal of Economic Behavior & Organization, 107 86-106.

9. Aytac, M. B., & Bilir, H. (2024). Child images affect sports fans' prosociality and aggression. Journal of Behavioral and Experimental Economics, 108 Article 108.

10. Barrera, O., Guriev, S., Henry, E., & Zhurayskaya, E. (2020). Facts, alternative facts, and fact checking in times of post-truth politics. Journal of Public Economics, 182.

11. Benuzzi, M., Klaser, K., & Bax, K. (2024). Which ESG plus F dimension matters most to retail investors? An experimental study on financial decisions and future generations.Journal of Behavioral and Experimental Finance, 41.

12. Bhanot, S. P. (2017). Cheap promises: Evidence from loan repayment pledges in an online experiment.Journal of Economic Behavior & Organization, 140 246–266.

13. Bilancini, E., Boncinelli, L., Nardi, C., & Pizziol, V. (2024). Cooperation is unaffected by the threat of severe adverse events in public goods games. Journal of Behavioral and Experimental Economics, 108 102145.

14. Bilancini, E., Boncinelli, L., Guarnieri, P., & Spadoni, L. (2023). Delaying and motivating decisions in the (Bully) dictator game. Journal of Behavioral and Experimental Economics, 107 Article 107.

15. Birkelund, J., Cherry, T. L., & McEvoy, D. M. (2022). A culture of cheating: The role of worldviews in preferences for honesty. Journal of Behavioral and Experimental Economics, 96.

16. Bosetti, V., Dennig, F., Liu, N., Tavoni, M., & Weber, E. U. (2022). Forward-looking belief elicitation enhances intergenerational beneficence. Environmental & Resource Economics, 81(4), 743–761.

17. Burdea, V., & Woon, J. (2022). Online belief elicitation methods.Journal of Economic Psychology, 90 Article 102470.

18. Burgstaller, L., & Pfeil, K. (2024). You don't need an invoice, do you? An online experiment on collaborative tax evasion. Journal of Economic Psychology, 101.

19. Burlacu, S., Mani, A., Ronzani, P., & Savadori, L. (2023). The preoccupied parent: How financial concerns affect child investment choices. Journal of Behavioral and Experimental Economics, 105 Article 105.

20. Cao, Y., Capra, C. M., & Su, Y. (2023). Do prosocial incentives motivate women to set higher goals and improve performance? Journal of Economic Psychology, 99.

21. Capra, C. M., Jiang, B., & Su, Y. X. (2024). Green self-image boosts online volunteering for environmental causes: Experimental evidence. Journal of Behavioral and Experimental Economics, 110.

22. Capra, C. Monica, Jiang, Bing, Su, Yuxin (2021). Altruistic self-concept mediates the effects of personality traits on volunteering: evidence from an online experiment. Journal of Behavioral and Experimental Economics, 92.

23. Carlsson, F., Kataria, M., & Lampi, E. (2024). Sexual objectification of women in media and the gender wage gap: Does exposure to objectifying pictures lower the reservation wage?Journal of Behavioral and Experimental Economics, 108.

24. Catola, M., D'Alessandro, S., Guarnieri, P., & Pizziol, V. (2021). Personal norms in the online public good game. Economics Letters, 207.

25. Catola, Marco, D'Alessandro, Simone, Guarnieri, Pietro, Pizziol, Veronica (2023). Multilevel public goods game: levelling up, substitution and crowding-in effects. Journal of Economic Psychology, 97.

26. Cetre, S., Algan, Y., Grimalda, G., Murtin, F., Pipke, D., Putterman, L., Schmidt, U., & Siegerink, V. (2024). Ethnic bias, economic achievement and trust between large ethnic groups: A study in Germany and the U.S.Journal of Economic Behavior & Organization, 224 996–1021.

27. Chakraborty, P., & Serra, D. (2024). Gender and leadership in organisations: The threat of backlash. Economic Journal, 134(660), 1401–1430.

28. Chen, X., Hong, F., & Zhao, X. (2020). Concentration and variability of forecasts in artificial investment games: an online experiment on WeChat. Experimental Economics, 23 815-847.

29. Chopra, F., Haaland, I., & Roth, C. (2022). Do people demand fact-checked news? Evidence from US Democrats. Journal of Public Economics, 205.

30. Cicognani, S., Romagnoli, G., & Soraperra, I. (2024). Fostering trust: When the rhetoric of sharing can backfire. Journal of Economic Psychology, 102 Article 102.

31. Cingl, L., Lichard, T., & Miklánek, T. (2023). Tax designation effects on compliance: An online experiment with taxpayers. Journal of Economic Behavior & Organization, 214 615–633.

32. Corneille, O., D'Hondt, C., De Winne, R., Efendic, E., Todorovic, A. (2021). What leads people to tolerate negative interest rates on their savings? Journal of Behavioral and Experimental Economics, 93.

33. d'Adda, G., Gao, Y., Golman, R., & Tavoni, M. (2024). Strategic information avoidance, belief manipulation and the effectiveness of green nudges.Ecological Economics, 222 Article 107419.

34. d'Adda, G., Capraro, V., & Tavoni, M. (2017). Push, don't nudge: Behavioral spillovers and policy instruments.Economics Letters, 154 92–95.

35. Dannenberg, Astrid, Sturm, Bodo, Vogt, Carsten (2010). Do equity preferences matter for climate negotiators? An experimental investigation. Environmental & Resource Economics, 47(1), 91–109.

36. Dato, S., Feess, E., & Nieken, P. (2024). Lying in competitive environments: Identifying behavioral impacts. European Economic Review, 170 Article 170.

37. Delaney, J., Jacobson, S., & Moenig, T. (2020). Preference discovery.Experimental Economics, 23(3), 694–715.

38. Diederich, J., & Goeschl, T. (2014). Willingness to Pay for Voluntary Climate Action and Its Determinants: Field-Experimental Evidence. Environmental & Resource Economics, 57(3), 405–429.

39. Diederich, J., Eckel, C. C., Epperson, R., Goeschl, T., & Grossman, P. J. (2022). Subsidizing unit donations: Matches, rebates, and discounts compared. Experimental Economics, 25(2), 734–758.

40. Dittrich, M., & Leipold, K. (2014). Gender differences in time preferences. Economics Letters, 122(3), 413–415.

41. Divle, S., Ertac, S., & Gumren, M. (2024). The impact of COVID-19 on the willingness to work in teams. Journal of Economic Behavior & Organization, 227 Article 227.

42. Ek, C., & Samahita, M. (2023). Too much commitment? An online experiment with tempting YouTube content. Journal of Economic Behavior & Organization, 208 21–38.

43. Essl, A., Hauser, D., & von Bieberstein, F. (2024). Let's think about the future: The effect of positive and negative future primes on pro-environmental behavior. Journal of Behavioral and Experimental Economics, 109 Article 102072.

44. Fanghella, V., Ploner, M., & Tavoni, M. (2021). Energy saving in a simulated environment: An online experiment of the interplay between nudges and financial incentives. Journal of Behavioral and Experimental Economics, 93 101709.

45. Fanghella, V., & Thogersen, J. (2022). Experimental evidence of moral cleansing in the interpersonal and environmental domains. Journal of Behavioral and Experimental Economics, 97.

46. Fanghella, V., Faure, C., Guetlein, M.-C., & Schleich, J. (2023). Locus of control and other-regarding behavior: Experimental evidence from a large heterogeneous sample. Journal of Economic Psychology, 95 Article 95.

47. Farjam, M., Nikolaychuk, O., & Bravo, G. (2019). Experimental evidence of an environmental attitude-behavior gap in high-cost situations. Ecological Economics, 166.

48. Fielding, D., Knowles, S., & Peeters, R. (2023). Timing of rebates and generosity. Journal of Behavioral and Experimental Economics, 107.

49. Fryer, R. G., Jr., Harms, P., & Jackson, M. O. (2019). Updating Beliefs when Evidence is Open to Interpretation: Implications for Bias and Polarization. Journal of the European Economic Association, 17(5), 1470–1501.

50. Galdikiene, L., Jaraite, J., & Kajackaite, A. (2024). Effects of cooperative and uncooperative narratives on trust during the COVID-19 pandemic: Experimental evidence. Journal of Behavioral and Experimental Economics, 112.

51. Gallo, E., Barak, D., & Langtry, A. (2023). Social distancing in networks: A web-based interactive experiment. Journal of Behavioral and Experimental Economics, 107.

52. Gehrlein, J., Crede, A. K., & Adrian, N. (2020). The impact of markets on moral reasoning: Evidence from an online experiment. Journal of Behavioral and Experimental Economics, 87 101577.

53. Gerhards, L. (2015). The incentive effects of missions: Evidence from experiments with NGO employees and students. European Economic Review, 79 252–262.

54. Goeschl, T., & Soldà, A. (2024). (Un)Trustworthy pledges and cooperation in social dilemmas.Journal of Economic Behavior & Organization, 223 106–119.

55. Goff, S. H., Waring, T. M., & Noblet, C. L. (2017). Does pricing nature reduce monetary support for conservation? Evidence from donation behavior in an online experiment.Ecological Economics, 141 119–126.

56. González, T. A., Capozza, F., & Granic, G. D. (2024). Cognitive dissonance, political participation, and changes in policy preferences. Journal of Economic Psychology, 105.

57. Greiff, M., & Giamattei, M. (2024). Spillovers from incentive schemes on distributional preferences and expectations.Journal of Behavioral and Experimental Economics, 112 Article 102195.

58. Harrison, G. W., Hofmeyr, A., Kincaid, H., Monroe, B., Ross, D., Schneider, M., & Swarthout, J. T. (2021). A case study of an experiment during the COVID-19 pandemic: Online elicitation of subjective beliefs and economic preferences. Journal of the Economic Science Association,(2),

59. Hauser, D., & Bregulla, D. (2024). Saving the world voluntarily: Experimental evidence of gain-loss framing on voluntary pro-environmental behavior. Ecological Economics, 226.

60. He, S. T., Blasch, J., Robinson, P. J., & van Beukering, P. (2024). Social comparison feedback in decision-making context: Environmental externality levels and psychological traits matter. Ecological Economics, 216.

61. He, T. S., Riyanto, Y. E., Tanaka, S. C., & Yamada, K. (2020). Pronoun drop and prosocial behavior: Experimental evidence from Japan. Journal of the Economic Science Association, 6(1), 13–25.

62. Hediger, C., Farsi, M., & Weber, S. (2018). Turn it up and open the window: On the rebound effects in residential heating.Ecological Economics, 149 21–39.

63. Heger, S. A., Slonim, R., Tausch, F., & Tymula, A. (2021). Altruism among consumers as donors.Journal of Economic Behavior & Organization, 189 611–622.

64. Heinicke, F., Rosenkranz, S.,& Weitzel, U. (2019). The effect of pledges on the distribution of lying behavior: An online experiment. Journal of Economic Psychology, 73 136–151.

65. Hendy, P., Slonim, R., & Atalay, K. (2021). Unsticking credit card repayments from the minimum: Advice, anchors and financial incentives. Journal of Behavioral and Experimental Finance, 30.

66. Hermann, D., & Brenig, M. (2022). Dishonest online: A distinction between observable and unobservable lying. Journal of Economic Psychology, 90 102489.

67. Hopp, D. (2022). High incentives without high cost: The role of (perceived) stake sizes in dictator games. Journal of Behavioral and Experimental Economics, 97.

68. Huang, W., Wang, Y., & Zhao, X. J. (2024). Motivated Beliefs, Independence and Cooperation. European Economic Review, 166.

69. Hueber, L., & Schwaiger, R. (2022). Debiasing through experience sampling: The case of myopic loss aversion. Journal of Economic Behavior & Organization, 198 87–138.

70. Huynh, L. D. T., Stratmann, P., & Rilke, R. M. (2024). No influence of simple moral awareness cues on cheating behaviour in an online experiment. Journal of Behavioral and Experimental Economics, 108 102126.

71. Ifcher, J., Zarghamee, H., Houser, D., & Diaz, L. (2020). The relative income effect: An experiment. Experimental Economics, 23(4), 1205–1234.

72. Ioannidis, K. (2023). Anchoring on valuations and perceived informativeness. Journal of Behavioral and Experimental Economics, 106.

73. Isler, O., & Gächter, S. (2022). Conforming with peers in honesty and cooperation. Journal of Economic Behavior & Organization, 195 75–86.

74. Jhunjhunwala, T. (2023). Searching to avoid regret in charitable giving. Journal of the Economic Science Association, 9(2), 207–226.

75. Jiang, Bing, Pan, Xiaofei (2023). An anger premium: an experiment on the role of counterpart emotions in coordination. Journal of Behavioral and Experimental Economics, 103.

76. Jorrat, D. (2021). Recruiting experimental subjects using WhatsApp. Journal of Behavioral and Experimental Economics, 90.

77. Kas, J. (2022). The effect of online reputation systems on intergroup inequality.Journal of Behavioral and Experimental Economics, 96 Article 101786.

78. Kesternich, I., Schumacher, H., Siflinger, B., & Valder, F. (2022). Reservation wages and labor supply. Journal of Economic Behavior & Organization, 194 583–607.

79. Klockmann, V., von Schenk, A., & Villeval, M. C. (2022). Artificial intelligence, ethics, and intergenerational responsibility. Journal of Economic Behavior & Organization, 203 284–317.

80. Krawczyk, M. (2024). Excessive discounting, longevity expectations, and retirement saving: An online survey. Journal of Behavioral and Experimental Economics, 112.

81. Laine, T., Silander, T., & Sakamoto, K. (2020). What distinguishes people who turn into tax evaders when properly incentivized from those who don't? An experimental study using hypothetical scenarios. Journal of Behavioral and Experimental Economics, 85.

82. Lambrecht, M., & Oechssler, J. (2023). Do women shy away from risky skill games? Journal of Economic Behavior & Organization, 211 241–250.

83. Lancee, B., Rossel, L., & Kasper, M. (2023). When the agency wants too much: Experimental evidence on unfair audits and tax compliance. Journal of Economic Behavior & Organization, 214 406–442.

84. Légeret, M., & Zehnder, C. (2022). Self-regulation after temptation? Economics Letters, 214.

85. Li, J. B., Zhang, Y. N., & Niu, X. F. (2021). The COVID-19 pandemic reduces trust behavior. Economics Letters, 199.

86. Li, J. W., Leider, S., Beil, D., & Duenyas, I. (2021). Running online experiments using web-conferencing software. Journal of the Economic Science Association, 7(2), 167–183.

87. Lilleholt, L., Schild, C., & Zettler, I. (2020). Not all computerized cheating tasks are equal: A comparison of computerized and non-computerized versions of a cheating task. Journal of Economic Psychology, 78.

88. Lohse, J., Goeschl, T., & Diederich, J. H. (2017). Giving is a question of time: Response times and contributions to an environmental public good. Environmental & Resource Economics, 67(3), 455–477.

89. Ludwig, J., & Achtziger, A. (2021). Cognitive misers on the web: An online-experiment of incentives, cheating, and cognitive reflection.Journal of Behavioral and Experimental Economics, 94 Article 101750.

90. Martínez, B. C. (2023). Social preferences, support for redistribution, and attitudes towards vulnerable groups. Journal of Behavioral and Experimental Economics, 107 102112.

91. McGranaghan, C., Nielsen, K., O'Donoghue, T., Somerville, J., & Sprenger, C. D. (2024). Distinguishing Common Ratio Preferences from Common Ratio Effects Using Paired Valuation Tasks. American Economic Review, 114(2), 307–347.

92. Meiske, B., Alvarez-Benjumea, A., Andrighetto, G., & Polizzi, E. (2024). Nudging punishment against sharing of fake news.European Economic Review, 168.

93. Menkhoff, L., Schmeling, M., & Schmidt, U. (2013). Overconfidence, experience, and professionalism: An experimental study. Journal of Economic Behavior & Organization, 86 92–101.

94. Metzger, L., & Günther, I. (2019). Is it what you say or how you say it? The impact of aid effectiveness information and its framing on donation behavior. Journal of Behavioral and Experimental Economics, 83 Article 83.

95. Milosav, D., & Nistotskaya, M. (2024). Unpacking the relevance of interpersonal trust in the blockchain era: Theory and experimental evidence. Journal of Behavioral and Experimental Finance, 42 Article 42.

96. Mishagina, N., & Montmarquette, C. (2021). The role of beliefs in supporting economic policies: The case of the minimum wage. Journal of Economic Behavior & Organization, 188 1059–1087.

97. Mol, J. M., & Molho, C. (2024). Information about changes in platform economy taxation diminishes optimism regarding future use.Journal of the Economic Science Association, Advance online publication.

98. Mollerstrom, J., Strulov-Shlain, A., & Taubinsky, D. (2024). The impact of group size on giving versus demand for redistribution. Journal of Public Economics, 237.

99. Moser, J., & Wallmeier, N. (2021). Correlation neglect in voting decisions: An experiment. Economics Letters, 198.

100. Nielsen, K., & Rehbeck, J. (2022). When choices are mistakes. American Economic Review, 112(7), 2237–2268.

101. Rafkin, Charlie, Shreekumar, Advik, Vautrey, Pierre-Luc (2021). When guidance changes: government stances and public beliefs. Journal of Public Economics, 196.

102. Rimbaud, C., & Soldà, A. (2024). Avoiding the cost of your conscience: Belief dependent preferences and information acquisition. Experimental Economics, 27(3), 491–547.

103. Robbett, A., Colón, L., & Matthews, P. H. (2023). Partisan political beliefs and social learning.Journal of Public Economics, 220 Article 104893.

104. Rode, J., Le Menestrel, M., & Cornelissen, G. (2017). Ecosystem service arguments enhance public support for environmental protection – But beware of the numbers. Ecological Economics, 141 213–221.

105. Sanders, M., Stockdale, E., Hume, S., & John, P. (2021). Loss aversion fails to replicate in the coronavirus pandemic: Evidence from an online experiment. Economics Letters, 199.

106. Schwaiger, R., & Hueber, L. (2021). Do MTurkers exhibit myopic loss aversion?. Economics Letters, 209 110137.

107. Schwaiger, R., Huber, J., Kirchler, M., Kleinlercher, D., & Weitzel, U. (2022). Unequal opportunities, social groups, and redistribution: Evidence from Germany. Journal of Behavioral and Experimental Economics, 100.

108. Settele, S., & Shupe, C. (2022). Lives or livelihoods? Perceived trade-offs and policy views. Economic Journal, 132(643), 1150–1178.

109. Shreedhar, G., & Mourato, S. (2020). Linking human destruction of nature to COVID-19 increases support for wildlife conservation policies. Environmental & Resource Economics, 76(4), 963–999.

110. Sonntag, A., & Zizzo, D. J. (2019). Personal accountability and cooperation in teams. Journal of Economic Behavior & Organization, 158 428–448.

111. Takeuchi, A.,& Seki, E. (2023). Coordination and free-riding problems in the provision of multiple public goods. Journal of Economic Behavior & Organization, 206 95–121.

112. Thaler, M. (2021). Gender differences in motivated reasoning.Journal of Economic Behavior & Organization, 191 501–518.

113. Vecchi, M., & Vitt, N. (2024). Stress or failure? An experimental protocol to distinguish the environmental determinants of decision-making. Journal of the Economic Science Association.

114. Wang, W., Chen, P., Li, J., & Niu, X. (2024). Institutional quarantine and dishonest behavior. Journal of Economic Psychology, 104 Article 104.

115. Wright, R., & Aldama, A. (2023). Not all luck is created equal: Sources of income inequality and willingness to redistribute. Journal of Economic Psychology, 97 Article 97.

116. Zhang, Y. J. J., Hoffmann, M., Sara, R., & Eckel, C. (2024). Fairness preferences revisited. Journal of Economic Behavior & Organization, 223 278–306.

117. Zylbersztejn, A., Babutsidze, Z., Hanaki, N., & Roul, M. S. (2024). Anonymity, nonverbal communication and prosociality in digitized interactions: An experiment on charitable giving.Journal of Economic Psychology, 105 Article 102599.

B Survey

B.1 A survey example on the six sent

Strategic Games –
Thank You for Participating

We are researchers from the University of Angers. This study is entirely anonymous and is conducted with no commercial or political intent.

Audience
We are collecting responses from individuals currently in employment.

Data Management
This study is anonymous.
In accordance with open science principles and the General Data Protection Regulation (GDPR), anonymized data will be archived and made accessible for scientific purposes only.

Duration
The survey takes a maximum of 5 minutes to complete.
You may stop at any time and resume later by clicking the same link.

We invite you to participate in a strategic game that takes no more than 5 minutes and gives you the chance to win between €0 and €15 in Illicado gift cards. The purpose of this study is to better understand economic behavior and to compare different research methods.

Contact
For any questions: xpeco-universite.angers@univ-angers.fr

There are 12 questions in this questionnaire.

Consent
Please select only one of the following options:
o I confirm that I have read and understood the information above. I am at least 18 years old, and I give my consent to participate in this study.
o I do not give my consent to participate in this study.

1. Your profile

a. You are:
Please select only one of the following options:
o a man
o a woman

b. Your year of birth:
Please enter your answer below:

c. What is your main professional activity?

Please select only one of the following options:

- o Teaching and research
- o Teaching only
- o Research only
- o PhD candidate / Doctoral student
- o Civil servant – Category A
- o Civil servant – Category B
- o Civil servant – Category C
- o Other

Please specify:
Please enter your answer below: _____

d. What is your highest level of education?

Please select only one of the following options:

- o No diploma
- o Lower secondary school certificate (Brevet des collèges)
- o Vocational qualification (e.g., CAP, BEP)
- o High school diploma (Baccalaureate)
- o 2-year university degree (BAC +2, e.g., BTS, DUT)
- o 3-year university degree (bachelor's level – BAC +3)
- o 4-year university degree (BAC +4)
- o 5-year university degree (master's level – BAC +5)
- o Doctorate / PhD (BAC +8)
- o Other _____

2. The Game

We invite you to take part in a strategic game.

Depending on your response, you can win between €0 and €15, which will be sent to you as Illicado gift cards. In this game, you will be paired with another participant recruited in the same way as you. You will not know who they are, and there will be no communication between you. Your decision will be matched with the choice of the other participant. The amount you win will depend on both your choice and theirs.

You will not be informed of the other person's decision, and they will not know yours.

You will be given €5. Here are the rules of the game:

Each player gives the other €0 or €5, knowing that any amount given is doubled.
So, when one player gives €5, the other receives €10.
Each player decides whether or not to give €5, without knowing the other's choice.

Possible outcomes:

- o If both give €5, each earns €10.
- o If both give €0, each keeps their €5.
- o If you give €5 and the other gives €0, you earn €0 and the other earns €15.
- o If you give €0 and the other gives €5, you earn €15 and the other earns €0.

a. What amount do you choose to give?

Please select only one of the following options:

o €0
o €5

b. How much do you think the other player will give you?

Please select only one of the following options:

o €0
o €5
o I don't know

c. To receive your Illicado gift cards, please provide your full name and postal address:

Please enter your response below:

3. Your Comments

a. Would you like to receive the results of this study by email in 2024?

Please select only one of the following options:

o Yes
o No

Please provide your email address:

For any comments, please feel free to use the space below:

Please enter your response below:

Thank You

Thank you for your participation.

Submit your questionnaire.

Thank you for completing this survey.

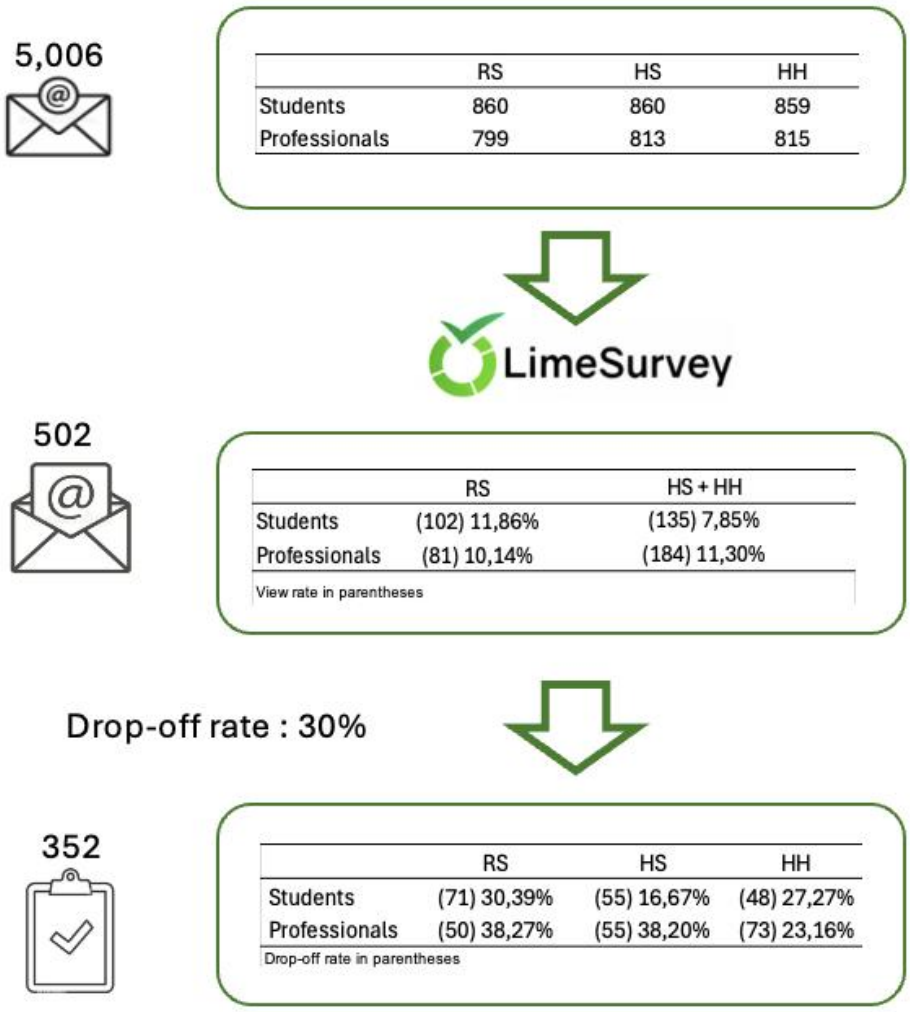

Figure 4: Survey participation overview

TEPP Working Papers 2026

26-1. Participatory democracy in question: the case of "The Sea in Debate"
François-Charles Wolff, Pierre-Alexandre Mahieu, Brice Trouillet, Alexia Pigeault, Nicolas Rollo

TEPP Working Papers 2025

25-7. The impact of subsidizing early young innovative companies on their access to capital market
Anna Malessan

25-6. Competitiveness and employment or wage distribution. What do we learn from the corporate and payroll tax cuts policies in France ?
Fabrice Gilles, Yannick L'Horty, Ferhat Mihoubi

25-5. Marginal employment as an incentive to find a regular job? A meta-regression analysis approach
Fabrice Gilles

25-4. Improving employability for the least qualified unemployed. Lessons from a new French training program
Héloïse Burlat, Fabrice Gilles, Yannick L'Horty

25-3. Production regulation principles and tax reforms
Laurence Jacquet, Etienne Lehmann

25-2. Monetary policy transmission and household indebtedness in Australia
Khuderchuluun Batsukh, Nicolas Groshenny, Naveed Javed

25-1. Payroll tax reductions on low wages and minimum wage in France
Julien Albertini, Arthur Poirier, Anthony Terriau

TEPP Working Papers 2024

24-9. Training and job-to-job mobility with transfer fees
Arnaud Chéron, Anthony Terriau

24-8. Corporate taxation and firm heterogeneity
Julien Albertini, Xavier Fairise, Anthony Terriau

24-7. Effects of a business support program on firm performances in France
Fabrice Gilles, Yannick L'Horty, Ferhat Mihoubi

24-6. Increased fine for repeat offenders and conglomerate dynamics
Armel Jacques

24-5. The valuation of energy efficiency labels in the French housing market
Sylvain Chareyron

24-4. A comprehensive analysis of production efficiency : a tax reform perspective
Laurence Jacquet, Etienne Lehmann

24-3. How to measure energy poverty in warm and cold climate territories? A multidimensional approach
Manitra Rakotomena, Olivia Ricci

24-2. Innovating for the good or for the bad. An EU-wide analysis of the impact of technological transformation on job polarisation and unemployment
Ylenia Curci, Nathalie Greenan, Silvia Napolitano

24-1. Is training helpful in boosting the self-confidence and professional integration of young people not in employment, education or training? Results from a randomized experiment
Nicolas Moreau, Alexis Parmentier, Mylène Lebon-Eyquem

TEPP Working Papers 2023

23-8. Dornbusch's overshooting and the systematic component of monetary policy in SOE-SVAR
Nicolas Groshenny, Naveed Javed

23-7. Is participatory democracy in line with social protest? Evidence from French yellow vests movement
Benjamin Monnery, François-Charles Wolff

23-6. On-the-job search, life-cycle training and the role of transfer fees
Arnaud Cheron, Anthony Terriau

23-5. Estimating the laffer tax rate on capital income : cross-base responses matter!
Marie-Noëlle Lefebvre, Etienne Lehmann, Michaël Sicsic

23-4. The trickle-down theory: a reality in French sports?
Florian Moussi-Beylie

23.3. Robotization and unbalanced changes in high-skill employment
Lucas Parmentier

23.2. Knowledge transmission in the second part of careers: does formal training matter?
Pierre-Jean Messe, Nathalie Greenan

23-1. Phantom cycles
Arnaud Chéron, Bruno Decreuse

TEPP Working Papers 2022

22-21. Utility services poverty : addressing the problem of household deprivation in Mayotte
Dorothée Charlier, Bérangère Legendre, Olivia Ricci

22-20. The effects of disability benefits on the employment of low-skilled youth : evidence from France
Sylvain Chareyron, Naomie Mahmoudi

22-19. Does gender equality bargaining reduce child penality? Evidence from France
Pierre-Jean Messe, Jérémy Tanguy

22-18. The effect of pro diversity actions on discrimination in the recruitment of large companies : a field experiment
Laetitia Challe, Sylvain Chareyron, Yannick L'Horty, Pascale Petit

22-17. Impacts of quota policy and employer obligation to adapt workstations on discrimination against people with disabilities : lesson from an experiment
Sylvain Chareyron, Yannick L'Horty, Philomene Mbaye, Pascale Petit

22-16. Are real merchandise imports per capita a good predictor for the standard of living for the small island world : testing for the imports-led growth and the growth-led imports hypotheses in panels over the period 1970-2019
Jean-François Hoarau, Nicolas Lucic

22-15. Extracting the discrimination components from the callback rates
Emmanuel Duguet, Loïc Du Parquet, Pascale Petit

22-14. Strategic debt in a mixed duopoly: the limited liability effect
Armel Jacques

22-13. Short-time work policies during the COVID-19 pandemic
Julien Albertini, Xavier Fairise, Arthur Poirier, Anthony Terriau

22-12. Immigration and labour market flows
Andri Chassamboulli, Idriss Fontaine, Ismael Galvez-Iniesta

22-11. Short-term impact of tropical cyclones in Madagascar : evidence from nightlight data
Idriss Fontaine, Sabine Garabedian, Maël Jammes

22-10. The current and future costs of tropical cyclones: A case study of La Réunion
Idriss Fontaine, Sabine Garabedian, Helene Veremes

22-9. Wealth and income responses to dividend taxation : Evidence from France
Marie-Noëlle Lefebvre, Eddy Zanoutene

22-8. Soccer labour market equilibrium and efficient training of talents
Marnix Amand, Arnaud Chéron, Florian Pelgrin, Anthony Terriau

22.7. Using short-term jobs as a way to fin a regular job. What kind of role for local context?
Fabrice Gilles, Sabina Issehnane, Florent Sari

22-6. Gender and age diversity. Does it matter for firms' productivity?
Laetitia Challe, Fabrice Gilles, Yannick L'Horty, Ferhat Mihoubi

22-5. How wages respond to the job-finding and job-to-job transition rates? Evidence from New Zealand administrative data
Christopher Ball, Nicolas Groshenny, Özer Karagedikli, Murat Özbilgind, Finn Robinsona

22-4. Endogenous timing of technological choices of flexibility in a mixed duopoly
Armel Jacques

22-3. Reducing ethnic discrimination through formal warning : evidence from two combined field experiments
Sylvain Chareyron, Yannick L'Horty, Souleymane Mbaye, Pascale Petit

22-2. Cream skimming and Discrimination in access to medical care: a field experiment
Sylvain Chareyron, Yannick L'horty, Pascale Petit

22-1. Optimal taxation with multiple incomes and types
Kevin Spiritus, Etienne Lehmann, Sander Renes, Floris T. Zoutman

TEPP Working Papers 2021

21-11. Intermittent collusive agreements : antitrust policy and business cycles
Emilie Dargaud, Armel Jacques

21-10. Endogenous breadth of collusive agreements : an application to flexible technological choices
Emilie Dargaud, Armel Jacques

21-9. How to tax different incomes?
Laurence Jacquet, Etienne Lehmann

21-8. Does optimal capital taxation under stochastic returns to savings
Eddy Zanoutene

21-7. Does the gender mix influence collective bargaining on gender equality? Evidence from France
Anne-Sophie Bruno, Nathalie Greenan, Jérémy Tanguy

21-6. The effects of the non-financial component of business accelerators
Fabrice Gilles, Yannick L'Horty, Ferhat Mihoubi

21-5. Organisational changes and long term sickness absence and injury leave
Mohamed Ali Ben Halima, Nathalie Greenan, Joseph Lanfranchi

21-4. The unexplored discriminations towards youth : equal access to goods and services
David Gray, Yannick L'Horty, Souleymane Mbaye, Pascale Petit

21-3. The zero effect of income tax on the timing of birth: some evidence on French data
Nicolas Moreau

21-2. Tropical cyclones and fertility : new evidence from Madagascar
Idriss Fontaine, Sabine Garabedian, David Nortes-Martinez, Hélène Vérèmes

21-1. On the heterogeneous impacts of the COVID-19 lockdown on US unemployment
Malak Kandoussi, François Langot

TEPP Working Papers 2020

20-8. COVID-19 mortality and health expenditures across European countries: The positive correlation puzzle
Serge Blondel, Radu Vranceanu

20-7. Measuring discrimination in the labour market
Emmanuel Duguet

20-6. The effects of age on educational performances at the end of primary school: cross-sectional and regression discontinuity approach applications from Reunion Island
Daniel Rakotomalala

20-5. Slowdown antitrust investigations by decentralization
Emilie Dargaud, Armel Jacques

20-4. Is international tourism responsible for the pandemic of COVID19? A preliminary cross-country analysis with a special focus on small islands
Jean-François Hoarau

20-3. Does labor income react more to income tax or means tested benefit reforms?
Michaël Sicsic

20-2. Optimal sickness benefits in a principal-agent model
Sébastien Ménard

20-1. The specific role of agriculture for economic vulnerability of small island spaces
Stéphane Blancard, Maximin Bonnet, Jean-François Hoarau

TEPP Working Papers 2019

19-8. The impact of benefit sanctions on equilibrium wage dispersion and job vacancies
Sebastien Menard

19-7. Employment fluctuations, job polarization and non-standard work: Evidence from France and the US
Olivier Charlot, Idriss Fontaine, Thepthida Sopraseuth

19-6. Counterproductive hiring discrimination against women: Evidence from French correspondence test
Emmanuel Duguet, Loïc du Parquet, Yannick L'Horty, Pascale Petit

19-5. Inefficient couples: Non-minimization of the tax burden among French cohabiting couples
Olivier Bargain, Damien Echevin, Nicolas Moreau, Adrien Pacifico

19-4. Seeking for tipping point in the housing market: evidence from a field experiment
Sylvain Chareyron, Samuel Gorohouna, Yannick L'Horty, Pascale Petit, Catherine Ris

19-3. Testing for redlining in the labor market
Yannick L'Horty, Mathieu Bunel, Pascale Petit

19-2. Labour market flows: Accounting for the public sector
Idriss Fontaine, Ismael Galvez-Iniesta, Pedro Gomes, Diego Vila-Martin

19-1. The interaction between labour force participation of older men and their wife: lessons from France
Idriss Fontaine

TEPP Working Papers 2018

18-15. Be healthy, be employed: a comparison between the US and France based on a general equilibrium model
Xavier Fairise, François Langot, Ze Zhong Shang

18-14. Immigrants' wage performance in the routine biased technological change era: France 1994-2012
Catherine Laffineur, Eva Moreno-Galbis, Jeremy Tanguy, Ahmed Tritah

18-13. Welfare cost of fluctuations when labor market search interacts with financial frictions
Elini Iliopulos, François Langot, Thepthida Sopraseuth

18-12. Accounting for labor gaps
François Langot, Alessandra Pizzo

18-11. Unemployment fluctuations over the life cycle
Jean-Olivier Hairault, François Langot, Thepthida Sopraseuth

18-10. Layoffs, Recalls and Experience Rating
Julien Albertini, Xavier Fairise

18-9. Environmental policy and health in the presence of labor market imperfections
Xavier Pautrel

18-8. Identity mistakes and the standard of proof
Marie Obidzinski, Yves Oytana

18-7. Presumption of innocence and deterrence
Marie Obidzinski, Yves Oytana

18-6. Ethnic Discrimination in Rental Housing Market: An Experiment in New Caledonia
Mathieu Bunel, Samuel Gorohouna, Yannick L'Horty, Pascale Petit, Catherine Ris

18-5. Evaluating the impact of firm tax credits. Results from the French natural experiment CICE
Fabrice Gilles, Yannick L'Horty, Ferhat Mihoubi, Xi Yang

18-4. Impact of type 2 diabetes on health expenditure: an estimation based on individual administrative data
François-Olivier Baudot , Anne-Sophie Aguadé,Thomas Barnay, Christelle Gastaldi-Ménager, Anne Fargot-Campagna

18-3. How does labour market history influence the access to hiring interviews?
Emmanuel Duguet, Rémi Le Gall, Yannick L'Horty, Pascale Petit

18-2. Occupational mobility and vocational training over the life cycle
Anthony Terriau

18-1. Retired, at last? The short-term impact of retirement on health status in France
Thomas Barnay, Eric Defebvre

TEPP Working Papers 2017

17-11. Hiring discrimination against women: distinguishing taste based discrimination from statistical discrimination
Emmanuel Duguet, Loïc du Parquet, Pascale Petit

17-10. Pension reforms, older workers' employment and the role of job separation and finding rates in France
Sarah Le Duigou, Pierre-Jean Messe

17-9. Healthier when retiring earlier? Evidence from France
Pierre-Jean Messe, François-Charles Wolff

17-8. Revisting Hopenhayn and Nicolini's optimal unemployment insurance with job search monitoring and sanctions
Sebastien Menard, Solenne Tanguy

17-7. Ethnic Gaps in Educational Attainment and Labor-Market Outcomes: Evidence from France
Gabin Langevin, David Masclet, Fabien Moizeau, Emmanuel Peterle

17-6. Identifying preference-based discrimination in rental market: a field experiment in Paris
Mathieu Bunel, Yannick L'Horty, Loïc du Parquet, Pascale Petit

17-5. Chosen or Imposed? The location strategies of households
Emilie Arnoult, Florent Sari

17-4. Optimal income taxation with composition effects
Laurence Jacquet, Etienne Lehmann

17-3. Labor Market Effects of Urban Riots: an experimental assessment
Emmanuel Duguet, David Gray, Yannick L'Horty, Loic du Parquet, Pascale Petit

17-2. Does practicing literacy skills improve academic performance in first-year university students? Results from a randomized experiment
Estelle Bellity, Fabrices Gilles, Yannick L'Horty

17-1. Raising the take-up of social assistance benefits through a simple mailing: evidence from a French field experiment
Sylvain Chareyron, David Gray, Yannick L'Horty

TEPP Working Papers 2016

16-8. Endogenous wage rigidities, human capital accumulation and growth
Ahmed Tritah

16-7. Harder, better, faster...yet stronger? Working conditions and self-declaration of chronic diseases
Eric Defebvre

16-6. The influence of mental health on job retention
Thomas Barnay, Eric Defebvre

16-5. The effects of breast cancer on individual labour market outcomes: an evaluation from an administrative panel
Thomas Barnay, Mohamed Ali Ben Halima, Emmanuel Duguet, Christine Le Clainche, Camille Regaert

16-4. Expectations, Loss Aversion, and Retirement Decisions in the Context of the 2009 Crisis in Europe
Nicolas Sirven, Thomas Barnay

16-3. How do product and labor market regulations affect aggregate employment, inequalities and job polarization? A general equilibrium approach
Julien Albertini, Jean-Olivier Hairault, François Langot, Thepthida Sopraseuth

16-2. Access to employment with age and gender: results of a controlled experiment Laetitia Challe, Florent Fremigacci, François Langot, Yannick L'Horty, Loïc Du Parquet, Pascale Petit

16-1. An evaluation of the 1987 French Disabled Workers Act: Better paying than hiring
Thomas Barnay, Emmanuel Duguet, Christine Le Clainche, Yann Videau

TEPP Working Papers 2015

15-10. Optimal Income Taxation with Unemployment and Wage Responses: A Sufficient Statistics Approach
Kory Kroft, Kavan Kucko, Etienne Lehmann, Johannes Schmieder

15-9. Search frictions and (in) efficient vocational training over the life-cycle
Arnaud Chéron, Anthony Terriau

15-8. Absenteeism and productivity: the experience rating applied to employer contributions to health insurance
Sébastien Ménard, Coralia Quintero Rojas

15-7. Take up of social assistance benefits: the case of homeless
Sylvain Chareyron

15-6. Spatial mismatch through local public employment agencies. Answers from a French quasi-experiment
Mathieu Bunel, Elisabeth Tovar

15-5. Transmission of vocational skills at the end of career: horizon effect and technological or organisational change
Nathalie Greenan, Pierre-Jean Messe

15-4. Protecting biodiversity by developing bio-jobs: A multi-branch analysis with an application on French data
Jean De Beir, Céline Emond, Yannick L'Horty, Laetitia Tuffery

15-3. Profit-Sharing and Wages: An Empirical Analysis Using French Data Between 2000 and 2007
Noélie Delahaie, Richard Duhautois

15-2. A meta-regression analysis on intergenerational transmission of education: publication bias and genuine empirical effect
Nicolas Fleury, Fabrice Gilles

15-1. Why are there so many long-term unemployed in Paris?
Yannick L'Horty, Florent Sari

TEPP Working Papers 2014

14-14. Hiring discrimination based on national origin and the competition between employed and unemployed job seekers
Guillaume Pierné

14-13. Discrimination in Hiring: The curse of motorcycle women
Loïc Du Parquet, Emmanuel Duguet, Yannick L'Horty, Pascale Petit

14-12. Residential discrimination and the ethnic origin: An experimental assessment in the Paris suburbs
Emmanuel Duguet, Yannick L'Horty, Pascale Petit

14-11. Discrimination based on place of residence and access to employment
Mathieu Bunel, Yannick L'Horty, Pascale Petit

14-10. Rural Electrification and Household Labor Supply: Evidence from Nigeria
Claire Salmon, Jeremy Tanguy

14-9. Effects of immigration in frictional labor markets: theory and empirical evidence from EU countries
Eva Moreno-Galbis, Ahmed Tritah

14-8. Health, Work and Working Conditions: A Review of the European Economic Literature
Thomas Barnay

14-7. Labour mobility and the informal sector in Algeria: a cross-sectional comparison (2007-2012)
Philippe Adair, Youghourta Bellache

14-6. Does care to dependent elderly people living at home increase their mental health?
Thomas Barnay, Sandrine Juin

14-5. The Effect of Non-Work Related Health Events on Career Outcomes: An Evaluation in the French Labor Market
Emmanuel Duguet, Christine le Clainche

14-4. Retirement intentions in the presence of technological change: Theory and evidence from France
Pierre-Jean Messe, Eva Moreno-Galbis, Francois-Charles Wolff

14-3. Why is Old Workers' Labor Market more Volatile? Unemployment Fluctuations over the Life-Cycle
Jean-Olivier Hairault, François Langot, Thepthida Sopraseuth

14-2. Participation, Recruitment Selection, and the Minimum Wage
Frédéric Gavrel

14-1. Disparities in taking sick leave between sectors of activity in France: a longitudinal analysis of administrative data
Thomas Barnay, Sandrine Juin, Renaud Legal

TEPP Working Papers 2013

13-9. An evaluation of the impact of industrial restructuring on individual human capital accumulation in France (1956-1993)
Nicolas Fleury, Fabrice Gilles

13-8. On the value of partial commitment for cooperative investment in buyer-supplier relationship
José de Sousa, Xavier Fairise

13-7. Search frictions, real wage rigidities and the optimal design of unemployment insurance
Julien Albertini, Xavier Fairise

13-6. Tax me if you can! Optimal nonlinear income tax between competing governments
Etienne Lehmann, Laurent Simula, Alain Trannoy

13-5. Beyond the labour income tax wedge: The unemployment-reducing effect of tax progressivity
Etienne Lehmann, Claudio Lucifora, Simone Moriconi, Bruno Van Der Linden

13-4. Discrimination based on place of residence and access to employment
Mathieu Bunel, Emilia Ene Jones, Yannick L'Horty, Pascale Petit

13-3. The determinants of job access channels: evidence from the youth labor market in France
Jihan Ghrairi

13-2. Capital mobility, search unemployment and labor market policies: The case of minimum wages
Frédéric Gavrel

13-1. Effort and monetary incentives in Nonprofit et For-Profit Organizations
Joseph Lanfranchi, Mathieu Narcy

The TEPP Institute

The CNRS **Institute for Theory and Evaluation of Public Policies** (the TEPP Institute, FR n°2024 CNRS) gathers together research centres specializing in economics and sociology:

- L'**Equipe de Recherche sur l'Utilisation des Données Individuelles en lien avec la Théorie Economique** (Research Team on Use of Individuals Data in connection with economic theory), **ERUDITE**, University of Paris-Est Créteil, University of Gustave Eiffel;
- Le **Centre d'Etudes des Politiques Economiques** (Research Centre focused on the analysis of economic policy and its foundations and implications), **EPEE**, University of Evry Paris-Saclay ;
- Le **Centre Pierre Naville** (Research on Work and Urban Policies), **CPN**, University of Evry Paris-Saclay
- Le **Groupe d'Analyse des Itinéraires et des Niveaux Salariaux** (Group on Analysis of Wage Levels and Trajectories), **GAINS**, Le Mans University
- Le **Centre de Recherches en Economie et en Management**, (Research centre in Economics and Management), **CREM**, University of Rennes 1, University of Caen Basse-Normandie ;
- Le **Groupe de Recherche ANgevin en Économie et Management** (Angevin Research Group in Economics and Management), **GRANEM**, University of Angers ;
- Le **Centre de Recherche en Economie et Droit** (Research centre in Economics and Law) **CRED**, University of Paris II Panthéon-Assas ;
- Le **Laboratoire d'Economie et de Management Nantes-Atlantique** (Laboratory of Economics and Management of Nantes-Atlantique) **LEMNA**, Nantes University ;
- Le **Laboratoire interdisciplinaire d'étude du politique Hannah Arendt – Paris-Est**, **LIPHA-PE**, University of Paris-Est Créteil and University of Gustave Eiffel ;
- Le **Centre d'Economie et de Management de l'Océan Indien**, **CEMOI**, University of La Réunion ;
- Le **Laboratoire d'économie de Poitiers**, **LéP**, University of Poitiers ;
- L'UMR **Structures et marchés agricoles, ressources et territoires**, **SMART**, INRAE, Agro Rennes-Angers Institute ;
- Le **Centre de recherche en économie et en droit sur le développement insulaire**, **CREDDI**, University of the Antilles.

TEPP brings together 230 teacher-researchers and 100 doctoral students. It is both one of the main academic operators in the evaluation of public policies in France, and the largest multidisciplinary federation of research on work and employment. It responds to the demand for impact assessment of social programs using advanced technologies combining theoretical and econometric modeling, qualitative research techniques and controlled experiences.