

Discussion Paper Series

IZA DP No. 18387

February 2026

What Makes a Tax Evader?

Marcelo Bergolo

IECON-UDELAR and IZA@LISER

Martin Leites

IECON-UDELAR

Ricardo Perez-Truglia

University of California, Los Angeles

Matías Strehl-Pessina

University of California, Santa Barbara and
IECON-UDELAR

The IZA Discussion Paper Series (ISSN: 2365-9793) ("Series") is the primary platform for disseminating research produced within the framework of the IZA Network, an unincorporated international network of labour economists coordinated by the Luxembourg Institute of Socio-Economic Research (LISER). The Series is operated by LISER, a Luxembourg public establishment (établissement public) registered with the Luxembourg Business Registers under number J57, with its registered office at 11, Porte des Sciences, 4366 Esch-sur-Alzette, Grand Duchy of Luxembourg.

Any opinions expressed in this Series are solely those of the author(s). LISER accepts no responsibility or liability for the content of the contributions published herein. LISER adheres to the European Code of Conduct for Research Integrity. Contributions published in this Series present preliminary work intended to foster academic debate. They may be revised, are not definitive, and should be cited accordingly. Copyright remains with the author(s) unless otherwise indicated.



What Makes a Tax Evader?*

Abstract

Why do some individuals evade taxes while others do not? We study this question using administrative tax records from Uruguay linked to a tailored survey of taxpayers. Using third-party reports, we measure individual income under-reporting as an indicator of evasion. We then examine how three factors predict who evades: social preferences (e.g., honesty measured through incentivized laboratory games), peers (e.g., the behavior of current and former coworkers), and economic factors (e.g., the marginal tax rate). We find that social preferences have little power to predict evasion, while economic factors matter more and peer behavior is the strongest predictor.

JEL classification

C93, H26, K34, K42, Z13

Keywords

tax evasion, social preferences, beliefs

Corresponding author

Marcelo Bergolo

marcelo.bergolo@fcea.edu.uy

* This Draft: January 28, 2026. First Draft: December 1, 2020.

We are thankful for excellent comments from colleagues and seminar discussants. We thank the Dirección General Impositiva de Uruguay and Centro de Estudios Fiscales for their support. This research project received the financial support from the Laboratorio de Políticas Públicas (OPP, Uruguay). The survey was pre-registered in the AEA RCT Registry (#0004108).

1 Introduction

Some individuals evade taxes, while others do not. What drives these differences in behavior? Economists typically begin with a utility-maximization framework, in which individuals weigh the expected costs and benefits of evasion (Allingham and Sandmo, 1972). In this view, compliance decisions are shaped by financial incentives, such as marginal tax rates and audit probabilities. However, other factors can influence compliance independently of financial considerations, often grouped under the umbrella term tax morale (Luttmer and Singhal, 2014). For example, some individuals may be intrinsically more honest or altruistic than others, or they may be influenced by social norms and the behavior of their peers. In this paper, we use linked administrative and survey data from Uruguay to study how three distinct factors—social preferences, peer behavior, and economic factors—predict which individuals evade taxes.

The first part of the study introduces an individual-level measure of tax evasion in a high-stakes, real-world setting. Measuring tax evasion is inherently challenging, especially at the individual level. With few exceptions, governments cannot observe what individuals should have reported on their tax forms, nor can researchers (Slemrod, 2019). Our primary measure of tax evasion focuses on the under-reporting of wages. Because taxpayers owe income taxes on each additional dollar of reported wages, they have an incentive to under-report wages to reduce their tax liability. As in many countries, individual taxpayers in Uruguay must file an annual tax return declaring their income, deductions, and withholdings. Uruguay also employs a third-party reporting system in which employers report information directly to the tax authority. We compare taxpayer reports with employer reports and use discrepancies to identify which taxpayers under-report wages and by how much.¹ Our approach fits into the “mismatch” strategy in the literature, which has been used to measure income tax evasion

¹ Our measure of evasion is feasible in settings where third-party reporting enforcement is limited—typically in developing countries (Carrillo et al., 2017; Brockmeyer and Hernandez, 2022)—thus enabling taxpayers to evade taxes by under-reporting wages despite the presence of third-party controls.

by employees (Best, 2025; Kumler et al., 2020) and even by firms (Almunia et al., 2024).²

Our measure is not the only tax evasion margin available to taxpayers, nor is it necessarily the most important one. Its key advantage is that wage under-reporting can be directly measured using administrative tax data, whereas other relevant forms of evasion—such as under-reporting self-employment income—cannot be observed at the individual level. Nonetheless, it is important to recognize the limitations of this measure. It assumes truthful reporting by firms and therefore abstracts from potential employer-employee collusion (Feinmann et al., 2024). Moreover, one should be cautious in extrapolating our results to other settings, given differences in institutional contexts.

We study 151,565 taxpayers in Uruguay who received wage income and filed a tax return in 2016. We find that 15.5% of them under-reported their wages. Among these taxpayers, the average amount of evasion corresponded to approximately 17% of their tax liability—equivalent to USD 344 per year. We provide suggestive evidence that these discrepancies are unlikely to reflect random mistakes. For instance, income under-reporting is far more common than over-reporting: 15.5% of taxpayers under-report wages, whereas only 3.9% over-report them. The disproportionate number of errors in the direction that best serves taxpayers’ financial interests suggests that wage under-reporting is largely intentional.

To provide additional evidence validating this measure of tax evasion, we exploit a unique feature of the institutional context. In addition to the incentive to under-report wages, employees have incentives to misreport two other items on the tax form: tax deductions and tax withholdings. However, while wage evasion requires under-reporting, evasion through deductions and withholdings requires over-reporting. We find systematic over-reporting of both deductions and withholdings. Specifically, 15.8% of individuals over-report deductions, compared with just 2.2% who under-report them. Similarly, 22.7% over-report withholdings, while only 2.9% under-report.³ The fact that taxpayers under-report wages but over-report

² Our approach follows Best (2025), who measure evasion using mismatches across administrative records. By contrast, Kumler et al. (2020) identify under-reporting by comparing administrative and survey data, whereas we rely solely on administrative data—self-reported returns and third-party reports.

³ For simplicity, these results on deduction and withholding misreporting are based on the subsample of

deductions and withholdings suggests that misreporting is largely intentional. We also conduct several robustness checks. For example, we show that wage under-reporting persists from one year to the next and remains substantial regardless of whether wages are stable or volatile, or whether the taxpayer has one or multiple employers.

In the second part of the paper, we leverage the linked survey and administrative data to examine which factors best predict who evades taxes. We consider three distinct factors: social preferences, peer behavior, and economic factors. To measure the first factor, we conducted a tailored taxpayer survey. More precisely, social preferences are measured using a battery of 12 incentivized *laboratory games* and 12 (mostly non-incentivized) *survey questions*. Examples of the games include a dice game (measuring honesty) and a public goods game (measuring willingness to contribute to public goods). Examples of the survey questions include a standard item on stated tax morale (i.e., whether it is never, sometimes, or always justifiable to evade taxes) and a standard question on trust in government.

From the universe of 151,565 wage earners, we invited a subset of 68,208 taxpayers with valid email addresses to participate in the survey. A total of 6,078 individuals completed the survey, yielding a response rate of 8.9%. Although the sample is not perfectly representative, survey respondents are similar to non-respondents across all observable characteristics. Importantly, respondents and non-respondents exhibit comparable rates of wage under-reporting and over-reporting of deductions and withholdings. In addition, the average responses from our survey-based measures closely resemble those from the World Values Survey for Uruguay—a nationally representative sample—which further mitigates concerns about participants adjusting their answers due to fear of the tax authority.

To measure economic factors, we use administrative data—for example, to construct each individual’s taxable income and marginal income tax rate. Lastly, to measure peer behavior, we also rely on administrative data. We follow the approach of Caldwell and Harmon (2022), which leverages an employee’s coworker network over the entire employment spell. More

taxpayers who report wages truthfully. See Section 3 for more details.

precisely, we construct two measures of peer behavior. The *former coworkers under-reporting* measure captures the average evasion behavior of an individual's past coworkers at current and previous firms. In contrast, the *current coworkers under-reporting* measure captures only the evasion behavior of an individual's present coworkers.

We begin by documenting correlations between tax evasion and each of the three factors. We find that social preferences—measured using 24 laboratory and survey instruments—are largely uncorrelated with tax evasion. To illustrate this point, consider the case of stated tax morale, which, given its prominent use in the literature, we expected to have the highest correlation with *actual* tax evasion. About 24.2% of taxpayers report that it is sometimes or always justifiable to evade taxes, while 75.8% say it is never justifiable. Yet the administrative data reveal similar rates of wage under-reporting in both groups: 14.0% versus 13.4%, respectively. As a result, the correlation coefficient between stated tax morale and wage under-reporting is close to zero (-0.006), statistically insignificant (p-value = 0.613), and precisely estimated (the 95% confidence interval rules out correlations below -0.032). Most of the other correlations between the laboratory and survey measures and tax evasion are close to zero and statistically insignificant. Even in the few cases with statistically significant correlations—such as generosity in dictator games or political ideology—the magnitudes are small and often in the opposite of the expected direction. These conclusions remain robust across a wide battery of checks.

By contrast, the peer evasion measures exhibit the strongest correlations with tax evasion: a higher share of evaders among coworkers is associated with a greater likelihood of under-reporting wages. Unlike the laboratory and survey measures, these correlations are large in magnitude and statistically significant. This pattern holds for both *current* coworkers (correlation coefficient of 0.599, p-value < 0.001) and *former* coworkers (correlation coefficient of 0.462, p-value < 0.001). Finally, economic factors such as the marginal tax rate exhibit statistically significant correlations with tax evasion: higher marginal tax rates, higher incomes, and greater experience with tax filing are all associated with a higher probability of wage

under-reporting. The strength of these correlations is greater than for social preferences but smaller than for peer behavior.

To more comprehensively assess the predictive power of these factors, we estimate multivariate regressions to predict who evades taxes. We evaluate predictive accuracy using a standard metric: the area under the receiver operating characteristic curve (AUC). This measure captures the probability that the model correctly identifies a tax evader when randomly comparing one evader and one non-evader. A value of 0.5 indicates performance no better than random guessing, whereas a value of 1 reflects perfectly accurate predictions. Even when considered jointly, the 24 laboratory and survey measures perform only slightly better than chance in predicting wage under-reporting (AUC = 0.575). By contrast, measures of wage under-reporting by former and current coworkers have by far the highest predictive power (AUC = 0.899). The model based on economic factors—including marginal tax rates—performs between the other two models (AUC = 0.617). Furthermore, these findings are robust to alternative measures of evasion, different sets of controls, varying sample restrictions, and alternative definitions of coworker networks.

Taken together, these results provide insights into which factors best predict who evades taxes. Social preferences exhibit little predictive value—an unexpected result. Economic factors perform somewhat better, but peer behavior emerges as the strongest predictor. Indeed, our findings are consistent with growing evidence that peers—such as friends, neighbors, and tax professionals—may influence tax evasion choices (Chetty et al., 2013; Wilson, 2022; Boning et al., 2020).

Our study relates to and contributes to the literature on the role of tax morale in tax compliance. A central hypothesis is that differences in tax evasion across individuals are partly driven by factors such as social preferences, social norms, and peer influence (Luttmer and Singhal, 2014). Yet there is still no consensus on the importance of tax morale in explaining tax compliance, nor on which of these channels plays the most significant role. We contribute to this literature by proposing a novel methodology that combines administrative

records of tax evasion with individual-level data on taxpayers’ social preferences and peer networks.⁴ Our empirical framework allows us to quantify and compare the roles of different tax morale channels, and our results highlight the potential importance of contextual factors.

Our study also contributes to the literature examining the relationship between laboratory behavior and real-world outcomes using administrative data, motivated by ongoing debates regarding the generalizability of lab findings (Levitt and List, 2007). Previous studies have found some predictive power of lab measures of dishonesty for real-world behaviors, such as absenteeism among nurses (Hanna and Wang, 2017), fare evasion on public transport (Dai et al., 2018), and misconduct among students (Cohn and Maréchal, 2018). We extend this literature by using large-scale administrative data on tax evasion—a high-stakes measure of real-world dishonesty. A key difference is that we employ much larger sample sizes than those used in prior studies, addressing concerns about publication bias (DellaVigna and Linos, 2022). For example, Hanna and Wang (2017) uses data on 165 nurses, Dai et al. (2018) on 279 passengers, and Cohn and Maréchal (2018) on 161 students. By comparison, we use data on more than 6,000 taxpayers. Contrary to earlier findings, we show that lab measures of dishonesty and other social preferences exhibit little to no predictive power for real-world tax evasion.⁵

Finally, our study relates to a recent but growing body of literature showing that social information transmitted through networks can be an important driver of tax evasion. For example, Alm et al. (2017) use a laboratory experiment to examine the role of peer effects on compliance behavior.⁶ Outside the lab, other studies using administrative data provide evidence that individuals’ evasion behavior is associated with interactions with friends (Wilson, 2022), neighbors (Chetty et al., 2013), and tax professionals (Boning et al., 2020). Although

⁴ The most popular approach is arguably field experiments involving moral-suasion mailings (e.g., Slemrod et al., 2001; Blumenthal et al., 2001; Slemrod, 2019). Other studies rely on cross-country comparisons (Kleven, 2014; Halla, 2012; DeBacker et al., 2015). For a literature review, see (Luttmer and Singhal, 2014).

⁵ On the other hand, our evidence is consistent with the view that dishonest behavior is highly context-specific (Ross and Nisbett, 2011).

⁶ Relative to this study, our contribution lies in analyzing real-world tax evasion choices and real-world peer networks.

our research design does not allow us to establish causality, our study contributes to this literature by focusing on a new social setting: the workplace.⁷ Moreover, our findings reinforce the view that social influences can be an important driver of tax morale and tax compliance (Luttmer and Singhal, 2014) and suggest that these contextual factors merit greater attention in future research.

The rest of the paper is organized as follows. Section 2 describes the institutional context. Section 3 introduces the individual-level measure of tax evasion. Section 4 presents the design we use to investigate the roles of social preferences, peer behavior, and economic factors in tax evasion. Section 5 presents the results. The last section concludes.

2 Institutional Context and Data Sources

In this section, we present all the key features of the institutional context that are important for the analysis.

2.1 Country Context

Uruguay is a fairly typical country in several relevant dimensions, such as government size, the prevalence of tax evasion, and social norms around tax compliance. It is a middle-high income country with low corruption and high human development.⁸ Tax revenue was 29.2% of GDP in 2018, close to the averages for Latin America (23.1%) and OECD countries (34.3%).⁹ Although cross-country comparisons of tax evasion are difficult, available data suggest that Uruguay is not out of the ordinary. Gomez-Sabaini and Jimenez (2012) esti-

⁷ While Feinmann et al. (2024) also study income tax evasion in a workplace setting, their focus is on employer-employee collusion in wage reporting. In contrast, our analysis emphasizes how peer behavior within the same workplace is associated with individual evasion decisions.

⁸ Uruguay's annual GDP per capita was USD 17,278 in 2018 (<https://datos.bancomundial.org/indicador/NY.GDP.PCAP.CD?locations=UY>). Transparency International ranks Uruguay 21st out of 198 countries (<https://www.transparency.org/en/cpi/2019/results>), and the United Nations Development Programme ranks Uruguay 52nd among 189 countries in terms of human development (<http://hdr.undp.org/en/content/2019-human-development-index-ranking>).

⁹ <https://www.oecd.org/tax/tax-policy/global-revenue-statistics-database.htm>

mate VAT evasion at around 26% in 2008, better than most Latin American countries and comparable to some OECD countries. Survey evidence also indicates fairly typical attitudes toward tax evasion: in the 2010–2013 wave of the World Values Survey, 77.2% of Uruguayan respondents report that evading taxes is never justified, compared with 68.2% in other Latin American countries and 70.9% in the United States.¹⁰

Our analysis focuses on the personal income tax on labor income (*Impuesto a la Renta de las Personas Físicas Categoría II*, or IRPF-II).¹¹ The schedule is progressive: individuals below a minimum income face a 0% tax rate, and those in the highest bracket face a marginal rate of 30%. In 2016, IRPF accounted for almost 13% of total tax revenue, the second-largest source after the VAT.¹² As in many developing countries (Jensen, 2022), there is a large exemption floor. In 2016, the tax exemption threshold was USD 12,436,¹³ compared with a minimum annual wage of USD 5,931 and a median labor income of USD 11,848. As a result, the personal income tax burden falls mainly on the upper part of the gross labor income distribution: about 34% of registered workers paid personal income tax in 2016.¹⁴

2.2 Tax Returns and Third-Party Reporting

Each year, individuals file their annual tax return using an electronic form (Form 1102), comparable to the U.S. 1040, in which they report all sources of income, including wage and self-employment income, as well as tax withholdings and deductions. Form 1102 then automatically computes the taxpayer’s total liability and the tax due or refund. Because

¹⁰ <https://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp>

¹¹ The labor income component aggregates earned income from (i) wage and salaried employment—including wages, salaries, commissions, overtime pay, vacation pay, annual leave, and any other payments received from an employer—and (ii) self-employment. It excludes all forms of capital income, which are taxed under a separate schedule at proportional rates (IRPF-I). In addition to the personal income tax, Uruguay also raises revenue through other taxes, such as the VAT and the corporate income tax.

¹² Own calculations based on data from the Central Bank of Uruguay and the Internal Revenue Service.

¹³ This and all other dollar amounts discussed in the paper use the purchasing power parity (PPP)-adjusted exchange rate from 2018.

¹⁴ This figure was extracted from technical reports by Uruguay’s Tax Authority (<https://www.dgi.gub.uy/wdgi/page?2,principal,Documentos-Informes,0,es,0,>).

of the high exemption floor, most individuals are not required to file a return.¹⁵ However, exempt individuals may still choose to file, for instance to claim itemized deductions that are not reported by the firm or are not subject to third-party reporting (e.g., rent or mortgage expenses). As a result, only a minority of workers file a return each year, but they account for a substantial share of tax revenues: in 2016, about 16% of all registered labor income earners filed a return, representing almost 45% of personal income tax revenues.

As in many other countries, firms play a central role in individual taxation through third-party reporting. Employers must submit an electronic Form 1144 to the tax agency, which reports tax-relevant information on their employees (similar to Form W-2 in the U.S.), including wage earnings, tax withheld, and tax deductions; this form is filed monthly. In addition, employers must provide workers with an annual “income tax summary” that reports total gross income, deductions, and withholdings, which employees can use to prepare their returns. While this summary must be delivered before the tax filing deadline, the mode of delivery is left to each firm: some send the information automatically, whereas others require employees to log into a website to access it.

2.3 Tax Deductions and Tax Withholding

Personal income tax is computed from two components: a *tax part* and a *deduction part*; their difference determines total liability. The *tax part* applies a progressive rate schedule to the individual’s gross labor income, including all wage and self-employment income received during the fiscal year. The *deduction part* consists of a relatively limited set of tax-code deductions, also subject to a progressive schedule. There are two types of deductions: *itemized* and *non-itemized*. *Itemized* deductions include some personal expenses, such as child care and housing expenditures.¹⁶ This study focuses on *non-itemized* deductions, which com-

¹⁵ Individuals required to file a tax return include workers earning self-employment income, and individuals with wage income from multiple jobs above a designated annual threshold. Employees with a single employer are not required to file a tax return, although they can (and often choose) to do so.

¹⁶ *Itemized* deductions must be voluntarily claimed by the taxpayer, either indirectly through the employer using a Form 3100 or directly on the annual tax return (Form 1102).

prise all social security contributions (e.g., payroll taxes and mandatory health insurance contributions) and are proportional (i.e., a fixed rate) to the worker’s gross labor income. The rate is set by law; for example, the rate for taxpayers with dependent children is 21%. Individuals who choose to file an annual tax return must report the amounts of non-itemized components to be deducted when computing their tax liability. As explained above, this information is available in the income tax summary provided by the employer.

Employers also play an important role in income tax withholding. They operate a pay-as-you-earn (PAYE) system to withhold income taxes from monthly wage earnings.¹⁷ Amounts withheld are treated as advance payments of personal income tax due. To calculate the amount to withhold, the employer uses information on monthly taxable income, non-itemized deductions, and itemized deductions claimed by the employee on the Form 3100. Each month, the employer determines the employee’s tax liability by computing the *tax part* and *deduction part* and taking their difference. The resulting amount is withheld and remitted to the tax authority. If the annual amount withheld exceeds the annual tax liability, the worker is entitled to a refund, which can be received either as a bank deposit or in cash.

2.4 Employer-Employee Matched Data

We combine multiple sources of administrative data provided by Uruguay’s Tax Authority to construct a panel of taxpayers for 2015-2016. Although the dataset includes self-employed individuals, our analysis focuses on wage earners, as this group enables measuring misreporting through employers’ third-party reports. The two primary datasets are individual tax returns (Form 1102) and third-party reports from employer statements (Form 1144).¹⁸ These datasets are linked using masked national identification numbers for individuals and firms, which also facilitate integration with other administrative data sources. Consequently,

¹⁷ Similar systems are used in other countries, including the U.S., Australia, New Zealand, and the United Kingdom (Slemrod, 2008).

¹⁸ We merge the tax returns and employer reports to obtain comprehensive information on gross wage earnings, tax types, deductions, and income tax amounts withheld by employers. Additionally, the tax agency provides data on calculations of the *tax part*, *deduction part*, and the final tax owed or credited for each taxpayer.

we incorporate individual-level data, such as year of birth and gender, as well as firm-level information, including number of employees, sales, and industry activity codes. Furthermore, we identify taxpayers’ coworkers through the firm-level identification numbers.

3 Measuring Tax Evasion at the Individual Level

3.1 Sample of Interest and Descriptive Statistics

The sample of interest consists of 151,565 taxpayers who earned their income exclusively through wages and filed a tax return in 2016.¹⁹ For this sample, we study tax evasion by comparing the self-reported tax return to the employer’s third-party report. This sample comprises 44.9% females with an average age of 45, earning USD 36,450 annually, with 31.5% working for multiple employers. Compared to all registered workers, our sample of wage earners and tax return-filers is demographically similar but substantially richer due to high exemption thresholds. In turn, our analysis sample aligns closely with the characteristics of the universe of tax filers. Table A.1 presents descriptive statistics.

3.2 Wage Under-reporting

Our first, and main, measure of income tax evasion is the under-reporting of wages by employees. Taxpayers are required to pay income taxes on each additional dollar reported as wages and therefore have an incentive to under-report wages to reduce their tax liability. Third-party reporting, in contexts of high enforcement capacity, should deter employees from under-reporting income for tax evasion (Kleven et al., 2011, 2016). For instance, in the United States, if an employee under-reports wages relative to the employer’s third-party report, the Internal Revenue Service automatically corrects the individual’s tax form, updates

¹⁹ This sample excludes 24,607 individuals who, in addition to wage income, reported self-employed income. We exclude them because the comparison with third-party reports has limitations for this sample. We also exclude 8,556 individuals who reported wage income on the tax return but for whom the information from the third-party report is missing in our dataset. By construction, it would be impossible for us to measure misreporting for this group.

the tax amount due, and notifies the taxpayer. Wage income subject to third-party reporting is heavily enforced in developed countries, such as the United States (Internal Revenue Service, 2016) and Denmark (Kleven et al., 2011). In developing countries, however, the effect of third-party reporting on tax compliance is constrained by weaker administrative capacity (Carrillo et al., 2017), even in the presence of tax withholding at the source (Brockmeyer and Hernandez, 2022).²⁰ In the country we study, Uruguay, the personal income tax was introduced recently (in 2008). Thus, the tax administration was still addressing a variety of pressing issues related to its implementation. During our period of analysis (2015–2016), the tax authority did not conduct a systematic and automatic cross-check between individual tax returns and third-party reports.²¹ As a result, employees could under-report wages to evade taxes during our sample period.²² Indeed, it is likely that most employees were unaware that third-party reporting existed or believed that it was imperfect. While we did not include a question on the perceived strength of third-party enforcement, we did ask about the perceived share of wage under-reporters. The fact that the vast majority of individuals expect *some* wage under-reporting suggests that they believe third-party reporting is either nonexistent or imperfectly enforced.²³

It is worth noting that our measure of tax evasion assumes the third-party reported wage by the employer is accurate. Since we measure the gap between the wages reported by the employer and the employee, a potential concern is that employees may report truthfully while employers are the ones misreporting. However, this alternative interpretation is rarely

²⁰ Third-party information also has limits as a compliance mechanism, even in environments with high tax enforcement, especially if taxpayers can adjust on margins that tax authorities cannot easily verify (Slemrod et al., 2017).

²¹ There was a major change in 2017, when the tax authority introduced pre-filled tax returns. On the pre-filled return, items such as labor income or personal deductions of taxpayers are pre-filled based on information from third-party reports, which may reduce this form of tax evasion by affecting the perceived probability of detection by taxpayers or by making unethical behavior more salient. Unfortunately, we do not have access to data after 2016 as of now to test this conjecture.

²² As in other forms of tax evasion, the evasion attempt could backfire. For example, if selected for an audit, the discrepancy with the third-party report could be detected, in which case the employee would have to pay the evaded amount as well as the corresponding fines. However, audit probabilities and penalty rates tend to be quite low (Bergolo et al., 2023).

²³ Results reported in panel (b) of Figure A.3.

considered in related studies (Kleven et al., 2011; Best, 2025; Bergolo et al., 2021), likely because firms face opposing incentives that discourage over-reporting wages to the tax agency. While over-reporting wages could reduce the firm’s tax burden by inflating deductible costs from the corporate tax base, it would simultaneously increase the payroll taxes and social security contributions tied to employee wages, which likely impose a greater tax burden (Li et al., 2020). Indeed, this is the case in Uruguay’s context. Firms are required to report total wages to the social security agency and pay contributions based on self-reported wages, providing some leeway to under-report the contribution base to reduce labor costs. However, the tax code allows firms to claim wages and social security contributions as labor costs deductible from the corporate tax base, counterbalancing the incentive to under-report employees’ actual wages. Given this opposing set of incentives, assuming the employer-reported wage is accurate is a plausible assumption in our setting.

Panel (a) of Figure 1 presents the results for the discrepancies in wage reporting in 2016. Around 80.6% of wages reported by individuals coincide perfectly or almost perfectly (i.e., within 1%) with the third-party report of the employer (black bar). Around 15.5% of individuals under-report their wages (red bars), meaning that the reported wage is at least 1% lower than the employer’s third-party report. Among those who under-report, the average discrepancy is 6.1%. Although these discrepancies could reflect honest mistakes, we provide robust evidence suggesting the contrary. Panel (a) shows that income under-reporting is far more prevalent than over-reporting (blue bars): 15.5% of taxpayers under-report to some extent, but only 3.9% over-report their wages. The fact that taxpayers make disproportionate mistakes in the direction that best serves their financial interest suggests that under-reporting is largely intentional.

That figure also shows that the significant fraction of individuals who under-report their wages do not do it excessively: the median under-reporting is 4.8%, and the 25th and 75th percentiles are 3.1% and 7.0%, respectively. One potential interpretation for this behavior is that individuals engage in “motivated errors”: i.e., subjects may act as if they are making a

“mistake” that reduces their tax burden (Exley and Kessler, 2024). For instance, employees may be rounding down their true salary, accidentally reporting the wage from the previous year, or “forgetting” to include a bonus payment or sales commission. Another potential mechanism is that taxpayers report wages from their main job but omit earnings from a secondary job. However, this mechanism cannot account for the patterns we document: when we compare under-reporting rates for workers with a single employer and for those with multiple employers, we find very similar rates in both groups.²⁴

To put these magnitudes in perspective, we estimate how wage misreporting affects the tax liability. To that purpose, we estimate the amount of tax misreported (i.e., the tax gap) as the difference between the individual tax liability based on actual tax returns versus what it would have been if, holding constant all the other items in the tax form, they had reported exactly the wages reported by the employer. Panel (b) of Figure 1 shows the distribution of the tax gap relative to the “true” tax liability. According to this analysis, 15.7% of individuals evade taxes (i.e., they pay less in taxes than they should).²⁵ Moreover, conditional on evading something, they evade an average of 17% of their tax liability, which corresponds to USD 344 per year.²⁶

Finally, we can benchmark our results to the results from Best (2025) corresponding to data for Pakistan during 2007–2012. Similar to our study, Best (2025) compares third-party reports to the wages reported by the taxpayer in the tax form and classifies them as under-reporters if they under-report by 0.25% or more. Best (2025) reports that 19.3% of employees from Pakistan under-report wages and, conditional on doing so, they understate them by an average of 15.6%. In comparison, using the same 0.25% threshold, we find that 18.5% of Uruguayan employees under-report wages by 5.2%, on average. The comparison between the Uruguay and Pakistan contexts has several caveats, however, including differences in institutional contexts, subject pools, and even how data is collected and processed. To the

²⁴ Details presented in Appendix A.1.

²⁵ We define taxpayers as tax evaders if their tax gap exceeds 1%.

²⁶ The median is 11% with an inter-quartile range of [6.9%, 18.4%].

extent that tax compliance tends to be higher in more developed countries, we arguably expect tax compliance to be higher in Uruguay than in Pakistan. Thus, it is reassuring that despite all of those differences, the extent of wage under-reporting reported for Uruguay is in the same order of magnitude reported by Best (2025) for Pakistan.

In contrast, the extent of wage under-reporting should arguably be much lower in developed countries compared to developing countries. Factors such as automated tax filing systems (e.g., pre-populated tax returns) and automatic cross-checking mechanisms make it more difficult for employees to under-report wages relative to third-party reports. Consistent with that conjecture, evidence suggests that the degree of wage under-reporting is substantially lower in some developed countries. For instance, Kleven et al. (2011) uses data from audits and finds that the fraction of wage under-reporters in Denmark was 1.4% in 2006—an order of magnitude lower than the levels observed in our data for Uruguay. Similarly, wage under-reporting appears to be rare in the United States (Johns and Slemrod, 2010).²⁷

3.3 Deduction and Withholding Over-Reporting

Albeit suggestive, this evidence is not proof that individuals under-report their wage earnings to evade taxes. This under-reporting instead could be due to asymmetrical mistakes (i.e., employees may be more likely to make downward errors than upwards errors). We test this hypotheses by exploiting the institutional context: although employees have incentives to under-report wages, they also have incentives to over-report tax deductions and tax withheld, which are both third-party reported. In the case of deductions, our analysis focuses on the subset of non-itemized deductions (i.e., items that are proportional to the worker’s gross labor income). For the sake of brevity, in the rest of the paper we refer to non-itemized deductions as just tax deductions.

For simplicity, we focus the analysis of deductions and withholdings misreporting for the

²⁷ Johns and Slemrod (2010) uses data from a 2001 sample of audited taxpayers from the Internal Revenue Service national research program and report that wages subject to third-party reporting and tax withholding were under-reported by an average of only 1%.

subsample of taxpayers who are wage accurate-reporters.²⁸ Panel (c) of Figure 1 presents the results for deduction discrepancies, which align with those on wage discrepancies from panel (a): most individuals report their deductions accurately, but those who misreport disproportionately do so in a way that reduces their tax liability. Specifically, 15.8% of individuals over-report their tax deductions, while only 2.2% under-report them. We interpret the discrepancies between the deductions reported by employees and those reported by employers as evidence consistent with employees strategically over-reporting deductions to evade taxes.

One potential concern, discussed above, regarding our evidence on wage under-reporting is that it may partly reflect employers over-reporting their wage bill rather than employees under-reporting their wages. In the case of deduction mismatches, however, this concern does not arise. We interpret the mismatch as employees under-reporting their deductions. The alternative interpretation—that employers are under-reporting their employees’ deductions—is implausible, as firms have no incentive to do so: the deductions claimed by employees do not affect the taxes owed by their employers.

Finally, panel (d) of Figure 1 examines discrepancies in tax withholdings, similar to the analysis in panel (c) of Figure 1 for deductions. Like deductions—and unlike wages—individuals have an incentive to over-report tax withholdings. Panel (d) shows that 22.7% of individuals over-report their tax withholdings, whereas only 2.9% under-report them. In summary, the evidence is consistent with the fact that individuals disproportionately make “mistakes” that reduce their tax liability.

²⁸For this group, it is more straightforward to interpret the over-reporting of automatic deductions or withholdings as evasion. For the remaining individuals, the interpretation is more complex. In particular, consider an individual who under-reports his wage to the tax agency. What deductions should we consider “accurate” for this individual? Should we expect the individual to report deductions exactly as reported by the employer, or should we expect the individual to reduce reported deductions proportionally to match the wage under-reporting? By restricting the sample to wage accurate-reporters, we avoid relying on additional assumptions and complicating the analysis.

3.4 Evasion Choices Across Years and Wage Volatility

One interesting feature of our data is that we observe the same taxpayer making multiple decisions: each taxpayer must choose whether to misreport a specific item on the tax return (e.g., under-report wages) and then faces the same decision in subsequent years. Whether the decision to evade is persistent can provide suggestive evidence on the underlying determinants of tax evasion. Indeed, we find that individuals who evade taxes in one year are significantly more likely to do so in the following year. Panels (a) and (b) of Figure 2 examine wage misreporting decisions for the same individuals over two years. This analysis focuses on the subset of taxpayers who filed tax returns and were pure wage earners in both 2015 and 2016. Panel (a) of Figure 2 corresponds to the subsample (79.6%) of individuals who reported wages accurately in 2015 based on third-party reports, while panel (b) corresponds to the subsample (10.6%) who under-reported wages in 2015. The data reveal significant persistence in these behaviors. For example, among accurate reporters in 2015, 15.2% under-reported wages in 2016; among under-reporters, however, a substantially higher share (26.5%) under-reported wages the following year. The difference between these two groups—11.3 percentage points (pp)—is large and highly statistically significant (p -value < 0.001). This persistence over time suggests that evasion choices are not purely random. Moreover, the evidence suggests that there is *some* scope for persistent individual traits, such as tax morale, to explain evasion choices across individuals.

For some employees, wages can increase or decrease from one year to the next. For other employees, wages can remain the same. It is possible that these wage changes play a role in the wage misreporting. For example, perhaps employees are under-reporting wages because they forget, conveniently or accidentally, to update their reported wage to reflect recent raises. Or perhaps employees who have stable incomes do not misreport because there is less room for “mistakes.” Panel (c) of Figure 2 presents a simple analysis to explore whether wage changes play a role in wage misreporting. The employees are divided in groups (as listed on the x-axis), according to the change in their third-party reported wages from 2015

to 2016.²⁹ For example, the leftmost group corresponds to employees whose wages declined by 20% or more, while the rightmost group corresponds to employees whose wages increased by 20% or more. The y-axis shows the average rate of wage under-reporting in 2016 for each group of taxpayers. A first finding that emerges from panel (c) is that misreporting remains significant even when wages are stable year over year, suggesting that wage changes cannot fully explain wage under-reporting. Second, while wage misreporting is significant across the board, there are differences in magnitude across groups. Relative to individuals who experience small wage changes, the degree of under-reporting is larger among individuals who experience substantial increases or decreases in wages. This evidence suggests that, while wage changes cannot be the whole story, they may play *some* role in wage under-reporting.³⁰

4 Measuring Social Preferences, Peer Behavior, and Economic Factors

In this section, we discuss how we created measures for the three factors that we hypothesized could predict who becomes a tax evader: social preferences, peer behavior and economic factors.

²⁹ As in the analysis of persistence shown above, this sample is based on the subset of individuals who filed tax returns and were pure wage earners in both 2015 and 2016.

³⁰ The fact that individuals who experience wage gains under-report more may reflect a tendency for individuals to, conveniently or accidentally, enter an outdated wage on their tax form. However, this cannot be the only explanation, as this mechanism would predict that individuals who experience wage decreases should be less likely to under-report if they use outdated wages on the tax form. For individuals whose salaries decrease, other mechanisms may operate in the opposite direction and thus partially cancel out this effect. For example, individuals with declining wages may resort to tax evasion due to liquidity constraints—unfortunately, our data do not provide direct measures of liquidity constraints, limiting our ability to further explore this channel.

4.1 Measuring Social Preferences

Overview of Survey Design. The survey is designed to be implemented with a sample of taxpayers who recently filed a tax return. The English translation of the full survey instrument is included in Appendix C, and the original Spanish version is in Appendix E. This survey was pre-registered in the Registry for Randomized Controlled Trials operated by the American Economic Association (RCT ID #0004108). The survey starts by collecting some background and demographic information about the respondent and then elicits the lab and survey measures, described in detail in the following sections.

Lab and Survey Measures. The respondent completes a series of laboratory games implemented as a series of incentivized survey questions. Right before starting, respondents see a screen explaining how the incentives work and emphasizing the importance of answering carefully and honestly because the games offer a real financial incentive: upon completion of the study, 50 respondents will be randomly selected to have one of their choices “executed”. In other words, for each participant, one of their incentivized decisions will be randomly chosen, and the payouts will be calculated based on that decision. For example, in the dictator game, if the first player chooses to split \$U 1,000 equally between herself and the second player, the researchers would pay \$U 500 to each of them.³¹ For those who are not among the 50 chosen respondents, their decisions remain hypothetical. The method of “executing” a random sample of choices is a common feature in laboratory experiments. Moreover, there is direct evidence that the probability with which each choice is “executed” does not matter as long as it is positive (Charness et al., 2016). To make the real financial consequences more salient, the following reminder message is displayed at the bottom of the screen for each of the incentivized questions: “There is a chance that this decision will be executed and therefore your choice could have real consequences.”

³¹ Most games involve two players, but some games have more than two players. In all games, one or two players make decisions that affect the final allocation to two or more players. Games for which more than one player has choices are played sequentially. In all cases, the players and their choices are anonymous. As explained below, in those games that required a previous move by another player, the choices made by students who played the same laboratory game were used as answers.

We use these questions to obtain measures of evasion aversion, willingness to contribute to a public good, dishonesty, altruism, attitudes toward the government, trust in others, willingness to pay to punish unfair attitudes, inequality aversion, meritocratic preferences, impatience and risk aversion. The incentivized survey questions are summarized in Panel (a) of Table 1 and each is discussed in more detail in Appendix A.2.

Additionally, we include a series of questions used in social science to measure individual preferences and beliefs that may predict the decision to evade taxes. Specifically, we use them to obtain measures of stated tax morale, perceptions of workers' and firms' evasion levels, trust in others, trust in government, perceptions of government efficiency, preferences for redistribution, political ideology, perceived and desired progressiveness of the tax system, perceived inequality, and the role of luck relative to effort in explaining economic outcomes. The survey questions are summarized in Panel (b) of Table 1 and each is discussed in more detail in Appendix A.2.

Implementation Details and Descriptive Statistics. We sent invitations by email between April 2019 and June 2019, and all responses were collected during that same time window. Invitations were sent to the email addresses that the taxpayers reported to the tax agency.³² Appendix B includes an English translation of the invitation email, and Appendix D includes the original Spanish version. This invitation describes a short survey for academic purposes conducted by researchers from universities in Uruguay, Argentina, and the United States. The invitation mentions that the survey relates to economic opinions and attitudes but provides no specifics on the hypotheses being tested. The invitation mentions a small monetary incentive to participate in the 20-minute survey: 20 raffle prizes of USD 150 each (plus additional potential rewards from the incentivized games).³³ The invitation

³² Taxpayers must file their tax returns in electronic format and submit the file by e-mail or in person at an official tax office. During the analysis period, including an email address in the tax return was optional. Taxpayers were required to include only a postal address and phone number. Therefore, we collected email addresses for taxpayers who included their email address in the tax return or delivered their tax returns by email (i.e., as an attachment).

³³ The median respondent took 21.88 minutes to complete the survey.

also emphasizes that participation in the survey is voluntary, that the responses to the questionnaire are confidential and would be used only for academic purposes. To comply with this promise, after the survey responses were linked to the administrative records of the tax agency, the individual identifiers were removed. As a result, the survey responses remained anonymous to both the tax agency and the researchers.

Table A.1 presents descriptive statistics for survey respondents and non-respondents from the wage earner tax-filer sample.³⁴ Out of 151,565 wage earners, 68,208 were invited (those with valid email addresses), and 6,078 completed the survey, yielding an 8.9% response rate.^{35, 36} Although differences in characteristics between respondents versus those invited but not responding are statistically significant due to the large sample size (e.g., gender, age, income), their magnitudes are small, suggesting that survey response is largely independent of observable characteristics. To address concerns that tax evaders might avoid surveys, Table A.1 examines tax evasion measures. The under-reporting rates among respondents (13.5%) and non-respondents (13.8%) are nearly identical, indicating that survey participation is unrelated to individuals' tax evasion behavior.

Finally, we provide some direct evidence that respondents paid close attention and understood most of the survey questions. We included a question at the end of the survey to assess the clarity of the survey and 98% of the respondents reported that they understood all or almost every question of the survey. We used two methods to check whether respondents

³⁴ We sent invitations to individuals outside of this sample, including 21,980 taxpayers with self-employment income, 1,828 of whom completed the survey. However, we do not present the data here because so far we do not have a measure of tax evasion for the self-employed and thus they do not play a role in the current version of the study.

³⁵ We excluded invalid email addresses, such as those without an “@”, and e-mail addresses that appeared more than once, likely belonging to a preparer other than the taxpayer, such as a family member or accountant. In addition to the first invitation email, subjects who did not complete the survey received a reminder email, typically a week after the original email.

³⁶ A survey was considered complete if the respondent completed 100% of the questions. Of the 7,858 individuals who clicked on the link to the survey and advanced to the first screen, 6,078 finished the entire survey and 1,780 finished part of it. In the current version of the study, we exclude partial responses from the analysis. We do not have information on the socio-demographic characteristics of taxpayers to identify which traits may correlate with non-response. However, the available data suggest that non-response leads to an over-representation of females and individuals with higher education levels. This pattern is consistent with prior studies examining biases in online surveys (e.g., Fowler et al., 2019; Sinclair et al., 2012).

paid close attention to the instructions. First, at the end of the questionnaire, we added a long question as an attention check, asking the respondent to select a specific option among a large number of options, and 94% responded correctly. This rate is high and consistent in magnitude with other survey studies using the same question.³⁷ Second, we purposely included a question asking the subject’s gender and then checked their responses against the administrative data. Almost all (95.9%) survey respondents reported the same gender as in the administrative records. In sum, these results indicate that subjects paid close attention to the questions and did not complete the survey quickly to be eligible for the raffle prizes.

Variation in Lab and Survey Measures. We find substantial variation in the lab and survey measures. For example, in the dictator game, 24.1% of respondents share 0%, 21% share 25%, 50.9% share half, and 4% share more than half of their endowment. The lab measure with the least variation is the inequality aversion game, in which most subjects choose an even split. We also observe substantial individual variation across survey measures. For instance, regarding stated tax morale, 75.8% of respondents claim that evading taxes is never justifiable, 22.7% say it is sometimes justifiable, and 1.5% consider it always justifiable. Additionally, we validate our measures by benchmarking them against those from other studies, mainly in Latin America, and find that the average behavior in our sample is largely consistent with the literature despite methodological differences. Additional details are provided in Appendix A.3.

4.2 Measuring Peer Behavior

Individuals’ tax compliance may be shaped by the social context in which decisions are made, particularly through social interactions within peer groups (Luttmer and Singhal, 2014). In our context, employees may learn to under-report wages from their current or former coworkers or even from accountants at their firms. Additionally, employees’ tax evasion decisions

³⁷ For example, 96.4% of respondents passed this attention check in Bottan and Perez-Truglia (2022). This high accuracy is even more remarkable given that it is included at the end of the survey when respondents may be subject to survey fatigue.

may be influenced by their coworkers' views and attitudes toward tax evasion. Moreover, if employees have an imperfect perception of the enforcement environment, their coworkers' actions could shape their beliefs about the potential consequences of evasion. Leveraging rich tax administrative data, we construct employees' coworker networks to evaluate the role of peer influence on tax evasion decisions.

We follow the same idea from Caldwell and Harmon (2022) in that the influence of coworkers may vary depending on the period during which they worked together. For example, current coworkers may be more likely to shape an individual's tax evasion decisions during the present period, as they remain actively engaged in the workplace when these decisions are assessed in the data. With this framework, we construct two measures of peer behavior. *Former coworkers under-reporting* is defined as the share of wage under-reporters in 2016 among coworkers the individual had at the current or any previous employer during the period 2009–2015. In contrast, *current coworkers under-reporting* is the share of wage under-reporters in 2016 among coworkers the individual currently works with in 2016.³⁸

On average, current and former coworkers exhibit comparable levels of evasion: for example, the average fraction of wage under-reporters is 16.5% and 16.3% among current and former coworkers, respectively.³⁹ The shares of current and former coworkers are highly correlated, but far from perfectly so, with a correlation coefficient of 0.71—see Appendix A.5 for more details. Intuitively, the first source of differences between the networks of current and former coworkers is driven by the fact that some employees move from one firm to another during the sample period. Second, even if an employee always stays with the same employer,

³⁸ For these two measures, we calculate the share of coworkers who under-report wages among coworkers who are pure wage earners and file a tax return—i.e., those who have the potential to under-report wage income for tax evasion purposes. For taxpayers without coworkers in 2016 (65 taxpayers) or prior to 2016 (82 taxpayers), the corresponding *current* and *former* coworkers under-reporting variables are undefined. To address this in the regression analysis in Section 5.2, we include a control variable: a dummy equal to 1 for these taxpayers and 0 otherwise.

³⁹ See Table A.10 for additional summary statistics. The median size of the coworker networks for our measure of current coworkers is 1,073, while it is 4,275 for our measure of former coworkers. This large number reflects the fact that most employees work in large firms and some employees have multiple jobs. The analysis includes robustness checks with additional restrictions on coworker networks, such as excluding the largest firms.

the network of former coworkers will differ from that of current coworkers as long as other employees join the firm during that period. We find that this second source of variation is also significant: even when we restrict the sample to individuals who always worked at the same firm, the correlation in under-reporting between current and former coworkers is 0.74, which remains significantly below 1.

4.3 Measuring Economic Factors

Standard economic factors may also shape tax compliance behavior. According to the canonical model of tax evasion, individuals are expected to evade more when facing higher marginal tax rates (Allingham and Sandmo, 1972). This model also suggests that income effects may influence tax evasion behavior, depending on the shape of the utility function.⁴⁰ Moreover, tax evasion decisions could change with increased experience and exposure to the tax system. In our context, we utilize tax administrative data and construct three variables to account for these economic factors affecting tax compliance. First, we include a measure of the individual’s marginal tax rate.⁴¹ Second, we use a measure of third-party reported wage income. Finally, we incorporate an indicator variable identifying taxpayers who filed tax returns between 2009 and 2015. For reference, 77.4% of individuals in our sample have prior filing experience.

5 Predicting Evasion Choices

5.1 Correlation Analysis

In this section, we analyze pairwise correlations between tax evasion and our measures of social preferences, peer behavior, and economic factors. Throughout this section, it is impor-

⁴⁰ In Allingham and Sandmo (1972)’s model, the effect of “real” income on declared income is ambiguous and depends on assumptions about the utility function’s shape.

⁴¹ Uruguay’s 2016 personal income tax schedule features seven marginal tax rates. This variable captures the marginal tax rate applicable to the individual’s third-party reported wage income.

tant to keep in mind that these are just correlations and, as such, should not be interpreted as causal relationships.

Social Preferences. Table 2 reports the pairwise correlations between the tax evasion outcome (i.e., a dummy variable that equals 1 if the individual under-reported wages in 2016) and each of the 24 lab and survey measures (column (1)), jointly with the corresponding confidence intervals (column (2)) and p-values (column (3)). Because we are evaluating the significance of 24 different correlations, a natural concern is false positives due to multiple hypothesis testing. To provide an accurate assessment of the statistical significance of each correlation, while column (3) reports the p-values, column (4) reports the corresponding q-values to account for multiple hypothesis testing (Benjamini and Yekutieli, 2001). Additionally, Figures 3 and A.7 provide a complementary descriptive analysis.

Although the survey measures exhibit slightly stronger correlations with evasion choices compared to the lab measures, most of the correlation coefficients in Table 2 are economically small and precisely estimated around zero.⁴² The absolute values of these correlation coefficients range from 0 to 0.067. Furthermore, due to the large sample size, each coefficient is estimated with high precision, and the 95% confidence intervals often allow us to rule out even small correlations. In fact, for all 24 measures, the 95% confidence intervals rule out correlations larger than 0.10 (in absolute value), enabling us to confidently reject the presence of moderate to large correlations.

The most important candidate for predicting tax evasion, due to its central role in the literature, is the survey measure of stated tax morale. For this measure, the correlation point estimate is close to zero (-0.006), with a 95% confidence interval ranging from -0.032 to 0.019. In other words, we can confidently rule out even small correlations between the stated tax morale measure and the actual tax evasion decision. Panel (a) of Figure 3 further illustrates the weakness of this relationship. It depicts the link between this survey measure (x-axis) and the share of taxpayers who under-reported their wages relative to third-party

⁴² Seven out of the 24 lab and survey measures have statistically significant correlations after accounting for multiple-hypothesis testing, defined as q-values below 0.1.

reports in 2016 (y-axis). Among individuals who state that it is never justified to evade taxes, 13.3% under-reported their wages. In contrast, 14.0% of those who believe that tax evasion is sometimes or always justified under-reported their wages. The difference between these two evasion rates is small (0.7 pp) and statistically insignificant (p-value = 0.503). Most importantly, the difference is precisely estimated: based on the 95% confidence interval we can rule out the possibility that individuals with low stated tax morale evade, on average, more than 2.69 pp above those with high stated tax morale.

The weak correlation between tax evasion and stated tax morale is also confirmed when using a lab-based measure derived from the evasion aversion game (Corr. Coef. = 0.008, p-value = 0.541). Figure 3b divides the sample into respondents with a low, medium and high aversion to tax evaders. We find that wage under-reporting rates are similar across these three groups (13.3%, 13.4%, and 13.7%, respectively). These differences are precisely estimated and statistically insignificant (p-value = 0.942). Similarly, the correlation between the lab-based measure of dishonesty and tax evasion is also low (Corr. Coef. = -0.000, p-value = 0.981). Figure 3b illustrates that the share of wage under-reporters is similar between individuals grouped by their reported outcome in the dice game.⁴³

The strongest correlation in Table 2 is with the perception of firms evasion, which has a correlation coefficient of 0.067 (p-value < 0.001, q-value < 0.001). Similarly, the perception of workers' evasion shows a positive and significant correlation of 0.038 (p-value = 0.003, q-value = 0.0027). The hypothesis is that employees who believe that other employees under-report their wages (or that firms evade taxes) may find it “easier” to evade taxes themselves, likely because they feel they are not violating a social norm. For these employees, it may

⁴³ This figure shows that the share of wage under-reporters is similar between individuals who report numbers 1, 2, or 6 (13.3%) and those who report 3, 4, or 5 (13.7%) in the dice game, with no statistically significant difference (p-value = 0.682). Although dishonest individuals tend to be concentrated among those who report 3, 4, or 5, we do not observe a higher share of wage under-reporters among those respondents. A regression analysis (detailed in Appendix A.3) indicates that a 1 pp increase in the probability of lying in the dice game is associated with a negligible and statistically insignificant 0.07 pp decrease in wage under-reporting (p-value = 0.981). It is important to note that our dice-based measure of dishonesty may be subject to measurement error, which could result in attenuation bias. Appendix A.7 addresses efforts to correct for this potential source of bias.

also be easier to share information on how to evade. Our findings offer some support for this hypothesis. Figures A.7a and A.7b present the correlation between wage under-reporting and the survey measures on perceived evasion behavior of firms and other workers, respectively. Both figures demonstrate that the rate of wage under-reporting increases as individuals' belief in the evasion behavior of firms and other workers rises. In the case of firm evasion, the slope of the relationship suggests that for each 1 pp increase in the perceived share of wage under-reporters, an individual's likelihood of wage under-reporting rises by 0.07 pp (p-value = 0.003). Although this effect is small, it is not negligible. These correlations suggest that the "type" of people who evade taxes tend to believe that firms and other workers also evade. This finding aligns with the results of Section 5.2, which explores the role of peers in evasion decisions.

Table 2 and Figures A.7c and A.7d present the results for the lab measures of generosity. Our prior hypothesis stated that more altruistic individuals would evade less, as they may be more concerned about the impact of tax evasion on others' well-being (i.e., lower provision of public goods and services). Alternatively, more altruistic individuals might think that they can use the funds more effectively to help others than the government, leading to more evasion. These two competing hypotheses reflect the classic trade-off between private and public sector solutions. Among the laboratory measures, the three related to generosity show the highest correlations: 0.040 (p-value = 0.002, q-value = 0.020), 0.046 (p-value < 0.001, q-value < 0.001), and 0.048 (p-value < 0.001, q-value < 0.001) for decisions to give to strangers, a charity and the government, respectively.⁴⁴ These results align with the alternative hypothesis that altruists prefer to allocate resources themselves rather than through the government. Table 2 and Figure 3d illustrate the correlation between tax evasion and contributions in the public goods game, and the findings are consistent with the notion

⁴⁴ The positive correlation between tax evasion and generosity goes against the hypothesis that more generous individuals would be less likely to evade taxes due to their concern for solving redistribution problems through the public sector. One potential confounding factor may be liquidity constraints—more generous individuals may have allocated a larger portion of their income to giving, leaving them with fewer resources to pay taxes.

that evaders may favor private solutions over public sector solutions. We observe very small differences in the shares of wage under-reporters across the three groups, and these differences are precisely estimated and statistically insignificant (p-value = 0.704).⁴⁵

An alternative interpretation is that certain personality traits are positively correlated with generosity. Although we do not have direct measures of personality traits, ideological self-identification and preferences for economic policies have been shown to be related to personality traits (Fatke, 2017). The second highest correlation in Table 2 is with the left-right political ideology, with a correlation coefficient of -0.062 (p-value < 0.001, q-value < 0.001). The third highest correlation is with preferences for tax progressiveness, with a correlation coefficient of 0.058 (p-value < 0.001, q-value < 0.001). These correlations suggest that individuals more likely to evade taxes tend to be politically left-leaning and favor more progressive taxation. However, it is important to note that these are merely correlations. For example, it could be that low-income individuals, who are more likely to face financial constraints, might (have to) evade taxes more often, and they may also be more likely to identify as left-wing.

Several concerns may arise from this analysis. First, one might doubt the stability of correlation estimates with alternative definitions of tax evasion. We show that these results are robust to the use of alternative measures of tax evasion, such as deduction over-reporting instead of wage under-reporting, intensive margin instead of extensive margin, or considering evasion across multiple margins.⁴⁶

An additional concern is that the lack of statistical significance of lab and survey measures in predicting tax evasion (and their low correlation coefficients) may stem from low variability in these measures. To address this concern, we use the same sample and a subset of variables to assess whether they can explain the decision to become a public employee. Previous

⁴⁵ Although speculative, another possible explanation for the positive relationship between generosity and wage under-reporting could be that individuals who evade taxes feel guilty and seek to compensate by being more generous. Some evidence for this has been observed in laboratory settings (Gneezy et al., 2014).

⁴⁶ Details provided in Appendix A.6.

literature suggests that public employment is associated with prosocial behaviors (Buurman et al., 2012), higher preferences for redistribution (Cusack et al., 2006), and greater risk aversion (Pfeifer, 2011; Dohmen et al., 2011; Bonin et al., 2007). The available data allow us to explore these relationships, and the results, presented in Figure A.8, show that the correlations between public employment status and this subset of variables are statistically significant and consistent with our expectations, alleviating our concern.

Finally, a potential concern with the previous results is that measurement error in the laboratory measures may induce attenuation bias in the estimated correlation coefficients. If such bias were substantial, the true correlations could be economically more meaningful than those reported. We therefore implement two standard approaches to assess the extent to which measurement error affects our estimates. The results indicate that measurement error is unlikely to alter our main conclusions.⁴⁷

Peer Behavior. Table 2 also presents pairwise correlations between the tax evasion outcome and the two peer evasion measures: *current coworkers under-reporting* and *former coworkers under-reporting* (column (1)). Additionally, it presents the corresponding confidence intervals, p-values, and q-values (columns (2)–(4), respectively).

In contrast to the lab and survey measures, the peer evasion measures exhibit strong and statistically significant correlations with tax evasion, which are also economically meaningful. The correlation sign aligns with our expectations: a higher proportion of tax-evading coworkers is associated with a higher probability of under-reporting wage income. This relationship holds for both current and former coworkers. Specifically, the correlation estimate for *current coworkers under-reporting* is 0.599 (p-value < 0.001, q-value < 0.001), while the estimate for *former coworkers under-reporting* is 0.462 (p-value < 0.001, q-value < 0.001). Furthermore, these correlations are robust to alternative measures of tax evasion. The correlation coefficients of *current* and *former* coworkers evasion behavior are all strongly correlated with other evasion measures such as over-reporting of deductions and withhold-

⁴⁷ Details presented in Appendix A.7.

ings, percent of under-reported wages, and indicators of presenting multiple evasion margins (see Table A.3).

Finally, we emphasize that these correlations should not be interpreted causally. Our approach does not allow us to identify the causal effect of social interactions or to disentangle the channels through which coworkers may affect evasion behavior.⁴⁸ Moreover, our peer measures may also capture other firm-level factors correlated with compliance—for instance, differences in how firms communicate third-party reporting or annual wage information to employees—which could shape under-reporting behavior even in the absence of direct peer influence.

Economic Factors. Finally, Table 2 also presents pairwise correlations between the tax evasion outcome and our measures of economic factors: the marginal tax rate, labor income, and an indicator of having filing experience. The three measures present statistically significant correlations with tax evasion, although the correlation of *Log. of labor income* is not statistically significant after accounting for multiple hypothesis testing (see column 4). The marginal tax rate is the most relevant in terms of magnitude. Specifically, the correlation estimate for *MTR* is 0.092 (p-value < 0.001, q-value < 0.001), the correlation estimate for *Log. of labor income* is 0.030 (p-value = 0.021, q-value = 0.161), and that of *Experienced filer* is 0.071 (p-value < 0.001, q-value < 0.001).

Overall, these findings document that while individual traits and beliefs, as captured by the lab and survey measures, do not strongly correlate with the tax evasion outcome, peer evasion behavior does, even more than standard economic factors. This suggests that the peer channel may be particularly relevant in explaining tax-evasion behavior.

⁴⁸ Causal identification of social interactions requires addressing challenges such as reflection, correlated unobservables, and endogenous group membership (Manski, 1993).

5.2 Predictive Analysis

This section explores the explanatory power of different measures that we associated with tax morale to account for tax evasion choices. For instance, it is possible that none of the lab and survey measures have substantial predictive power individually but may exhibit significant joint explanatory power. To investigate this possibility, Table 3 presents the results of a multivariate probit regression. Each column corresponds to a separate regression, where the dependent variable is an indicator that equals 1 for individuals who, according to third-party reports, under-reported their wages in 2016. The coefficients shown in the columns represent the marginal effects from the estimated probit models. At the bottom of the table, we report a common measure of predictive power for binary dependent variables: the area under the receiver operating characteristic (AUC). This metric reflects the probability that the model correctly identifies an evader when comparing a randomly selected individual who evaded with one who did not. An AUC value of 0.5 indicates that the model performs no better than chance (i.e., equivalent to flipping a coin). The closer the AUC to 1, the better the predictive power, with a value of 1 indicating 100% accuracy. Specifically, we report the out-of-sample (cross-validated) AUC.⁴⁹ For completeness, we also include an alternative goodness-of-fit measure: the pseudo- R^2 .

Social Preferences. To make the coefficients more comparable, the 24 lab and survey measures used as independent variables in Table 3 are normalized to have a mean of 0 and a standard deviation of 1. In column (1) of Table 3, the independent variables consist of the 12 lab measures (definitions provided in the notes to Table 2). Only three coefficients are statistically significant, corresponding to the same three variables with the highest pairwise correlations: giving to strangers (p-value = 0.056), giving to charity (p-value = 0.002) and giving to the government (p-value < 0.001). The AUC (0.546) suggests that the lab measures perform slightly better than chance in identifying tax evaders.⁵⁰ The conclusions are

⁴⁹ We employ k-fold cross-validation with k=10, which divides the data into 10 folds, calculates the AUC for each fold, and takes the average AUC.

⁵⁰ These results are similar when using the traditional (i.e., “in-sample”) definition of the AUC. For example,

comparable for the alternative goodness-of-fit measure, the pseudo- R^2 (0.008).

In column (2) of Table 3, the independent variables are the 12 survey measures (definitions provided in the notes to Table 2). Similarly to the lab measures, these 12 survey measures are standardized. Only three of the 12 have statistically significant coefficients, corresponding to the same variables with the strongest pairwise correlations: perceived evasion rate among firms (p-value < 0.001), the left-right political spectrum (p-value = 0.046), and desired progressiveness (p-value = 0.032). The sign of some coefficients may seem surprising, potentially indicating unobserved factors such as economic resources. For instance, low-income individuals might be more likely to evade taxes due to financial constraints and are also more likely to identify as left-wing. However, these results should be interpreted with caution for two reasons. First, these coefficients represent correlations, not causality. Second, once we control for demographics, the coefficient on desired progressiveness is no longer significant, and the coefficient on the left-right political spectrum is only significant at the 10 percent level.⁵¹ The predictive power of the survey measures (AUC = 0.572, column (2)) is slightly higher than that of the lab measures (AUC = 0.546, column (1)), but still far from perfect. In column (3) of Table 3, the independent variables include the combination of all 24 lab and survey measures. Again, the predictive power improves slightly (AUC = 0.575, column (3)) but remains small.

The evidence thus far indicates that even when considered jointly, measures of social preferences and beliefs perform poorly in predicting which taxpayers evade taxes. However, interpreting the magnitude of goodness-of-fit can be challenging. A low goodness-of-fit, for example, may reflect that the outcome is inherently random and, as such, unpredictable using *any* type of data—not just the survey and lab measures employed in this study. To address this, we next examine the predictive power of a model that incorporates measures of peer behavior as an alternative tax morale mechanism to explain tax-evasion behavior.

Peer Behavior. To proxy the influence of peers on evasion decisions, column (4) of Table 3

the out-of-sample AUC in column (1) of Table 3 is 0.546, while the corresponding in-sample AUC is 0.564.
⁵¹ See column (2) of Table A.6 for details.

introduces two independent variables, following Caldwell and Harmon (2022), as discussed in Section 4.2. The first variable, *current coworkers under-reporting*, represents the proportion of current coworkers who under-reported wages in 2016 and captures social learning from current coworkers. The second variable, *former coworkers under-reporting*, represents the proportion of an individual’s former coworkers who under-reported wages in 2016, as individuals may have adopted evasion behaviors from their former coworkers.

The results in column (4) of Table 3 indicate that a 1 pp increase in the share of current coworkers who under-report wages is associated with a 0.47 pp increase in the probability of under-reporting (p-value < 0.001). Similarly, a 1 pp increase in the share of former coworkers who under-report wages corresponds to a 0.164 pp increase in the likelihood of under-reporting (p-value < 0.001). Furthermore, this model, which incorporates taxpayers’ peers’ behavior, significantly outperforms random chance in identifying tax evaders, with an AUC of 0.899 (column (4)).

Economic Factors. Column (5) of Table 3 presents the results of a model based on standard economic factors. It includes as an independent variable the marginal tax rate applicable to the individual’s third-party reported wage income. To account for income effects that may influence tax-evasion behavior, column (5) also includes the logarithm of the third-party reported wage income. Additionally, to capture the possibility that tax evasion decisions may change with experience with the tax system, column (5) includes an indicator variable equal to one if the individual filed a tax return between 2009 and 2015.

The coefficients for the three variables in column (5) of Table 3 have the expected signs, are large in magnitude, and are statistically significant. Specifically, a 1 pp increase in the marginal tax rate is associated with a 0.919 pp increase in the probability of wage under-reporting. A 10% increase in income is associated with a 6.6 pp decrease in the probability of wage under-reporting, suggesting that, holding the marginal tax rate constant, wealthier individuals are less likely to under-report wages. Furthermore, individuals with prior filing experience are 5 pp more likely to under-report their wage income. However, the predictive

power of this model improves only a bit (AUC = 0.617, column (5)) compared to the model that incorporates laboratory and survey measures.

Overall, the findings in Table 3 highlight significant differences in the predictive power of the models. While the model incorporating all 24 lab and survey measures of social preferences demonstrates some predictive ability, the model based on coworkers' under-reporting behavior performs substantially better. Moreover, while the simpler model based on standard economic factors shows greater predictive power than the model focused on social preferences, it largely underperforms relative to the model that incorporates peer behavior.

We conduct several robustness checks, detailed in Appendix A.8, to assess the consistency of our results. Specifically, we show that the findings remain robust under alternative measures of evasion, including using the intensive rather than the extensive margin, considering deductions and withholdings over-reporting instead of wage under-reporting, and employing an indicator variable for evasion across multiple margins. Additionally, we demonstrate that the results are unaffected by the inclusion of different sets of control variables in the regressions.⁵² Finally, we show that the results from the model capturing the taxpayer's context and peers' influence remain stable under various set of controls, sample restrictions and definitions to construct the coworker network.

6 Conclusions

Why do some individuals choose to evade taxes while others do not? In collaboration with Uruguay's national tax agency, we leverage unique data to shed light on this question. Using third-party reports, we construct an individual-level measure of income under-reporting as an indicator of tax evasion. We then assess which types of metrics, if any, best predict who evades taxes. To this end, we conduct a horse race comparing the predictive power of three categories of factors: social preferences, contextual variables, and economic factors. Social

⁵² For example, we include a set of dummies for income changes as control variables and show that the estimated coefficients and the model's predictive power are similar to those in the main specification.

preferences exhibit little predictive value; economic factors perform modestly better; but peer behavior stands out as the strongest predictor of tax evasion by a wide margin. This finding underscores the role of peer effects and social influences as a relevant mechanism through which tax morale affects tax compliance (Luttmer and Singhal, 2014).

Strikingly, some measures that are widely believed to be central to tax compliance decisions—such as survey-based stated tax morale, which is commonly used in the literature as a proxy for evasion—exhibit virtually no power in predicting individual-level tax evasion. While individual traits do not explain who evades taxes, they appear more informative at the aggregate level. For example, in our lab-in-the-field dice game, 11% of participants misreported their roll—closely mirroring the 15.5% wage under-reporting rate observed in the administrative tax records. Moreover, consistent with prior findings, even those who lied rarely reported the maximum possible value.

Some caveats must be kept in mind when interpreting our evidence. First, our measure of tax evasion has limitations. Although we have provided arguments against this interpretation, our measure of wage under-reporting may partly reflect employers over-reporting wages rather than employees under-reporting them. Moreover, our analysis takes the employer’s third-party-reported wage as given and examines whether the employee chooses to report truthfully or not. As a result, we capture evasion over and above any additional evasion that may occur through off-the-books compensation or other channels—for example, employer-employee collusion to keep part of compensation off the books, thereby reducing payroll taxes and social security contributions and splitting the gains (Bjørneby et al., 2021; Bíró et al., 2020; Feinmann et al., 2024). Most importantly, one should be cautious in extrapolating our results to other settings, given differences in institutional context. The specific form of tax evasion we study depends on factors such as risk preferences, perceived enforcement, or awareness of reporting systems—all of which may differ in other contexts, limiting the external validity of our results. For instance, if it is easier to learn from coworkers how to under-report wages than to learn from other firms how to under-report revenues, then the

role of peers may be less important for firm evasion than for employee wage under-reporting.

Lastly, our results raise several questions for future research. First, our findings are derived from a specific setting, and future studies could apply our survey design to explore similar questions in other contexts. Second, the emergence of coworker behavior as a key factor in explaining variation in tax evasion raises the question of whether this association reflects a causal link and, if so, through which mechanisms. For example, are coworkers discussing their evasion strategies informally (e.g., by the water cooler), or does the behavior stem from the actions or recommendations of the employer's accountants or human resources staff?

References

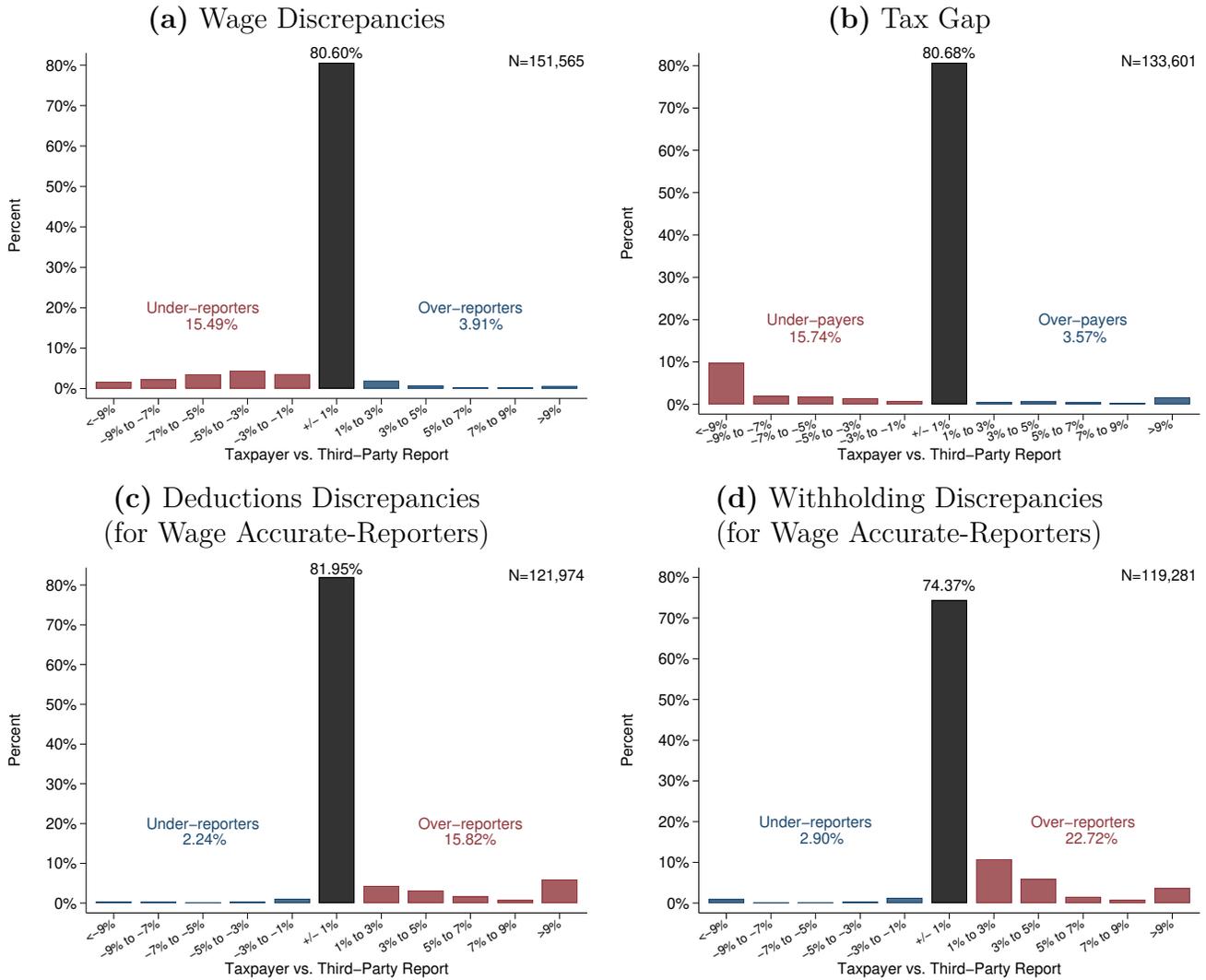
- Allingham, M. G. and A. Sandmo (1972). Income Tax Evasion: A Theoretical Analysis. *Journal of Public Economics* 1(3-4), 323–338.
- Alm, J., K. M. Bloomquist, and M. McKee (2017). When you know your neighbour pays taxes: Information, peer effects and tax compliance. *Fiscal Studies* 38(4), 587–613.
- Almunia, M., J. Hjort, J. Knebelmann, and L. Tian (2024, 01). Strategic or confused firms? evidence from "missing" transactions in uganda. *The Review of Economics and Statistics* 106(1), 256–265.
- Benjamini, Y. and D. Yekutieli (2001). The control of the false discovery rate in multiple testing under dependency. *Annals of Statistics* 29(4), 1165–1188.
- Bergolo, M., G. Burdin, M. De Rosa, M. Giacobasso, and M. Leites (2021). Digging Into the Channels of Bunching: Evidence from the Uruguayan Income Tax. *The Economic Journal* 131(639), 2726–2762.
- Bergolo, M., R. Ceni, G. Cruces, M. Giacobasso, and R. Perez-Truglia (2023, February). Tax audits as scarecrows: Evidence from a large-scale field experiment. *American Economic Journal: Economic Policy* 15(1), 110–53.
- Best, M. C. (2025). The Role of Firms in Workers' Earnings Responses to Taxes: Evidence From Pakistan. *Working Paper*.
- Bíró, A., D. Prinz, and L. Sándor (2020). Tax evasion and the minimum wage. In *Proceedings. Annual Conference on Taxation and Minutes of the Annual Meeting of the National Tax Association*, Volume 113, pp. 1–8.
- Bjørneby, M., A. Alstadsæter, and K. Telle (2021). Limits to third-party reporting: Evidence from

- a randomized field experiment in Norway. *Journal of Public Economics* 203, 104512.
- Blumenthal, M., C. Christian, and J. Slemrod (2001). Do Normative Appeals Affect Tax Compliance? Evidence From a Controlled Experiment in Minnesota. *National Tax Journal* 54(1), 125–138.
- Bonin, H., T. Dohmen, A. Falk, D. Huffman, and U. Sunde (2007). Cross-sectional earnings risk and occupational sorting: The role of risk attitudes. *Labour Economics* 14(6), 926–937.
- Boning, W. C., J. Guyton, R. Hodge, and J. Slemrod (2020). Heard it through the grapevine: The direct and network effects of a tax enforcement field experiment on firms. *Journal of Public Economics* 190, 104261.
- Bottan, N. L. and R. Perez-Truglia (2022). Choosing Your Pond: Location Choices and Relative Income. *The Review of Economics and Statistics* 104(5), 1010–1027.
- Brockmeyer, A. and M. Hernandez (2022). Taxation, Information, and Withholding: Evidence from Costa Rica. *CEPR Discussion Paper 17716*.
- Buurman, M., J. Delfgaauw, R. Dur, and S. Van den Bossche (2012). Public sector employees: Risk averse and altruistic? *Journal of Economic Behavior & Organization* 83(3), 279–291.
- Caldwell, S. and N. Harmon (2022). Outside options, bargaining and wages: Evidence from coworker networks. *Working Paper*.
- Carrillo, P., D. Pomeranz, and M. Singhal (2017). Dodging the Taxman: Firm Misreporting and Limits to Tax Enforcement. *American Economic Journal: Applied Economics* 9(2), 144–164.
- Charness, G., U. Gneezy, and B. Halladay (2016). Experimental methods: Pay one or pay all. *Journal of Economic Behavior & Organization* 131, 141–150.
- Chetty, R., J. N. Friedman, and E. Saez (2013). Using Differences in Knowledge Across Neighborhoods to Uncover the Impacts of the EITC on Earnings. *Am. Econ. Rev.* 103(7), 2683–2721.
- Cohn, A. and M. A. Maréchal (2018). Laboratory Measure of Cheating Predicts School Misconduct. *The Economic Journal* 128(615), 2743–2754.
- Cusack, T., T. Iversen, and P. Rehm (2006). Risks at work: The demand and supply sides of government redistribution. *Oxford Review of Economic Policy* 22(3), 365–389.
- Dai, Z., F. Galeotti, and M. C. Villeval (2018). Cheating in the Lab Predicts Fraud in the Field: An Experiment in Public Transportation. *Management Science* 64(3), 1081–1100.
- DeBacker, J., B. T. Heim, and A. Tran (2015). Importing corruption culture from overseas: Evidence from corporate tax evasion in the United States. *Journal of Financial Economics* 117(1), 122–138.
- DellaVigna, S. and E. Linos (2022). Rcts to scale: Comprehensive evidence from two nudge units. *Econometrica* 90(1), 81–116.
- Dohmen, T., A. Falk, D. Huffman, U. Sunde, J. Schupp, and G. G. Wagner (2011). Individual risk

- attitudes: Measurement, determinants, and behavioral consequences. *Journal of the European Economic Association* 9(3), 522–550.
- Exley, C. L. and J. B. Kessler (2024). Motivated errors. *American Economic Review* 114(4), 961–987.
- Fatke, M. (2017). Personality traits and political ideology: A first global assessment. *Political Psychology* 38(5), 881–899.
- Feinmann, J., R. Hsu Rocha, and M. Lauletta (2024). Payments Under the Table: Employer-Employee Collusion in Brazil. *SSRN Working Paper No. 4270665*.
- Fowler, F., C. Cosenza, L. Cripps, S. Edgman-Levitan, and P. Cleary (2019, 01). The effect of administration mode on cahps survey response rates and results: A comparison of mail and web-based approaches. *Health Services Research* 54.
- Gneezy, U., A. Imas, and K. Madarász (2014). Conscience Accounting: Emotion Dynamics and Social Behavior. *Management Science* 60(11), 2645–2658.
- Gomez-Sabaini, J. C. and J. P. Jimenez (2012). Tax structure and tax evasion in Latin America. *Macroeconomics of Development Series* 118.
- Halla, M. (2012). Tax Morale and Compliance Behavior: First Evidence on a Causal Link. *The B.E. Journal of Economic Analysis & Policy* 12(1), 1–27.
- Hanna, R. and S.-Y. Wang (2017). Dishonesty and Selection into Public Service: Evidence from India. *American Economic Journal: Economic Policy* 9(3), 262–290.
- Internal Revenue Service (2016). Federal Tax Compliance Research: Tax Gap Estimates for Tax Years 2008-2010. Technical report.
- Jensen, A. (2022). Employment structure and the rise of the modern tax system. *American Economic Review* 112(1), 213–34.
- Johns, A. and J. Slemrod (2010). The Distribution of Income Tax Noncompliance. *National Tax Journal* 63(3), 397–418.
- Kleven, H. J. (2014). How Can Scandinavians Tax So Much? *Journal of Economic Perspectives* 28(4), 77–98.
- Kleven, H. J., M. B. Knudsen, T. Kreiner, S. Pedersen, and E. Saez (2011). Unwilling or Unable to Cheat? Evidence from a Randomized Tax Audit Experiment in Denmark. *Econometrica* 79(3), 651–692.
- Kleven, H. J., C. Kreiner, and E. Saez (2016). Why Can Modern Governments Tax So Much? An Agency Model of Firms as Fiscal Intermediaries. *Economica* 83, 2016.
- Kumler, T., E. Verhoogen, and J. Frias (2020). Enlisting employees in improving payroll tax compliance: Evidence from Mexico. *The Review of Economics and Statistics* 102(5), 881–896.
- Levitt, S. D. and J. A. List (2007). What Do Laboratory Experiments Measuring Social Preferences

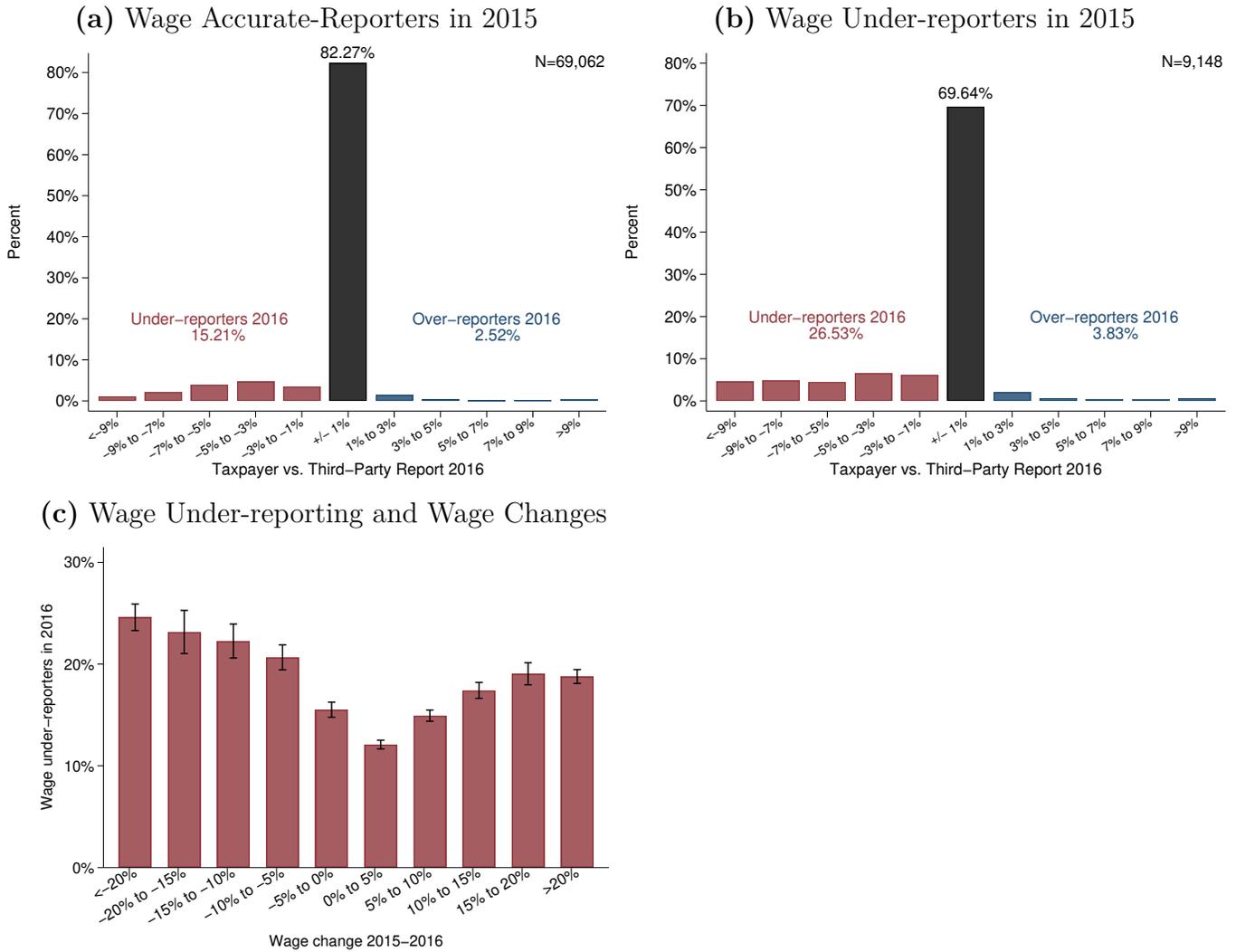
- Reveal About the Real World? *Journal of Economic Perspectives* 21(2), 153–174.
- Li, X., L. Tian, and J. Xu (2020). Missing social security contributions: the role of contribution rate and corporate income tax rate. *International Tax Public Finance* 27, 1453–1484.
- Luttmer, E. F. P. and M. Singhal (2014). Tax Morale. *Journal of Economic Perspectives* 28(4), 149–168.
- Manski, C. F. (1993, 07). Identification of endogenous social effects: The reflection problem. *The Review of Economic Studies* 60(3), 531–542.
- Pfeifer, C. (2011). Risk aversion and sorting into public sector employment. *German Economic Review* 12(1), 85–99.
- Ross, L. and R. E. Nisbett (2011). *The person and the situation: Perspectives of social psychology*. London: Pinter & Martin Ltd.
- Sinclair, M., J. Otoole, M. Malawaraarachchi, and K. Leder (2012, 08). Comparison of response rates and cost-effectiveness for a community-based survey: Postal, internet and telephone modes with generic or personalised recruitment approaches. *BMC Med. Res. Methodol.* 12, 132.
- Slemrod, J. (2008). Does It Matter Who Writes the Check to the Government? The Economics of Tax Remittance. *National Tax Journal* 61.
- Slemrod, J. (2019). Tax Compliance and Enforcement. *Journal of Economic Literature* 57(4), 904–954.
- Slemrod, J., M. Blumenthal, and C. Christian (2001). Taxpayer response to an increased probability of audit: evidence from a controlled experiment in Minnesota. *Journal of Public Economics* 79(3), 455–483.
- Slemrod, J., B. Collins, J. Hoopes, D. Reck, and M. Sebastiani (2017). Does credit-card information reporting improve small-business tax compliance? *Journal of Public Economics* 149, 1–19.
- Wilson, R. (2022). The Impact of Social Networks on EITC Claiming Behavior. *The Review of Economics and Statistics* 104(5), 929–945.

Figure 1: Measures of Tax Evasion



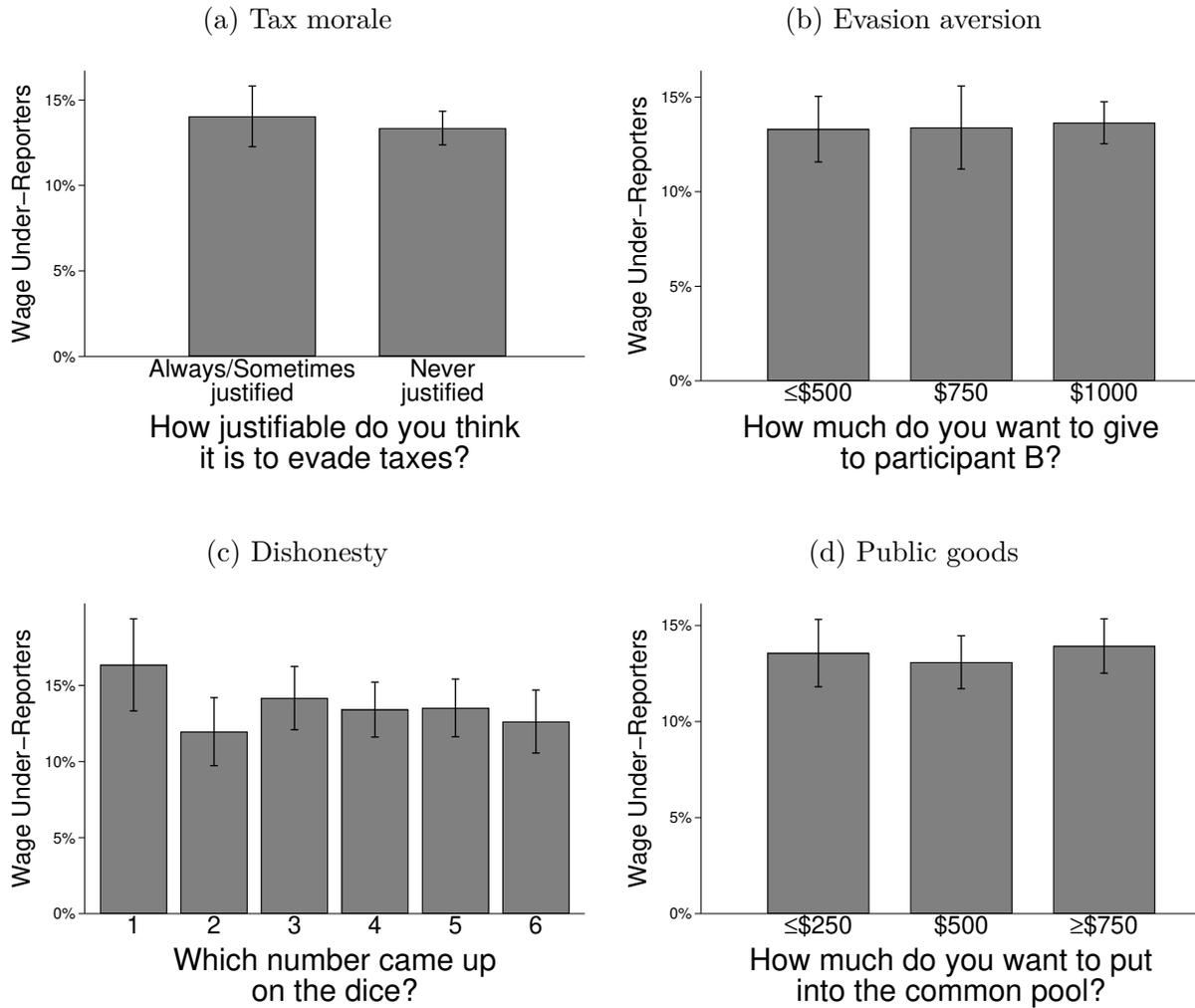
Notes: Panel (a): discrepancies between the wages reported in the taxpayer’s tax return versus the employer’s third-party report (as the percentage of third-party wage income). Results based on the sample of taxpayers who were pure wage earners and filed a tax return in 2016. Panel (b): discrepancies between the effective tax liability (net of deductions) of the taxpayers and the counterfactual tax liability they would face if they had reported wages equal to the third-party report (as a percentage of the latter). We must restrict the sample to taxpayers with positive counterfactual tax amounts (to avoid dividing by zero). Panel (c): discrepancies between the automatic deductions reported in the taxpayer’s tax return versus the employer’s third-party report (as a percentage of the latter). Results based on the subsample of taxpayers who reported their wages within 1% of their third-party reports (i.e., wage accurate-reporters). Panel (d): discrepancies between the tax withholdings reported in the taxpayer’s tax return versus the employer’s third-party report (as a percentage of the latter). Results based on the subsample of taxpayers who reported their wages within 1% of their third-party reports (i.e., wage accurate-reporters).

Figure 2: Misreporting, Persistence, and Wage Changes



Notes: Results based on the sample of 86,749 taxpayers who were pure wage earners and filed a tax return in both 2015 and 2016. Panels (a) and (b) present discrepancies in wages reported in the taxpayer tax return versus the employer’s third-party report for two different subsamples: panel (a) corresponds to the subsample of taxpayers who reported their wages within 1% of their third-party reports (i.e., accurate-reporters) in 2015, and panel (b) corresponds to the subsample of taxpayers who reported wages below 1% of their third-party reports (i.e., under-reporters) in 2015. In panel (c), each bar represents the share of employees under-reporting their wages in 2016 for a different group of employees. As denoted by the x-axis, the employees are grouped based on the change in their third-party reported wages from 2015 to 2016.

Figure 3: Correlation between Actual Tax Evasion Choices and Selected Social Preferences



Notes: Results based on the 6,078 survey respondents. Each bar corresponds to the share of wage under-reporters (i.e., taxpayers who reported wage income below 1% of the third-party report filed by their employers), with 95% robust confidence intervals. Each panel breaks the same sample of 6,078 taxpayers into subgroups based on selected lab or survey measures: e.g., panel (a) breaks them down by the responses to the question on stated tax morale.

Table 1: Summary of the Variables used to measure Social Preferences

Panel (a): Summary of Laboratory-based Social Preferences Variables

Label	Variable definition
Evasion aversion	The share of the endowment given to player B, when player B thinks evading taxes is not justified.
Public good	The share of the endowment contributed to the common pool.
Dishonesty	The chance of having lied conditional on the dice draw that was reported.
Giving to strangers	The share of the endowment given to a random participant.
Giving to charity	The share of the endowment donated to a non-governmental non-profit organization.
Giving to government	The share of the endowment donated to the government program.
Trust	It takes the value 1 if the respondent invested in the partner
Ultimatum	It takes the value 1 if the proposer's offer was rejected
Inequality aversion	It takes the value 1 if the respondent preferred the egalitarian allocation
Meritocratic preferences	The share of the endowment given to the subject who exerted effort
Impatience	The premium that must be offered to the respondent to delay the payment for a year
Risk aversion	The premium that must be offered to accept the risk

Panel (b): Summary of Survey-based Social Preferences Variables

Label	Variable definition
Tax morale	It indicates in a 1-3 scale if evading taxes is justifiable with 3 being never justifiable.
Workers' evasion	It indicates in a 1-10 scale the perceived share of wage earners who evade taxes in 2019 (1 "0-10%" to 10 "90-100% ")
Firms' evasion	It indicates in a 1-10 scale the perceived share of value added tax that is evaded by firms in 2019 (1 "0-10%" to 10 "90-100%")
Trust in others	It indicates in a 1-2 scale if most people can be trusted
Trust in government	It indicates in a 1-5 scale whether one can trust the government in acting properly (5 = always)
Government efficiency	It indicates in a 1-4 scale the perceived efficiency of the government (4 = very efficient)
Preferences for redistribution	It indicates, on a 1-4 scale, the extent to which respondents agree that the government should take steps to reduce the income gap between the rich and the poor (4 = strongly disagree)
Left-right spectrum	It indicates in a 0-10 scale the respondents's placement in the left-right spectrum (10 = right)
Perceived progressiveness	It indicates the respondents's perceived difference in tax rate paid between the upper 20 % and the bottom 20 % in 2017
Desired progressiveness	It indicates, on a 1-4 scale, the extent to which respondents agree whether the tax system should be more progressive (4 = strongly disagree)
Perceived inequality	It indicates in a 1-3 scale whether inequality is "too low", "about right", or "too high"
Role of luck	It indicates in a 0-2 scale if luck is important to determine incomes (2=important)

Notes: The table summarizes the variables used in the study to capture the lab-based measures of social preferences (panel (a)) and the survey-based measures of social preferences (panel (b)). The full version of the survey questions is provided in Appendix A.2. A sample of the full survey questionnaire is attached as Appendix C.

Table 2: Pairwise Correlations between Tax Evasion and Different Factors

		Corr.Coeff. (1)	95% CI (2)	p-value (3)	q-value (4)
Lab-Based Social Preferences	Evasion aversion	0.008	[-0.017,0.033]	0.541	0.999
	Public goods	0.003	[-0.022,0.028]	0.812	0.999
	Dishonesty	-0.000	[-0.025,0.025]	0.993	0.999
	Giving to strangers	0.040	[0.015,0.065]	0.002	0.020
	Giving to charity	0.046	[0.021,0.071]	<0.001	<0.001
	Giving to government	0.048	[0.023,0.073]	<0.001	<0.001
	Trust	-0.008	[-0.033,0.017]	0.516	0.999
	Ultimatum	0.026	[0.000,0.051]	0.046	0.321
	Inequality aversion	0.007	[-0.018,0.033]	0.560	0.999
	Inequity aversion	-0.001	[-0.026,0.024]	0.925	0.999
	Impatience	0.021	[-0.005,0.046]	0.108	0.652
	Risk aversion	0.013	[-0.012,0.038]	0.324	0.999
Survey-Based Social Preferences	Tax morale	-0.006	[-0.032,0.019]	0.613	0.999
	Workers' evasion	0.038	[0.013,0.064]	0.003	0.027
	Firms' evasion	0.067	[0.042,0.092]	<0.001	<0.001
	Trust in others	0.024	[-0.001,0.049]	0.063	0.408
	Trust in government	0.028	[0.003,0.054]	0.027	0.204
	Government efficiency	0.046	[0.021,0.071]	<0.001	<0.001
	Preferences for redistribution	0.042	[0.017,0.067]	0.001	0.011
	Left-right spectrum	-0.062	[-0.087,-0.037]	<0.001	<0.001
	Perceived progressiveness	-0.010	[-0.035,0.015]	0.445	0.999
	Desired progressiveness	0.058	[0.033,0.084]	<0.001	<0.001
	Perceived inequality	0.029	[0.003,0.054]	0.026	0.204
	Role of luck	0.047	[0.022,0.072]	<0.001	<0.001
Peer	Current coworkers under-reporting	0.599	[0.583,0.615]	<0.001	<0.001
	Former coworkers under-reporting	0.462	[0.442,0.481]	<0.001	<0.001
Economic	MTR	0.092	[0.067,0.117]	<0.001	<0.001
	Log. of labor income	0.030	[0.005,0.055]	0.021	0.161
	Experienced filer	0.071	[0.046,0.096]	<0.001	<0.001

Notes: Correlations between tax evasion (and an indicator variable that takes the value 1 if the individual under-reported wages in 2016 and 0 otherwise) and each of the the lab, survey, and peer measures. Results for the 6,078 wage earners who filed a tax return in 2016 and responded to our survey. The q-values (column (4)) are based on the Yekutieli method. *Evasion aversion* is the share of the endowment given to the partner who thinks evading taxes is never justifiable, *public goods* is the share of the endowment contributed to the common pool, *dishonesty* is the probability of having lied conditional on the dice draw that was reported, *giving to strangers* is the share of the endowment given to a random stranger, *giving to charity* is the share of the endowment given the charity, *giving to government* is the share of the endowment given to the government program, *trust* indicates if the respondent invested in the partner, *ultimatum* indicates whether the proposer's offer was rejected, *inequality aversion* indicates if the respondent preferred the egalitarian allocation, *meritocratic preferences* is the share of the endowment given to the subject who exerted effort, *impatience* is the premium that must be offered to the respondent to delay the payment for a year, *risk aversion* is the premium that must be offered to accept the risk, *tax morale* indicates in a 1–3 scale if evading taxes is justifiable with 3 being never justifiable, *workers' evasion* indicates in a 1–10 scale the perceived share of wage earners who evade taxes (10 = 90–100%), *firms' evasion* indicates in a 1–10 scale the perceived share of value added tax that is evaded by firms (10 = 90–100%), *trust in others* indicates in a 1–2 scale if most people can be trusted, *trust in government* indicates in a 1–5 scale whether one can trust the government in acting properly, *government efficiency* indicates in a 1–4 scale the perceived efficiency of the government, *preferences for redistribution* indicates in a 1–4 scale whether the government should take steps to reduce the income gap between rich and poor, *left-right spectrum* indicates in a 0–10 scale the respondents' placement in the left-right spectrum (10 = right), *perceived progressiveness* indicates the respondents' perceived difference in tax rate paid between the upper 20% and the bottom 20%, *desired progressiveness* indicates in a 1–4 scale whether the tax system should be more progressive, *perceived inequality* indicates in a 1–3 scale whether inequality is too high, *role of luck* indicates in a 0–2 scale if luck is important to determine incomes, *current* and *former coworkers under-reporting* indicate the share of current (2016) and former (2009–2015) coworkers that under-report wages in 2016, respectively. *MTR* corresponds to a continuous variable that reflects the marginal tax rate the individual faces according to the third-party reported salary (from 0 to 0.3). *Log. of labor income* is the third-party reported salary in logs. *Experienced filer* corresponds to a dummy indicating having filed a tax return before 2016.

Table 3: Predicting Tax Evasion Choices with Multivariate Probit Regression

	(1)	(2)	(3)	(4)	(5)	
Lab-Based Social Preferences	Evasion aversion	-0.000 (0.005)		0.001 (0.005)		
	Public goods	-0.001 (0.005)		-0.003 (0.005)		
	Dishonesty	0.000 (0.004)		0.000 (0.004)		
	Giving to strangers	0.009* (0.005)		0.007 (0.005)		
	Giving to charity	0.014*** (0.005)		0.013*** (0.005)		
	Giving to government	0.016*** (0.004)		0.008 (0.005)		
	Trust	-0.005 (0.005)		-0.004 (0.005)		
	Ultimatum	0.006 (0.004)		0.005 (0.004)		
	Inequality aversion	0.001 (0.004)		0.002 (0.004)		
	Meritocratic preferences	0.003 (0.005)		0.004 (0.005)		
	Impatience	0.007 (0.004)		0.006 (0.005)		
	Risk aversion	0.002 (0.005)		0.003 (0.005)		
	Tax morale		-0.003 (0.004)	-0.005 (0.005)		
	Workers' evasion		0.004 (0.006)	0.005 (0.005)		
Firms' evasion		0.020*** (0.005)	0.019*** (0.005)			
Survey-Based Social Preferences	Trust in others		0.004 (0.005)	0.005 (0.005)		
	Trust in government		-0.002 (0.006)	-0.002 (0.006)		
	Government efficiency		0.007 (0.006)	0.005 (0.006)		
	Preferences for redistribution		-0.001 (0.005)	-0.002 (0.005)		
	Left-right spectrum		-0.011** (0.006)	-0.008 (0.006)		
	Perceived progressiveness		-0.001 (0.004)	0.000 (0.004)		
	Desired progressiveness		0.012** (0.006)	0.011** (0.006)		
	Perceived inequality		0.003 (0.005)	0.002 (0.005)		
	Role of luck		0.007 (0.005)	0.006 (0.005)		
	Peer				0.470*** (0.017)	
				0.164*** (0.025)		
Economic	MTR				0.919*** (0.124)	
	Log. of labor income				-0.066*** (0.011)	
	Experienced filer				0.050*** (0.012)	
AUC	0.546	0.572	0.575	0.899	0.617	
Pseudo R ²	0.008	0.014	0.018	0.386	0.021	
Observations	6,078	6,078	6,078	6,078	6,078	

Notes: Each column corresponds to a different Probit regression. Marginal effects with robust standard errors in parentheses. The dependent variable indicates whether the taxpayer under-reported wages in 2016. All the survey-based and lab-based were normalized to have a mean of 0 and standard deviation of 1 (for their definitions, see the notes to Table 2). *Current coworkers under-reporting* indicates the share of current coworkers that are wage under-reporters in 2016. *Former coworkers under-reporting* corresponds to the share of former coworkers that are wage under-reporters in 2016. Since not every individual has coworkers, we include a dummy indicating not having coworkers as a control in column (4). *MTR* corresponds to a continuous variable that reflects the marginal tax rate the individual faces according to the third-party reported salary (from 0 to 0.3). *Log. of labor income* is the third-party reported salary in logs. *Experienced filer* corresponds to a dummy indicating having filed a tax return before 2016. For each column, we include the out-of-sample AUC.

Online Appendix (For Online Publication Only)

Bergolo, Leites, Perez-Truglia, and Strehl-Pessina

“What Makes a Tax Evader?” January 28, 2026

A Further Details and Results

A.1 Measuring Tax Evasion: Additional Results

This section explores whether under-reporting behavior documented in Section 3.2 correlates with reporting wages from multiple employers. To examine this possibility, Figure A.1 presents results as in Figure 1 but by splitting the sample according to the number of employers. Panel (a) of Figure A.1 depicts discrepancies in wage reporting among taxpayers who have a single employer, while panel (b) does the same for the subsample of taxpayers with multiple employers. We find a slightly higher rate in wage under-reporting among taxpayers with multiple employers relative to those with a single employer: 17.4% vs. 14.6%. However, we also find higher rates of wage over-reporting in taxpayers with more than one employee: 5.7% vs. 3.1%. These results suggest that while having multiple employers might create more opportunities for misreporting, the magnitude of discrepancies is small and their direction seems to reflect unintentional mistakes.

A.2 Measuring Social Preferences: Full Survey Questions

In this subsection, we provide the full survey questions used to measure social preferences, summarized in Table 1. A sample of the full questionnaire is provided in Appendix C.

A.2.1 Lab Measures

The respondent completes a series of laboratory games implemented as a series of incentivized survey questions. Right before starting, respondents see a screen explaining how the

incentives work and emphasizing the importance of answering carefully and honestly because the games offer a real financial incentive: upon completion of the study, 50 respondents will be randomly selected to have one of their choices “executed”. In other words, for each participant, one of their incentivized decisions will be randomly chosen, and the payouts will be calculated based on that decision. For example, in the dictator game, if the first player chooses to split \$U 1,000 equally between herself and the second player, the researchers would pay \$U 500 to each of them.⁵³ For those who are not among the 50 chosen respondents, their decisions remain hypothetical. The method of “executing” a random sample of choices is a common feature in laboratory experiments. Moreover, there is direct evidence that the probability with which each choice is “executed” does not matter as long as it is positive (Carson and Groves, 2007; Charness et al., 2016). To make the real financial consequences more salient, the following reminder message is displayed at the bottom of the screen for each of the incentivized questions: “There is a chance that this decision will be executed and therefore your choice could have real consequences.”

We include the following adaptations of well-known laboratory games that are designed to measure specific traits (e.g., altruism, honesty) that could affect the decision to evade taxes.

- **Evasion aversion:** We designed this game specifically to measure attitudes towards tax evasion in an incentive-compatible way. In this game, the subject (player A) decides how to assign money to two random taxpayers (player B and player C). Player A learns that player B thinks it is never acceptable to evade taxes and that player C thinks it is sometimes acceptable to evade taxes.⁵⁴ Player A then decides how much of \$U 1,000

⁵³ Most games involve two players, but some games have more than two players. In all games, one or two players make decisions that affect the final allocation to two or more players. Games for which more than one player has choices are played sequentially. In all cases, the players and their choices are anonymous. As explained below, in those games that required a previous move by another player, we used choices made by a separate group of students who played the same laboratory games.

⁵⁴ The draw of the respondents’ choices that were executed with real consequences was implemented once the field work ended. Player B is randomly selected from the group who responded that “it is never acceptable to evade taxes”, while player C is randomly selected from the group that responded “it is sometimes acceptable to evade taxes”.

to give to player B (with the remainder going to player C), anywhere from \$U 0 to \$U 1,000 in \$U 250 increments. Regardless of the decision, player A receives \$U 1,000. The share of the endowment given to player B, who thinks evading taxes is not justified, constitutes our incentivized measure of aversion to tax evaders. The hypothesis is that individuals who are more averse to tax evaders will be less likely to evade taxes.

- **Public good:** In the literature on tax compliance, the decision to evade taxes is typically modeled as the decision to become a free-rider in the context of a public good provision (Cowell and Gordon, 1988). Thus, we include a simple variant of the public good game. Player A is paired with four random taxpayers. Each of the five players must decide how much of their \$U 1,000 endowment to contribute to the public good, from \$U 0 to \$U 1,000 in increments of \$U 250, knowing that the total contribution will be doubled and then divided equally among the five participants.⁵⁵ The share of the endowment contributed to the common pool measures the willingness to cooperate in the provision of public goods. The hypothesis is that individuals who contribute more to the public good will be less likely to evade taxes.
- **Dishonesty:** To check whether dishonest people evade taxes, we included a classic lab measure of honesty: the dice game (Fischbacher and Föllmi-Heusi, 2013). The respondent is asked to report the outcome of a (private) die roll and then receives a reward that is proportional to the number reported, thus incentivizing to over-report the number rolled. The hypothesis is that individuals who are more likely to lie in the dice game are also more likely to evade taxes. Moreover, to serve as a benchmark, we include a game where individuals can earn more by lying, but they have to lie about information that is verifiable: we ask subjects whether they were born in an even or odd year and explain that we will pay \$U 500 if they answered an odd year or \$U 2,500 if they answered an even year. Since we observe the year of birth in the administrative

⁵⁵ The group of 5 taxpayers is randomly selected once the entire survey is completed. The game is then executed based on the responses provided by the selected taxpayers.

records, we can measure directly whether the subjects are lying or not. The hypothesis is that individuals would be much less likely to lie about information that is ex-post verifiable, such as the year of birth.

- **Giving to strangers:** Another reason why individuals may choose not to evade taxes is that they do not want to harm the individuals who benefit from the services that are financed through those tax revenues. Thus, we include three variants of the dictator game to measure the respondent's generosity towards groups that can benefit from tax revenues. In this first variant, the respondent chooses how much of a \$U 1,000 endowment to share with a stranger (another random taxpayer), on a scale from \$U 0 to \$U 1,000 in increments of \$U 250.⁵⁶ The hypothesis is that individuals who are more generous will be less likely to evade taxes.
- **Giving to charity:** One could argue that the tax revenues do not benefit a random stranger but are disproportionately likely to benefit the neediest in the population. In this game, respondents can donate part of their endowment to a well-known nonprofit organization that provides charitable education services. Players choose how much of their \$U 1,000 endowment to donate on a scale from \$U 0 to \$U 1,000 in increments of \$U 250. The hypothesis is that individuals who are more generous will be less likely to evade taxes.
- **Giving to government:** Some individuals may want to help people in need but do not want to pay taxes because they believe that those tax dollars are spent inefficiently (Alm et al., 1992, 2012). For this reason, we include yet another variant of the dictator game in which the respondent can make a donation to the government or to a nonprofit organization. To make it comparable to the donation to the charity, the recipient of this donation is a government agency that provides education services comparable to those provided by the charity. Respondents choose how to distribute donations between

⁵⁶ Player A is paired with another random taxpayer once the entire survey has been completed.

them on a scale from \$U 0 to \$U 1,000 in increments of \$U 250. The players receive \$U 1,000 regardless of their decision. The hypothesis is that individuals who are more generous toward the government will be less likely to evade taxes.

- **Trust:** An honest taxpayer may mistrust others and suspect that they evade, which results in the typical free-rider problem (Alm et al., 2012; Fehr, 2009). To capture this phenomenon, we include the standard trust game (Berg et al., 1995). The subject (player A) decides whether to invest all or none of a \$U 1,000 endowment in another randomly selected taxpayer (player B). If player A does not invest, both players receive \$U 1,000 each. If player A invests, player B receives \$U 4,000 and must decide how to split the earnings: either both players receive \$U 2,000, or player B keeps the entire \$U 4,000).⁵⁷ Choosing to invest indicates that the subject is willing to trust others. The hypothesis is that individuals who are more trusting will be less likely to evade.
- **Ultimatum:** Some studies argue that the decision to evade taxes may be related to social preferences, such as fairness and equality concerns (Alm et al., 1995; Andreoni et al., 1998). We thus include a series of games related to social preferences. First, we include a simple version of the ultimatum game. The respondent (player A) is paired with player B, who proposes how to split a \$U 1,000 endowment: \$U 800 for player B and \$U 200 for player A.⁵⁸ Player A may accept or reject the offer (in which case both players get nothing). The choice to reject the offer measures whether the subject cares about fairness. The hypothesis is ambiguous: depending on whether the individual thinks that tax evasion increases or decreases fairness, the decision in the ultimatum game may be positively or negatively correlated to tax evasion. An individual who believes to have been treated unfairly by society may see tax evasion as an opportunity to make things fair. On the other hand, an individual could see tax

⁵⁷ Player A is paired with another randomly selected taxpayer once the entire survey has been completed.

⁵⁸ In this case, player B is randomly selected from a sample of Economics students who previously participated in laboratory games. A sub-sample played the role of player B, deciding how to distribute \$U 1,000 between themselves and an anonymous player.

evasion as intrinsically unfair to fellow citizens. Indeed, the hypothesis is ambiguous not only for this ultimatum game but for all the following games regarding social concerns.

- **Inequality aversion:** In this game, the respondent (player A) must choose between two possible allocations for two randomly selected taxpayers (players B and C). Player A can either allocate \$U 250 to player B and \$U 250 to player C or opt for an unequal split of \$U 250 to player B and \$U 750 to player C.⁵⁹ Regardless of the decision, player A receives \$U 1,000. Choosing an equal split indicates that the player values equality over efficiency. The hypothesis is, again, ambiguous: individuals who prioritize equality may be either more or less likely to evade.

- **Meritocratic preferences:** According to a meritocratic fairness view, more productive workers should earn higher income than less productive ones (Almås et al., 2020). In this game, the subject (player A) decides how to split an endowment of \$U 1,000, in increments of \$U 250, between two randomly selected players (B and C). Player A is informed that player B performed a simple task on the computer for 15 minutes, while player C did nothing.⁶⁰ Giving a higher share of the endowment to player B (the one who worked) would reveal that player A is more willing to tolerate inequality arising from “effort” rather than “luck”, which is consistent with a meritocratic view. The hypothesis remains ambiguous: individuals with a meritocratic view may be either more or less likely to evade.

- **Impatience:** Because the potential costs of evading taxes (e.g., fines, reduced provision of public goods) occur in the future, less patient individuals may be more tempted to evade. We measure impatience using the “staircase” procedure for intertemporal choice proposed in Falk et al. (2018), in which subjects make up to six sequential

⁵⁹ Player A is paired with other randomly selected taxpayers B and C once the entire survey has been completed.

⁶⁰ In this case, this refers to a sample of Economics students who previously participated in laboratory games, a subset of whom performed a simple 15-minute task on a computer.

choices to assess their willingness to accept a delayed payment over a year. Specifically, participants engage in a series of up to six binary choices between an immediate payment and a larger payment “in 12 months.” In the first question, participants had to decide between receiving \$U 1,000 in June 2019 or receiving \$U 1,200 in June 2020. The immediate payment \$U 1,000 remained constant in all subsequent five questions, while the delayed payment was increased in \$U 200 in each round until it reaches \$U 2,200 in the sixth round. The hypothesis is that more impatient individuals will be more likely to evade.

- **Risk aversion:** The standard model of tax evasion views it as a risky investment (Allingham and Sandmo, 1972). In this framework, evasion resembles a risky lottery: there is a high probability of retaining the evaded amount but also a certain probability of incurring significant costs (e.g., fines) if caught. Consequently, the decision to evade may depend on the individual’s degree of risk aversion. We measure risk aversion using the staircase procedure proposed in Falk et al. (2018), where subjects make up to five sequential choices that allow us to identify the certainty equivalent for a risky lottery. More specifically, participants decide about a series of five binary choices. We elicited the risk aversion parameter by asking participants to make a sequence of 5 choices between guaranteed payment (\$U 1,000) and a lottery but then varying the expected value of the lottery. The first lottery starts at \$U 2,000 with a 50 percent chance and \$U 0 with a 50% chance. The sequence of choices establishes a fixed sure payment and an increasing expected value of the lottery (\$U 1,250, \$U 1,500, \$U 1,750 and \$U 2,000), which establishes a trade-off between sure and risky payments. For the the precise sequence of questions see the Game 13 in Appendix C. The hypothesis is that more risk-averse individuals will be less likely to evade.

A.2.2 Survey Measures

We include a series of questions used in social science to measure individual preferences and beliefs (e.g., stated tax morale, preferences for redistribution) that may predict the decision to evade taxes. Each measure is summarized briefly below:

- **Tax morale:** We ask, “How justifiable do you think it is to evade taxes?”. Responses range from “never”, “sometimes”, and “always”. This type of survey question is the most widely used in the literature on tax morale (Torgler, 2005; Cummings et al., 2006; Frey and Torgler, 2007; Halla, 2012). The hypothesis is that individuals who think it is sometimes or always justifiable to evade taxes will be more likely to do so.
- **Workers’ evasion:** We use a simple measure of descriptive beliefs about social norms to achieve compliance. After a brief explanation of how employees may under-report wages, we ask individuals to guess the percentage of employees who under-report their wages using bins from “0-10%” to “90-100%”. To encourage honest guesses, we include this and the following question as part of the incentivized games. Subjects are told that we will compare their guesses to the results from a recent academic study, and if they choose the correct option, they could win \$U 1,000. The hypothesis is that individuals who perceive high rates of wage under-reporting will be more likely to under-report themselves, presumably due to weaker perceived compliance norms.
- **Firms’ evasion:** In addition to perceptions about evasion rates among employees, we also obtain the perceived evasion rate among firms. Since the VAT is the largest source of taxation for firms, we ask respondents to guess the average VAT that companies under-report. As with the previous question, we provide a potential \$U 1,000 reward for an accurate guess. The hypothesis is that individuals who perceive high evasion rates among firms will be more likely to evade taxes themselves, due to beliefs about compliance norms or perhaps fairness concerns.⁶¹

⁶¹ Moreover, after eliciting these prior perceptions about workers and firms, we embed an information-

- **Trust in others:** In addition to measuring interpersonal trust with a laboratory game, we also include the standard attitudinal survey question on a 3-point scale used in the American General Social Survey and the World Values Survey: “Generally speaking, would you say that most people can be trusted, or that one can never be careful enough when dealing with others?” The hypothesis is that individuals who are more trusting will be less likely to evade taxes.

- **Trust in government:** Compared with interpersonal trust, trust in the government may be more important to foster tax compliance (Feld and Frey, 2002). Thus, we include the following question: “Would you say that the government can generally be trusted to act correctly?” The responses on a 5-point scale range from “never” to “always.” The hypothesis is that individuals who trust the government more will be less likely to evade taxes.

- **Government efficiency:** Individuals may trust the government but think that tax revenue is wasted due to government inefficiency. We thus include the question: “Do you think that the government is efficient in the way it manages public resources?” The responses on a 4-point scale range from “very inefficient” to “very efficient.” The hypothesis is that individuals who think the government is efficient will be less likely to evade taxes.

- **Preferences for redistribution:** Taxation plays a crucial role in the provision of public goods and the redistribution of income. Consequently, individuals may be more willing to pay taxes if they agree with the goal of income redistribution (Castañeda et al., 2020). We ask respondents to rate their agreement with the following statement on a 4-point scale, ranging from “strongly agree” to “strongly disagree”: “Governments should take steps to reduce the income gap between rich and poor.” The hypothesis is

provision experiment to create exogenous variation in the posterior beliefs. Unfortunately, due to unforeseen challenges, we have not been able to access the administrative data for the post-survey period and thus, we cannot estimate the effects of the experiment yet.

that individuals who support income redistribution will be less likely to evade taxes.

- **Left-Right Spectrum:** Individuals may want to evade taxes for ideological reasons. For instance, those who believe that taxation is ethically wrong may be less inclined to pay their taxes (Doerrenberg and Peichl, 2022). To assess ideological leanings, we use a standard measure of a public opinion research question based on self-reported positions on an 11-point scale, with a midpoint of 5: “In politics, we usually speak of *left* and *right*. On a scale where 0 is the left and 10 is the right, where would you be located?” The hypothesis is that individuals positioned further to the right on the political spectrum may be more likely to evade taxes.
- **Perceived progressiveness:** Individuals may be reluctant to pay taxes because they disagree with how the tax burden is distributed across the population. We adapt a question from Kuziemko et al. (2015), that elicits perceptions of the average tax rate for three different economic groups in the country: “In 2017, what percentage of their gross personal income do you think that the following social groups actually paid in personal taxes, on average?” Respondents estimate the tax rates for the lower class (the bottom 20% of the income distribution), the middle class (the middle 60%), and the higher class (the top 20%). For each group, responses are recorded as a continuous variable ranging from 0% to 100%. To provide context, respondents are informed that the average tax rate for the entire population is 21%. We define perceived progressiveness as the difference between the perceived tax rates paid by the higher and lower classes. Based on the model proposed by Doerrenberg and Peichl (2013), the hypothesis is that individuals who perceive the tax schedule as more progressive will be less likely to evade.
- **Desired progressiveness:** Perhaps what matters most is not whether individuals perceive the tax schedule as currently progressive but whether they believe it should be more or less progressive. We measure desired progressiveness by asking respondents

to rate their agreement with the following statement on a 4-point scale (from “strongly agree” to “strongly disagree”): “Tax rates should be more progressive (that is, higher for the rich and lower for the poor)”.⁶² Based on the model proposed by Doerrenberg and Peichl (2013), the hypothesis is that individuals who favor a more progressive tax schedule will be less likely to evade.

- **Perceived inequality:** We include a lab game to assess attitudes towards inequality. To complement this measure, we elicit tolerance for inequality using a question widely employed in the literature on preferences for redistribution: “What do you think about income differences between the rich and the poor in Uruguay?” Responses are recorded on a 3-point scale (“too low”, “about right”, or “too high”). The hypothesis remains ambiguous: individuals who care more about equality may be more or less likely to evade.
- **Role of Luck:** To complement the lab game measuring inequity concerns, we include a question adapted from Kuziemko et al. (2015) that asks whether luck or effort is more important in explaining why some individuals are rich and others are poor. Responses are coded as 2 if luck is deemed important for both being rich and being poor, 1 if luck is important for one but not for the other, and 0 if luck is considered important for neither. The hypothesis is ambiguous: individuals who attribute greater importance to luck may be either more or less likely to evade taxes.

A.3 Variation in Lab and Survey Measures of Social Preferences: Additional Results

A.3.1 Lab Measures

Figure A.2 presents the raw distribution of responses for each of the 12 lab measures used in this study. Each question shows variation in individual responses. For example, panel

⁶² This is a simplified version of a question used in Kuziemko et al. (2015) to measure the ideal tax rate.

(d) of Figure A.2 shows that in the dictator game, around 24.1% of the respondents share 0% of the endowment with their partners, 21.0% of the respondents share 25%, 50.9% share exactly half of the endowment and 4.0% share more than half. The question with the least variation is the inequality aversion game (panel (i) of Figure A.2), in which most subjects (85.3%) choose an even split.

One game that deserves special attention is the dice game. Under the null hypothesis that everyone is honest, we would expect one sixth of the respondents to fall into each option 1 through 6. Panel (c) of Figure A.2 and panel (a) of Figure A.6, however, show that this is not the case: while the highest number (6) is reported almost exactly one sixth of the time, low numbers (1 and 2) are reported less frequently than one sixth of the time and medium to high numbers (3 to 5) are reported more frequently than one sixth of the time. In fact, this distribution of responses mimics closely what has been reported in other studies based on different populations. The intuition is that, while we can reject that everyone responds honestly, most people seem to be honest. Furthermore, when people are dishonest, they seem to avoid taking full advantage of the lie (i.e., lying about rolling a 6). We summarize these results by associating the “excess mass” in numbers 3 to 5 to the probability of lying. For example, 22.6% of the respondents pick answer 4, but we only expect 16.7% to actually get that number by chance, so the probability of having lied conditional on reporting number 4 is 26.3% ($= \frac{22.6-16.66}{22.6}$). According to this rough estimate, about 11% of the subjects lied in the dice game. Recall that we include an additional game to use as a benchmark, in which we give individuals incentives to lie about verifiable information (whether their year of birth is an even or odd number). Although individuals who were born on an even year had a strong financial incentive to misreport that they were born on an odd year, only 3% of respondents do so (for more details, see Appendix A.4 and panel (b) of Figure A.6). This result is consistent with findings in the literature that individuals are much less likely to lie about things that can be observed and verified by others (Crede and von Bieberstein, 2020).

We also find that the variation between different lab measures is mostly orthogonal to

each other. For example, pairwise correlations between lab measures range from -0.140 to 0.260, with an average correlation of 0.016 (see Appendix A.4). In other words, rather than measuring the same trait repeatedly, these games seem to measure different features of individual preferences.

We also provide a validation test for these lab measures. We benchmark the average choices in these games against the average responses reported in (arguably) similar laboratory experiments performed in other countries, mainly from Latin America.⁶³ Panel (a) of Figure A.4 presents the results for all 12 lab measures. For ease of interpretation, the variables are constructed to take values from 0 to 1.⁶⁴ For example, the variable for giving to strangers is equal to the fraction of the endowment that the dictator shares with a stranger, with 0 corresponding to nothing and 1 to everything.

The results in panel (a) of Figure A.4 indicate that the lab measures align reasonably well with the corresponding measures from other studies. For example, the average subject in our dictator game shares 34.6% of the budget with a partner. In comparison, Engel (2011) reports that, on average, dictators in their study shared 28.3% of the budget. Regarding the dice game, 11% of the respondents lie in our sample, compared to 21.8% in Gächter and Schulz (2016). More generally, the average choices in our experiment are significantly correlated with those in benchmark studies (correlation coefficient of 0.763, p-value=0.004). Note that we should not expect the average behavior to be identical across each pair of studies. For example, there are differences in population type (e.g., a random sample of taxpayers from Uruguay versus undergraduate students from the United States), the stakes involved, and the language and framing of the game. Despite these differences, it is reassuring that the average behavior in our sample is largely consistent with the average behavior in the literature.

⁶³ For the lab measures used in this study there are no previous comparable studies for Uruguay. We use previous studies with similar samples prioritizing Latin American countries as benchmark.

⁶⁴ The only exception is the variable *impatience*, which can take values from 0 to 1.2. See the notes to Figure A.4 for a full list of variable definitions.

A.3.2 Survey Measures

Figure A.3 presents the raw distribution of responses to the 12 survey measures, again showing ample variation across individuals. For example, in response to the question about their tax morale (panel (a) of Figure A.3), 75.8% of subjects report that it is never justifiable to evade taxes, compared to 22.7% who report that it is sometimes justifiable and 1.5% who respond that it is always justifiable. We again observe that the variations between these different survey measures are mostly orthogonal to each other, with pairwise correlations ranging from -0.47 to 0.61 and an average correlation of 0.04 (see Appendix A.4 for more details). In other words, these survey questions seem to measure different features of individual preferences and beliefs.

We further validate the survey measures by benchmarking them against other sources of survey data from Uruguay. Panel (b) of Figure A.4 presents this comparison for 10 survey measures in our study for which we could find a benchmark. As in panel (a) of Figure A.4, panel (b) defines the survey measures to take values from 0 to 1 for ease of exposition. The results from panel (b) of Figure A.4 show that, again, the average responses to the survey questions in our sample align reasonably well with the corresponding responses in other Uruguayan surveys. For instance, in our question on tax morale, 75.8% of respondents say that it is never justifiable to evade taxes. Similarly, in the 2011 World Values Survey for Uruguay, 76.5% of respondents declared that it is never justifiable to evade taxes. This result suggests that participants' responses are not biased by strategic behaviors to prevent potential responses from the monetary authority.

The correlation between the average survey responses in our experiment and the benchmark studies is quite significant (0.76, with a p-value=0.011). The distribution of responses is unlikely to be identical due to differences in how the surveys were implemented and how respondents were recruited. For example, the benchmark surveys tried to recruit a representative sample of the whole country, whereas our survey was directed towards individuals who file tax returns and thus tend to belong to the upper echelons of the income distribu-

tion. However, despite these differences, it is reassuring that responses are largely consistent across surveys.

A.4 Lab and Survey Measures of Social Preferences: Additional Results

Table A.2 shows descriptive statistics for the 24 lab- and survey-measures and the sample of 6,078 observations. Furthermore, panels (a) and (b) of Figure A.4 show that the average responses in our survey are similar than the results reported in (arguably) similar studies.

The first 12 rows in Table A.2 show summary statistics for the variables based on incentivized lab games. Note that most of participants in our sample are averse to tax evaders and in average assign 83.1% of the endowment to the players that think evading taxes is never justifiable. Furthermore, most of the participants are willing to cooperate in the provision of a public good, and they prefer to assign more money to Charity institution both than a stranger or a government agency that provides education services comparable to those provided by the charity. The distribution of the trust game is divided almost evenly into two parts. Regarding social preferences, inequality aversion attitudes and meritocratic views dominate among the participants.

The next 12 rows of Table A.2 show the same statistics for the variables based on survey-measures. Our stated tax morale measure also supports the notion that most participants think that evading taxes is never justifiable (the average is 2.74 and the 25th percentile is 3). The average perception of Workers' evasion is 35%, while the average perceived share of value added tax that is evaded by firms is 43% (we assume uniform distribution within each bin to estimate both averages). The question about trust in others shows a similar pattern than the corresponding lab measure. Most of the respondents do not trust that the government acting properly and perceive a relatively low efficiency of the government. Regarding left-right political ideology, the distribution of responses is barely skewed to the left with an average of 4.2. Regarding inequality, most of participants perceive a relative high

income inequality in Uruguay and prefer a more progressive tax schedule. Finally, despite the mentioned dominance of meritocratic view, most of the respondents believe that luck is more relevant than effort in determining economic success in life.

For an alternative measure of honesty, we can compare whether the individual reported to be born on an even or odd year to what the administrative records indicate. We find that 95.5% of subjects respond truthfully to this question: i.e., consistent with the administrative records. Around 2.9% of subjects misreport in the direction that is most convenient for them: i.e., they claim to have been born on an odd year (which qualifies them for a \$U 2,500 reward) even though according to the administrative records they were actually born in an even year (which would have qualified them for a \$U 500 reward instead). The remaining 1.6% misreported but in the direction that is not convenient for them: i.e. they claimed to have been born on an even year while in reality they were born on an even year. Given how small this share is (1.6%), it is plausible that they misreported by mistake (recall that 5.96% do not pass the attention check at the end of the survey) or it could also be attributed to rare errors in the administrative records. We can compare the tax evasion among the 2.9% of subjects who cheated in the game about their birth year and the 95.5% who did not cheat. The average share of evaders is 9.8% and 13.6%, respectively, and the difference is statistically insignificant (p -value=0.154). This evidence indicates that cheating in this game does not predict who is more likely to cheat on their taxes.

Finally, Figure A.5 shows the pairwise correlations coefficients for the 24 lab- and survey-measures. The blue and red hue in cells of the matrix indicate the positive and negative correlations, respectively, while the higher density of the color, the greater the absolute magnitude of the coefficients. Three main results. First, the pairwise correlations between different lab measures with an average correlation of 0.016. It range from -0.140 (*Trust* and *Risk aversion*) to 0.260 (*Giving to strangers* and *Giving to charity*). Precisely this last variable is the only lab-measure that has a correlation higher (in absolute value) than 0.1 with other lab measures (more precisely, with *Giving to Strangers*, *Giving to Government*,

Trust, *Ultimatum*, and *Meritocratic preferences*). It is important to note that our measure of tax aversion shows a low correlation with the others lab-measures (its highest correlation is with meritocratic preferences, at 0.221).

Second, the pairwise correlation between different lab measures is higher than the commented correlation for lab-based measures. For example, the pairwise correlations between survey measures range from -0.465 (*Government efficiency* and *Left-Right spectrum*) to 0.596 (*Trust in Government* and *Government Efficiency*). There are positive and relatively high pairwise correlations between variables associated with *Trust in others*, *Trust in the government*, *Preferences for Redistribution* and *Desired progressiveness*, while *Left-Right spectrum* shows a negative correlation with this group of variables. Finally, stated tax morale shows a positive correlation with Trust in Government (0.186) and negative with Perceived worked evasion and firm evasion (-0.122 and -0.115 respectively).

Finally, we found a relatively high pairwise correlation between some lab measures and survey measures. For example, stated tax morale presents a correlation of 0.374 with evasion aversion. While *Trust in others*, *Trust in government* and *Government Efficiency* present a positive and relatively high correlation coefficient with *Giving to Strangers*, *Giving to Government*, *Trust* and negative with *Meritocratic preferences*. These results are relevant the instrumental variables approach carried out in Appendix A.7 based on the Obviously Related Instrumental Variables model. In this section we treat our lab measures as endogenous variables and some closely-related survey measures as their corresponding instrumental variable.

A.5 Variation in Peer Behavior Measures of Tax Evasion

In this section, we provide evidence on the sources of variation in our measures of peer tax evasion. Intuitively, differences between the networks of current and former coworkers arise from two main sources. First, some employees move from one firm to another during the sample period. Second, even if an employee remains with the same employer throughout,

the network of former coworkers will differ from that of current coworkers as long as other employees join the firm during that period.

We begin by presenting descriptive statistics suggesting that both sources of variation are relevant in our context. For each year from 2009 to 2016, between 65% and 83% of employees in our survey sample ($N = 6,078$) worked at a firm that hired new employees who filed tax returns, thereby potentially altering their former coworker network. In addition, for each year from 2009 to 2016, between 22.9% and 31.4% of employees in our survey sample ($N = 6,078$) joined a new firm, which could also change their former coworker network.

To further illustrate this point, we present an additional exercise in Figure A.9. This figure shows two heat plots summarizing the correlation between under-reporting among former and current coworkers. Panel (a) reports the correlation for the full survey sample ($N = 6,078$), while panel (b) restricts the sample to individuals who stayed with the same employer over the entire analysis period ($N = 1,798$). In panel (b), variation in former-coworker under-reporting for individual i arises solely from other employees joining i 's firm(s). Thus, if the correlation coefficient in panel (b) were equal to 1, it would imply that all differences between former and current coworkers' under-reporting for individual i are driven by individual i moving across firms. If the correlation coefficient were the same as in panel (a), it would imply that these differences are driven entirely by other employees joining individual i 's firm(s). Finally, if the correlation coefficient in panel (b) is higher than in panel (a) but still below 1, it would indicate that both sources of variation are relevant.

As Figure A.9 shows, the shares of current and former coworkers under-reporting are highly correlated but far from perfectly so, with a correlation coefficient of 0.71. The results in panel (b) suggest that both sources of variation are relevant: even when we restrict the sample to individuals who always worked at the same firm, the correlation in under-reporting between current and former coworkers is 0.74, which remains significantly below 1.

A.6 Pairwise Correlations: Robustness Checks

This section shows that the baseline correlation analysis from Table 2 in the main text is robust to alternative outcome variables. Table A.3 presents the estimated pairwise correlation between different measures of tax evasion and our measures of social preferences, peer behavior, and economic factors. The last row of this table shows the mean value of the outcome measures.

Column (1) in Table A.3, replicates column (1) in Table 2, and serves as a benchmark for comparison purposes. Column (2) is identical to column (1) except that the outcome captures the intensive margin of wage under-reporting instead of just the extensive margin. More specifically, we define this outcome variable as the discrepancy between the wages reported in the taxpayer’s tax return and the employer’s third-party report as percent of individual tax liability. Column (3) is identical to column (1) instead that tax evasion is measured as deductions over-reporting instead of wage under-reporting. More precisely, we define this outcome as an indicator variable that takes the value one if the individual over-reported automatic deductions and zero otherwise.⁶⁵ Column (4) uses withholdings over-reporting instead of wage under-reporting as the tax evasion outcome. We define this outcome as an indicator variable for whether the taxpayer over-reported withholdings in the tax return relative to the employer’s third-party report.⁶⁶ Column (5), instead, uses cheating on more than one margin as the tax evasion outcome. We define this outcome as an indicator variable of whether the individual evaded taxes on more than one margin—i.e., wages, deductions and withholdings. Column (6) uses the number of margins the individual evades as the main outcome variable. We define this outcome as the number of margins the

⁶⁵ For the individuals who are not wage accurate-reporters, we define deduction over-reporting by comparing automatic deductions reported by the taxpayer to the automatic deductions that the taxpayer should have reported according to his or her self-reported wage. This is not the only possible definition, however: we could also define deduction over-reporting by comparing the deductions reported by the taxpayer to the deductions from the third-party report.

⁶⁶ For the individuals who are not wage accurate-reporters, we define withholdings over-reporting by comparing the withholdings reported by the taxpayer to the withholdings that the taxpayer should have reported according to his or her self-reported wage. As in the case of deductions over-reporting, however, this is not the only possible definition.

individual used to evade.

The results in columns (2)–(6) of Table A.3 are similar to those in column (1). All the correlation coefficients for the social preferences measures are small in magnitude and tightly estimated around zero. For example, the correlation coefficient for stated tax morale is -0.006 in the baseline results in column (1), while the corresponding coefficients in columns (2)–(6) are -0.011, 0.002, 0.021, 0.017 and 0.012, respectively. Additionally, the correlation coefficients for our measures of peer behavior are economically and statistically significant. For instance, the correlation coefficient for current coworkers evasion is 0.599 in the baseline results in column (1), while the corresponding coefficients in columns (2)–(6) are 0.446, 0.293, 0.314, 0.177, and 0.285, respectively. Finally, the correlation coefficients for our measures of economic factors are statistically and economically significant, but smaller in magnitude relative to those of the peer evasion measures.

A.7 Pairwise Correlations: Accounting for Measurement Error

This section presents two standard strategies to account for attenuation bias due to the potential measurement error in the lab measures.⁶⁷ The results show that it is unlikely to change the main conclusions from the baseline correlation analysis from Table 2 in the main text.

The primary strategy, described in Gillen et al. (2019), involves using a correction factor for attenuation bias based on the correlation between two elicitation of the same lab measure (commonly referred to as test-retest reliability). Since our survey does not elicit the same lab measure twice, we rely on related studies to estimate a range of potential values for the scaling factor.⁶⁸ Table A.4 summarizes the results of this strategy. Column (1) shows

⁶⁷ A related concern is that of temporal stability. However, previous studies suggest that these measures can be relatively stable (Stango and Zinman, 2020).

⁶⁸ One limitation of our data is the absence of multiple elicitation for the same lab measure. To address this, we employ the ORIV (obviously related instrumental variable) strategy, instrumenting the lab measure with a commonly used survey-based measure to estimate the behavioral parameter. However, a caveat of this approach is that it assumes the orthogonality of errors when the instrument may not fully satisfy the exogeneity condition. Even when failing to meet the orthogonality assumption, the instrumental variable

the correlation coefficient between each of the 12 lab measures and tax evasion (reproduced from column (1) of Table 2). Column (2) provides the range of scaling factors reported in other studies, while column (3) cites the data sources. Column (4) presents the rescaled bounds corresponding to each correlation coefficient. For 9 of the 12 measures, including key measures such as Evasion Aversion, Public Goods, and Dishonesty, the rescaled coefficients remain close to zero, even after adjusting for attenuation bias. However, for 3 out of the 12 measures (Giving to Charity, Giving to Government, and Ultimatum), the upper bounds of the rescaled correlations are relatively high, suggesting that we should interpret those null results with caution.

The second strategy we implement, also discussed in Gillen et al. (2019), is the Obviously Related Instrumental Variables (ORIV) model. Specifically, we treat our lab measures as endogenous variables and use closely related survey measures as their corresponding instrumental variables. For example, we instrument the lab measure Evasion Aversion using the survey measure of stated tax morale. Due to the limited availability of variables that could plausibly serve as obviously related instruments, we applied this strategy to 3 of the 12 lab measures. The results are presented in Table A.5. Each row corresponds to a separate regression with a single right-hand-side variable, normalized to have a mean of 0 and a standard deviation of 1. The dependent variable is an indicator for whether the taxpayer under-reported wages in 2016.

Columns (1) and (2) of Table A.5 show the endogenous variable and its corresponding instrument(s), respectively. As a benchmark, column (3) presents the OLS coefficients, which are related to—but should not be confused with—the pairwise correlations shown in column (1) of Table 2. Column (4) provides the 2SLS coefficients, which can be directly compared to the corresponding OLS coefficients in column (3). To diagnose weak instruments, we report the Stock and Yogo (2005) F-statistic, and in all regressions we confidently reject the

strategy is not rendered invalid. When the first stage indicates a high correlation, the coefficient produced is less biased than the one estimated by OLS (Gillen et al., 2019).

null hypothesis of weak instruments.⁶⁹ For the most important measure, Evasion Aversion, the results remain unchanged after accounting for measurement error. Specifically, both the OLS and 2SLS estimates of the slope (0.008 and -0.017, respectively) are close to zero and to each other. For Giving to Government, the coefficient remains similar after accounting for measurement error (0.048 in OLS vs. 0.105 in 2SLS). For Trust, the 2SLS slope (0.164) diverges more from its OLS counterpart (-0.008), indicating a more substantial 2SLS correction. However, even in this case, the 2SLS slope remains statistically insignificant.

A.8 Multivariate Regression: Robustness Checks

This section shows that the baseline multivariate regression analysis from Table 3 in the main text is robust to an alternative set of controls, outcome variables, and definitions.

Table A.6 presents regression results that use an alternative set of controls. Columns (1) and (2) replicate results shown in the same number of columns in Table 3, but add controls for taxpayers' sociodemographic characteristics to the model, including gender, age, education and income. By adding these controls, we partially account for the presence of potential unobserved differences that may be correlated with the explanatory variables and evasion choices, such as economic resources. The magnitude and significance of the estimated coefficients in the survey measures model (column 1) remain mostly stable, while the significance of some coefficients in the lab measures model changes (column 2). For instance, in column (2), the coefficient on desired progressiveness is no longer significant, and the coefficient on the left-right political spectrum is only significant at the 10 percent level once we control for demographics. Regarding predictive power, the AUC values are slightly larger (AUC=0.613 and AUC=0.616, respectively) once controls are added compared to the corresponding values of the baseline models (AUC=0.546 and AUC=0.572, respectively). Column (3) of Table A.6 replicates column (3) of Table 3 that includes all 24 lab and survey variables at once but adds a set of variables to account for the taxpayers' 2015-2016 percent

⁶⁹ We performed this exercise for three additional endogenous variables: Inequality Aversion, Public Goods, and Inequity Aversion. However, in these cases, we could not reject the null hypothesis of weak instruments.

change in wages. Panel (c) of Figure 2 shows that there are clear and significant differences in evasion patterns across groups of taxpayers that experience different wage changes. Thus, including a set of variables that account for such differences in the prediction model may strengthen prediction and/or change the coefficients of the baseline model. However, we find no such change. After including the dummies for income changes as controls, the estimated coefficients on the laboratory and survey measures remain similar in magnitude, sign, and statistical significance. The predictive power of the model increases with the addition of this extra variable, but just slightly: from an AUC of 0.575 in column (3) of Table 3 versus an AUC of 0.585 in column (3) of Table A.6. Finally, column (4) replicates column (3) of Table 3 but includes the economic factors (as in column (5) of Table 3) and peer behavior (as in column (4) of Table 3) as independent variables in addition to all 24 lab and survey measures of social preferences. Two results emerge from this model. First, it performs much better in predicting evasion choices than the baseline model (AUC=0.895 vs AUC=0.575). Second, including economic factors to the model that accounts for peer evasion (column (4) of Table 3) does not almost change its predictive power (AUC=0.895 vs AUC=0.899). These results confirm that an individual’s context plays a much bigger role in predicting who evades taxes than beliefs and values, and economic factors.

Table A.7 presents regressions results corresponding to different tax evasion measures in columns. At the bottom of the table, we present the traditional measure of predictive power: the out-of-sample AUC, Pseudo R^2 , and R^2 , depending on the estimation method. Column (1) in Table A.7 replicates column (3) in Table 3 and serves as a benchmark for comparison purposes. The outcome variable in column (2) is the percentage of wage under-reported. Columns (3), (4), and (5) use an indicator variable for over-reporting deductions, withholdings, and evading in multiple margins, respectively. Column (6) uses the number of margins the taxpayer cheats to the tax authority. The results of Table A.7 show that models with lab and survey measures that use alternative evasion measures as outcomes have low predictive power, similar to the baseline model in the main text, and do worse than the

model that includes variables to capture peer evasion (see column (4) in Table 3).

Table A.8 tests the robustness of the relationship between individuals' wage underreporting and contextual factors such as peer evasion behavior. Rows 1 and 2 in this table show the estimated coefficients for the variables of current and former coworkers' wage underreporting, respectively. Column (1) replicates column (4) in Table 3 for comparison purposes. Columns (2)–(4) replicate the result in column (1) but include controls for sociodemographic characteristics as in Table A.6, economic factors as in column (5) of Table 3, and lab and survey measures.

For the social learning mechanism, we expect individuals to learn primarily from coworkers in similar positions. Since our baseline model does not impose any restrictions on our sample of analysis to construct the coworkers' network, one might be concerned about the extent to which an individual knows all of her coworkers in a firm—particularly those in very large firms—or in different firms in case of holding multiple jobs. To check if this issue is problematic in our setting, we run baseline regressions that impose three alternative sample restrictions before the construction of the coworkers' network. First, column (5) of Table A.8 restricts the definition of coworkers to those who work in the individual's main firm.

Second, we restrict connections to those coworkers who have a wage income within a similar range as a way to approximate individuals in similar positions or occupations within the firm.⁷⁰ Columns (6)–(8) of Table A.8 present regression results from constructing coworker networks based on coworkers whose wage income varies within a range of 50%, 30%, and 20% around the individual's own wage, respectively.

Third, to assess the role of the largest firms, we follow the network literature and exclude connections formed in firms with more than a determined number of employees. Column (9) of Table A.8 presents results that exclude firms with more than 30,000 employees. Similarly, since large firms might be more likely to truthfully report workers' income, in columns (10)–(12) we replicate the analysis excluding individuals whose main job takes place in firms with

⁷⁰ Our data does not include information on title positions or occupations.

fewer than 5, 10, and 50 employees that file tax returns, respectively.

Fourth, to show that our results are not capturing other characteristics of sectors or firms' environment that could drive both coworker and individual reporting behavior, in columns (13)–(15) of Table A.8, we replicate the analysis excluding multiple-employer individuals, adding sector fixed effects, and adding firm fixed effects, respectively. As the results in the table show, the estimates are qualitatively consistent in all specifications: The coefficients are always positive, of a similar magnitude and highly statistically significant (p-value<0.001 in all specifications except for the one with firm fixed effects (column 15) where p-value=0.02). Specifically, the fact that the estimated coefficients of peer behavior almost do not change when considering economic factors and social preferences measures as controls (column (4)) highlights the role of peer evasion behavior as a relevant channel through which tax morale influences tax-evasion behavior. Importantly, the predictive power of the different models remains high and almost stable regardless of the controls we include and the type of restriction we impose to construct coworkers' networks, which strengthens the result that peer behavior is an important predictor of evasion choice.

Finally, since the time window used to construct the *former* coworker network could be too large or even look arbitrary, in our last robustness check for the role of peer behavior in predicting individual wage under-reporting we replicate the estimations using all the possible different time windows to construct the *former* coworker network. The results are presented in Table A.9. Columns (1)–(7) replicate the analysis using the 2009-2015 period—as in column (4) of Table 3—, 2010-2015, 2011-2015, 2012-2015, 2013-2015, 2014-2015, and 2015 alone, respectively, to calculate *former* coworker networks. The measure of *current coworkers under-reporting* is constant across specifications. Again, the results in this table show that the estimates are qualitatively consistent in all specifications: The coefficients are always positive, of a similar magnitude and highly statistically significant.

The last result provides *some* evidence in support of two potential (albeit speculative) hypotheses. First, employees may become less connected to their former coworkers over

time. Although we do not observe a perfectly monotonic pattern, the estimated effects of *former coworkers under-reporting* are larger when we focus on the most recent coworker network (column (7) of Table A.9) than when we consider *older* coworker networks (columns (1)–(6)). Second, once employees are exposed to their coworkers’ behavior and learn from it, the effect may persist even if they subsequently lose contact over time. This interpretation is consistent with the estimates of *former coworkers under-reporting* remaining large and statistically significant even when allowing for wide time windows to construct the *former* coworker network.

Appendix References

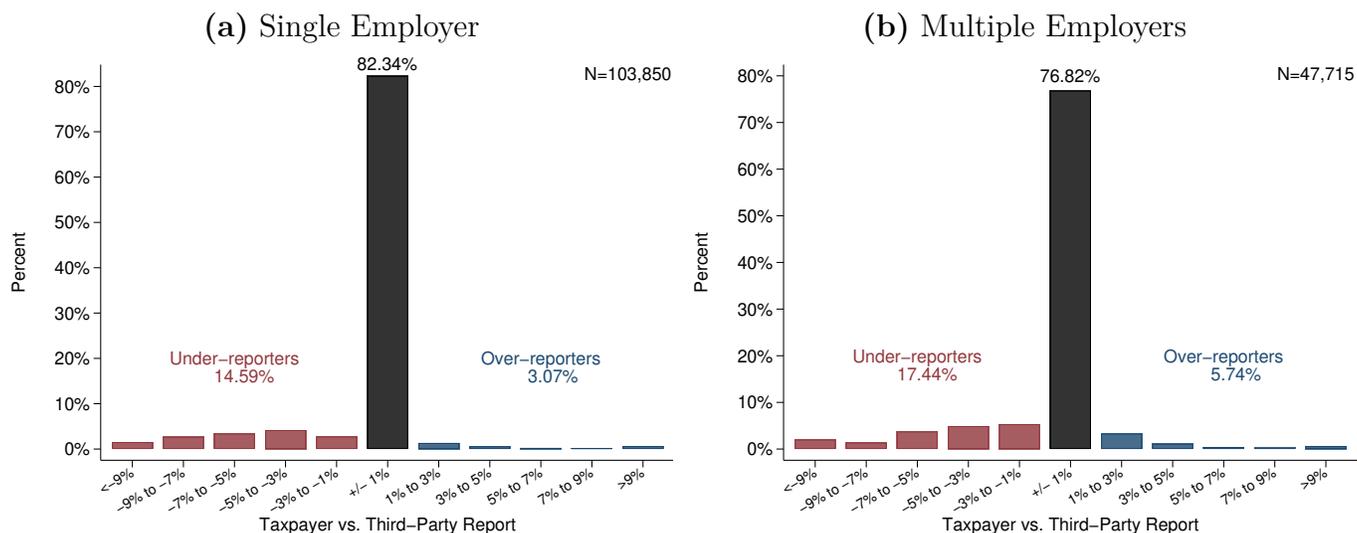
- Allingham, M. G. and A. Sandmo (1972). Income Tax Evasion: A Theoretical Analysis. *Journal of Public Economics* 1(3-4), 323–338.
- Alm, J., B. Jackson, and M. McKee (1992). Estimating the Determinants of Taxpayer Compliance with Experimental Data. *National Tax Journal* 45(1), 107–114.
- Alm, J., E. Kirchler, and S. Muehlbacher (2012). Combining Psychology and Economics in the Analysis of Compliance: From Enforcement to Cooperation. *Economic Analysis and Policy* 42(2), 133–151.
- Alm, J., I. Sanchez, and A. De Juan (1995). Economic and Noneconomic Factors in Tax Compliance. *Kyklos* 48(1), 1–18.
- Almås, I., A. W. Cappelen, and B. Tungodden (2020). Cutthroat Capitalism versus Cuddly Socialism: Are Americans More Meritocratic and Efficiency-Seeking than Scandinavians? *Journal of Political Economy* 128(5), 1753–1788.
- Andreoni, J., B. Erard, and J. Feinstein (1998). Tax Compliance. *Journal of Economic Literature* 32(2), 818–860.
- Berg, J., J. Dickhaut, and K. McCabe (1995). Trust, Reciprocity, and Social History. *Games and Economic Behavior* 10(1), 122–142.
- Brosig, J., T. Riechmann, and J. Weimann (2007). Selfish in the end?: An investigation of consistency and stability of individual behavior. *MPRA Munich Personal RePEc Archive* (2035).
- Cappelen, A. W., J. Mollerstrom, B.-A. Reme, and B. Tungodden (2022). A meritocratic origin of egalitarian behaviour. *The Economic Journal* 132(646), 2101–2117.
- Cardenas, J. C. and J. Carpenter (2008). Behavioural Development Economics: Lessons from Field Labs in the Developing World. *The Journal of Development Studies* 44(3), 311–338.
- Carlsson, F., O. Johansson-Stenman, and P. K. Nam (2014). Social preferences are stable over long periods of time. *Journal of Public Economics* 117.
- Carson, R. T. and T. Groves (2007). Incentive and informational properties of preference questions. *Environmental and Resource Economics* 37(1), 181–210.

- Castañeda, N., D. Doyle, and C. Schwartz (2020). Opting Out of the Social Contract: Tax Morale and Evasion. *Comparative Political Studies* 53(7), 1175–1219.
- Charness, G., U. Gneezy, and B. Halladay (2016). Experimental methods: Pay one or pay all. *Journal of Economic Behavior & Organization* 131, 141–150.
- Charness, G. and M. Rabin (2002). Understanding Social Preferences with Simple Tests. *The Quarterly Journal of Economics* 117(3).
- Chuang, Y. and L. Schechter (2015). Stability of experimental and survey measures of risk, time, and social preferences: A review and some new results. *J. Dev. Econ.* 117, 151–170.
- Coller, M. and M. B. Williams (1999). Eliciting Individual Discount Rates. *Experimental Economics* 2(2), 107–127.
- Cowell, F. A. and J. P. F. Gordon (1988). Unwillingness to pay: Tax evasion and public good provision. *Journal of Public Economics* 36(3), 305–321.
- Crede, A.-K. and F. von Bieberstein (2020). Reputation and lying aversion in the die roll paradigm: Reducing ambiguity fosters honest behavior. *Manag. Decis. Econ.* 41(4), 651–657.
- Cummings, R. G., J. Martinez-Vazquez, and M. McKee (2006). Cross Cultural Comparisons of Tax Compliance Behavior. *Journal of Economic Psychology* 27(2), 224–246.
- Dean, M. and A. Sautmann (2021). Credit constraints and the measurement of time preferences. *Review of Economics and Statistics* 103(1).
- Doerrenberg, P. and A. Peichl (2013). Progressive taxation and tax morale. *Public Choice* 155(3-4), 293–316.
- Doerrenberg, P. and A. Peichl (2022). Tax morale and the role of social norms and reciprocity – evidence from a randomized survey experiment. *FinanzArchiv* 78(1-2), 44–86.
- Dohmen, T., A. Falk, D. Huffman, and U. Sunde (2010). Are Risk Aversion and Impatience Related to Cognitive Ability? *American Economic Review* 100(3), 1238–1260.
- Engel, C. (2011). Dictator games: a meta study. *Experimental Economics* 14, 583–610.
- Falk, A., A. Becker, T. Dohmen, D. B. Huffman, and U. Sunde (2018). Global Evidence on Economic Preferences. *The Quarterly Journal of Economics* 133(4), 1645–1692.

- Fehr, E. (2009). On The Economics and Biology of Trust. *Journal of the European Economic Association* 7(2-3), 235–266.
- Feld, L. P. and B. S. Frey (2002). Trust breeds trust: How taxpayers are treated. *Economics of Governance* 3(2), 87–99.
- Fischbacher, U. and F. Föllmi-Heusi (2013). Lies in Disguise - An Experimental Study on Cheating. *Journal of the European Economic Association* 11(3), 525–547.
- Frey, B. S. and B. Torgler (2007). Tax morale and conditional cooperation. *Journal of Comparative Economics* 35(1), 136–159.
- Gächter, S. and J. F. Schulz (2016). Intrinsic honesty and the prevalence of rule violations across societies. *Nature* 531(7595), 496–499.
- Gillen, B., E. Snowberg, and L. Yariv (2019). Experimenting with Measurement Error: Techniques with Applications to the Caltech Cohort Study. *Journal of Political Economy* 127(4), 1826–1863.
- Halla, M. (2012). Tax Morale and Compliance Behavior: First Evidence on a Causal Link. *The B.E. Journal of Economic Analysis & Policy* 12(1), 1–27.
- Kuziemko, I., M. I. Norton, E. Saez, and S. Stantcheva (2015). How Elastic Are Preferences for Redistribution? Evidence from Randomized Survey Experiments. *American Economic Review* 105(4), 1478–1508.
- Levin, I. P., S. S. Hart, J. A. Weller, and L. A. Harshman (2007). Stability of choices in a risky decision-making task: A 3-year longitudinal study with children and adults. *Journal of Behavioral Decision Making* 20(3).
- Li, S. X., C. C. Eckel, P. J. Grossman, and T. L. Brown (2011). Giving to government: Voluntary taxation in the lab. *Journal of Public Economics* 95(9-10), 1190–1201.
- List, J. A. (2004). Young, Selfish and Male: Field Evidence of Social Preferences. *The Economic Journal* 114(492), 121–149.
- Lönnqvist, J. E., M. Verkasalo, G. Walkowitz, and P. C. Wichardt (2015). Measuring individual risk attitudes in the lab: Task or ask? An empirical comparison. *Journal of Economic Behavior and Organization* 119.

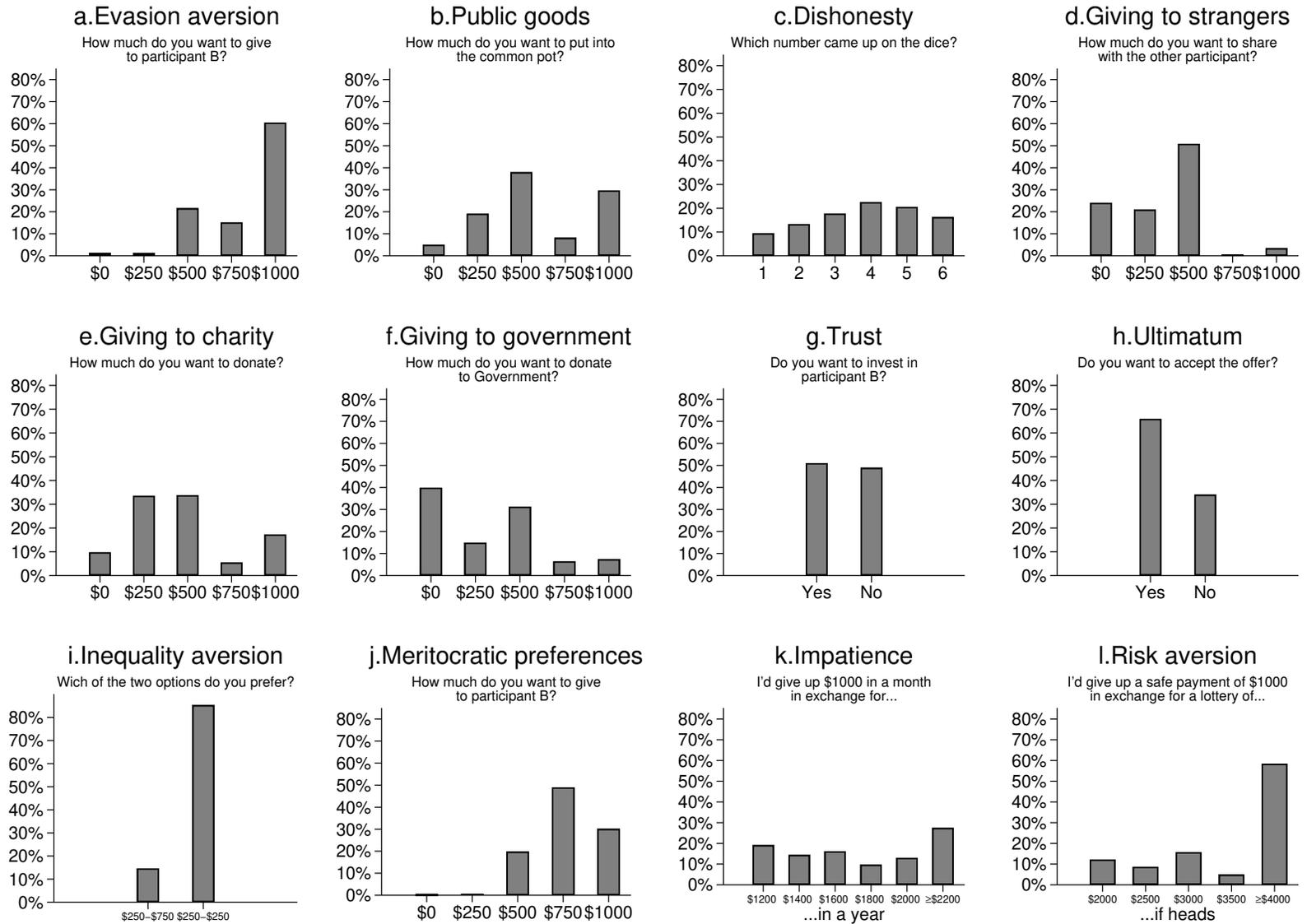
- Luttmer, E. F. P. and M. Singhal (2014). Tax Morale. *Journal of Economic Perspectives* 28(4), 149–168.
- Meier, S. and C. D. Sprenger (2015). Temporal stability of time preferences. *Review of Economics and Statistics* 97(2).
- Oosterbeek, H., R. Sloof, and G. van de Kuilen (2004). Cultural Differences in Ultimatum Game Experiments: Evidence from a Meta-Analysis. *Experimental Economics* 7(2), 171–188.
- Stango, V. and J. Zinman (2020). Behavioral Biases are Temporally Stable. *NBER WP 27860*.
- Stock, J. H. and M. Yogo (2005). Testing for Weak Instruments in Linear IV Regression. In D. W. K. Andrews and J. H. Stock (Eds.), *Identification and Inference for Econometric Models*, pp. 80–108. Cambridge University Press.
- Torgler, B. (2005). Tax morale and direct democracy. *European Journal of Political Economy* 21(2), 525–531.
- World Values Survey Association (2014). World Values Survey Wave 6 (2010-2014) Official Aggregate v.20180912. Technical report, Asep/JDS, Madrid, Spain.

Figure A.1: Wage Misreporting: Single vs. Multiple Employers



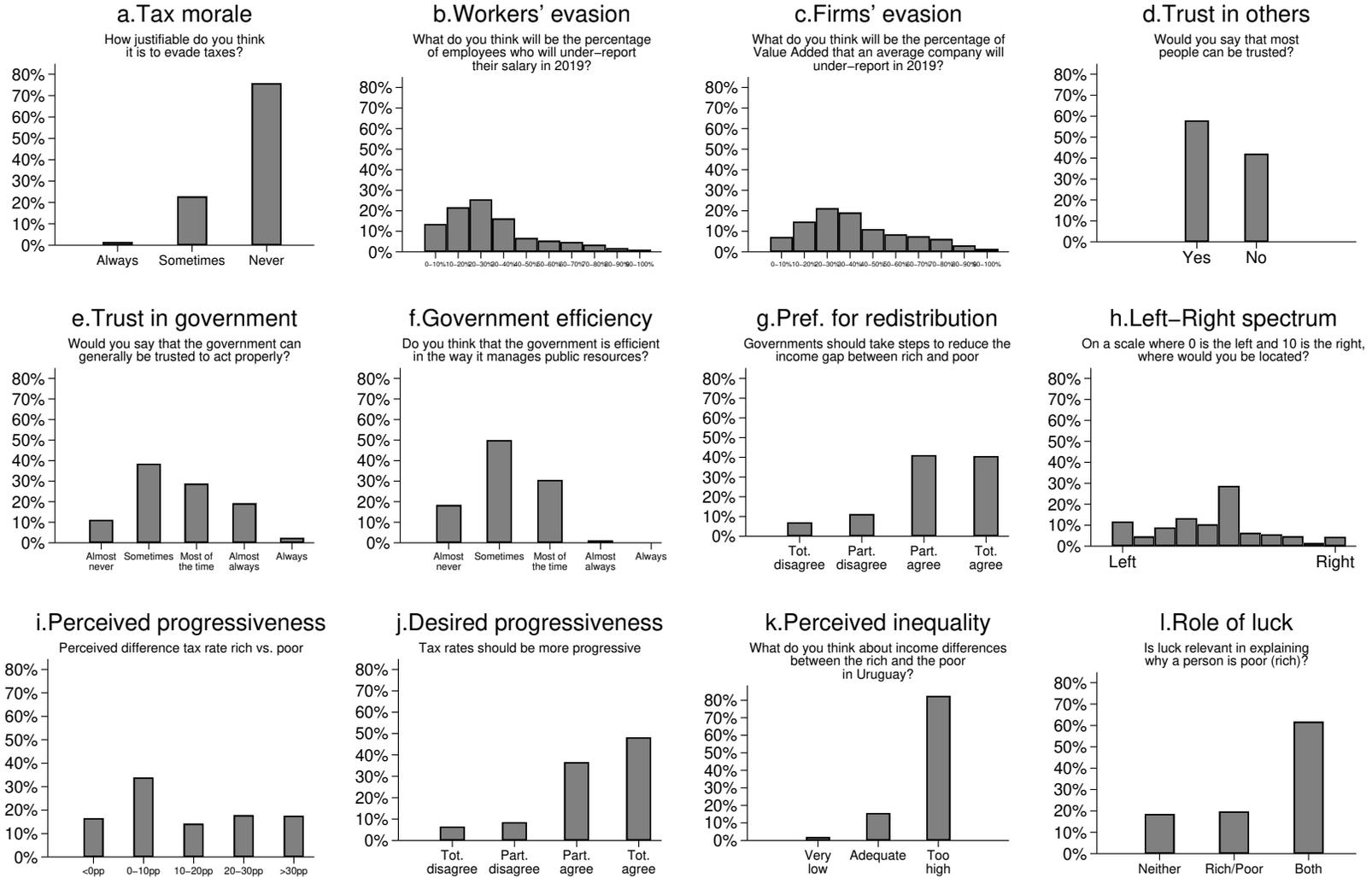
Notes: Discrepancies between the wages reported in the taxpayer’s tax return versus the employer’s third-party report (as the percentage of third-party wage income). Results based on the sample of taxpayers who were pure wage earners and filed a tax return in 2016. Panel (a) corresponds to the subsample of taxpayers who have a single employer, while panel (b) corresponds to the subsample of taxpayers with more than one employer.

Figure A.2: Distribution of Lab-Measures of Social Preferences



Notes: Distribution of the 12 lab-based measures among the 6,078 taxpayers who responded to the survey. For the full survey questionnaire, see Appendix C.

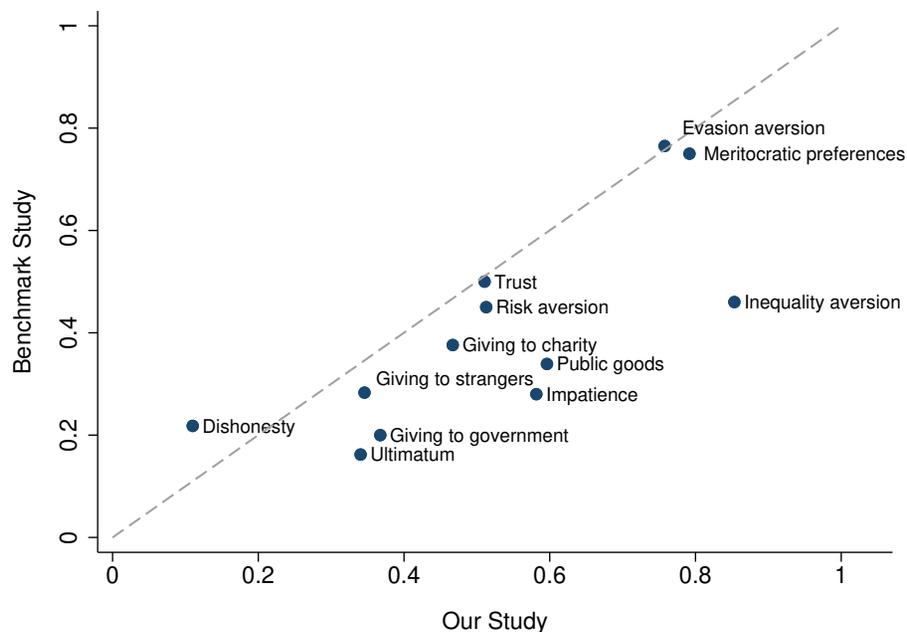
Figure A.3: Distribution of Survey-Measures of Social Preferences



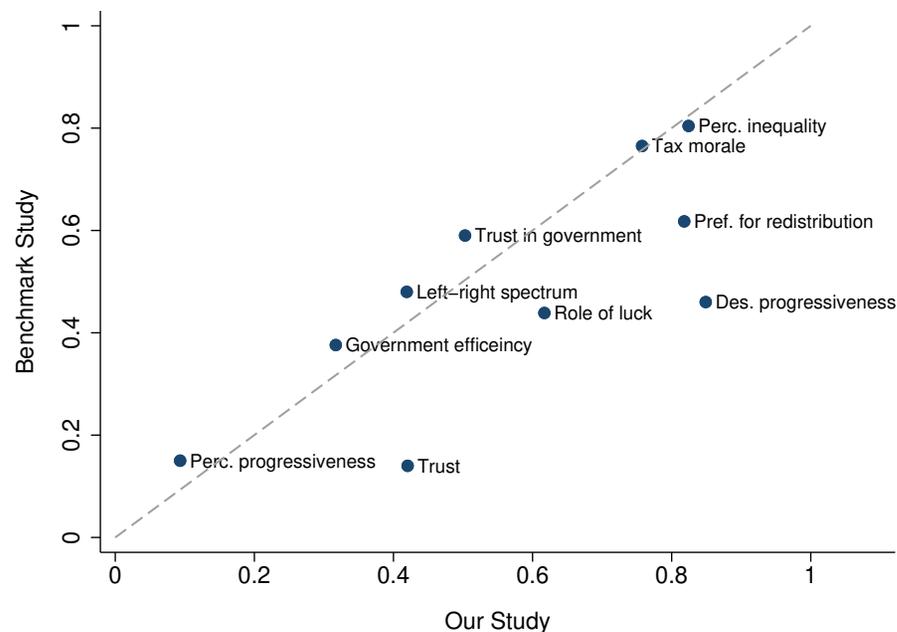
Notes: Distribution of the 12 survey-based measures among the 6,078 taxpayers who responded to the survey. For the full survey questionnaire, see Appendix C.

Figure A.4: Comparison of the Results from Lab- and Survey-Measures of Social Preferences to Related Studies

(a) Lab-Measures



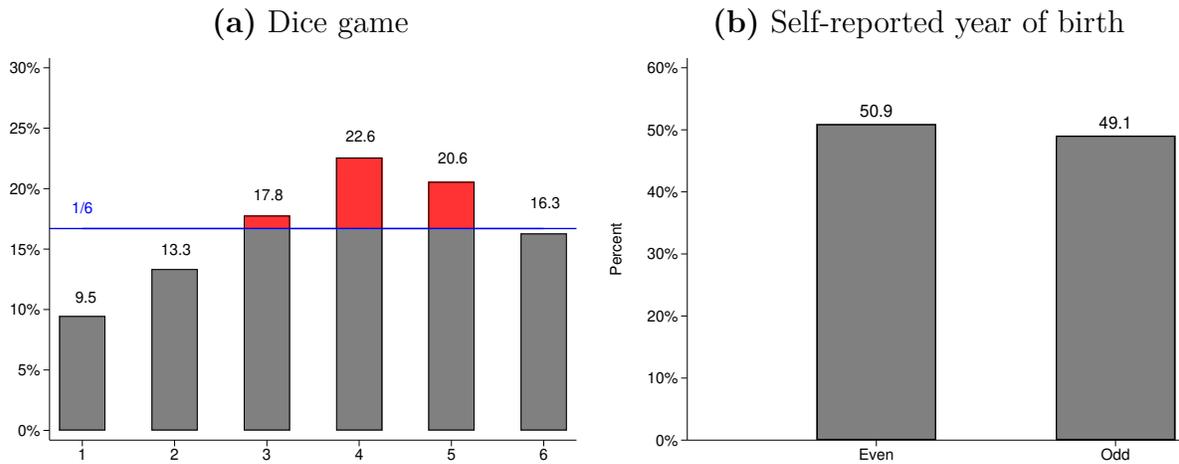
(b) Survey-Measures



Appendix 33

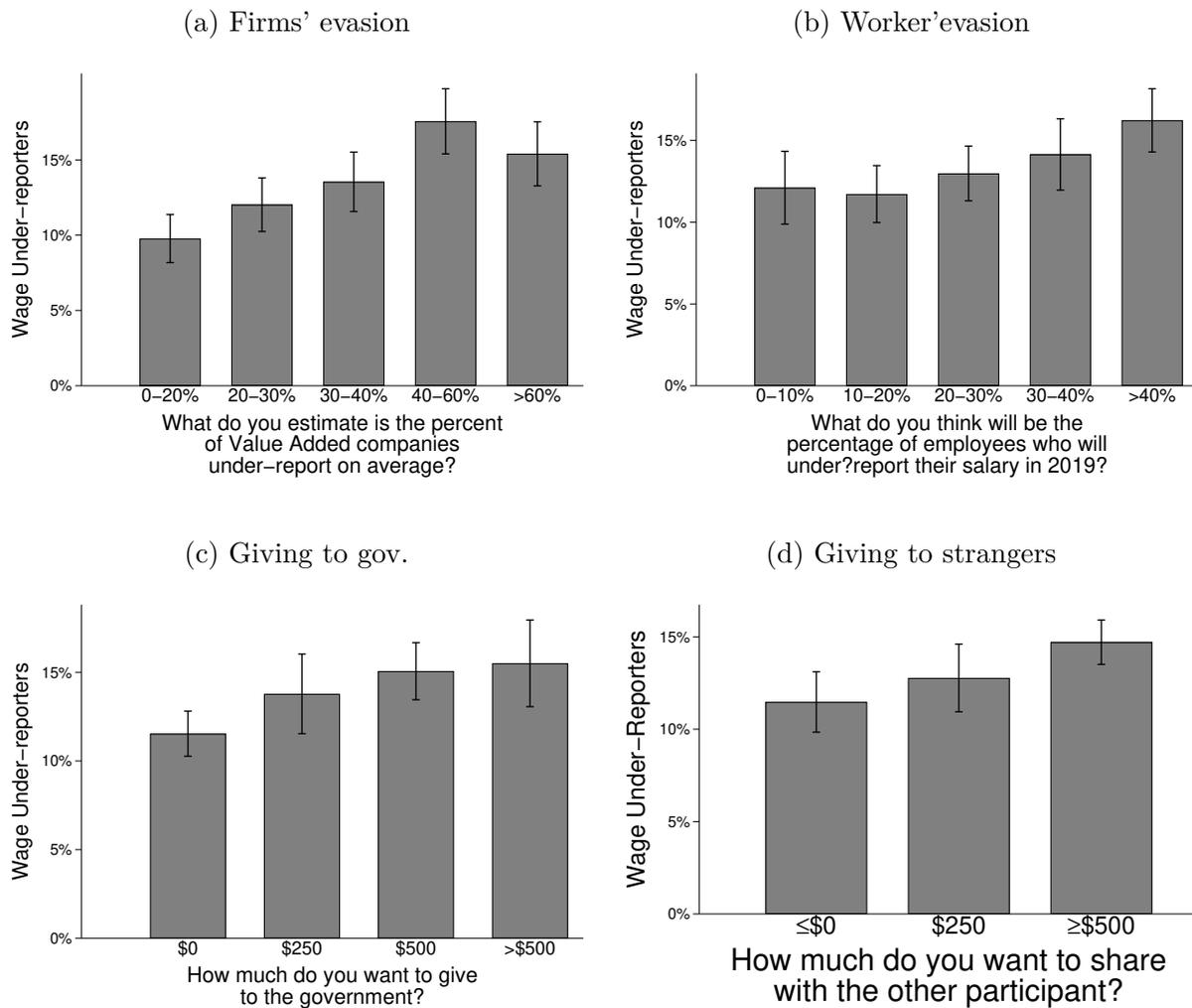
Notes: Comparison of average responses in our study (N=6,078) vs. the corresponding benchmark study. Lab-measures: *evasion aversion* is the share of respondents that give more endowment to those participants that think that evading taxes is never justifiable (benchmark study: Luttmer and Singhal (2014)), *public goods* is the average share of the endowment contributed to the common pool (List, 2004), *dishonesty* is the probability of lying, measured as the excess mass in faces 3, 4 and 5 (Gächter and Schulz, 2016), *giving to strangers* is the share of the endowment that the respondent gave to a randomly-chosen individual (Engel, 2011), *giving to charity* is the share of the endowment that the respondent gave to charity (Engel, 2011), *giving to government* is the share of the endowment that the respondent gave to the government ministry of social development (Li et al., 2011), *trust* is the share of respondents that decided to invest in the other participant (Cardenas and Carpenter, 2008), *ultimatum* is the share of respondents that rejected the offer (Oosterbeek et al., 2004), *inequality aversion* is the share of respondents that preferred an egalitarian allocation (Charness and Rabin, 2002), *Meritocratic preferences* is the share of respondents that gave a bigger share of the endowment to the participant that had made an effort (Cappelen et al., 2022), *impatience* is the extra-share of the payment that must be offered to the respondent in order for them to prefer waiting a year for the payment instead of perceiving the payment next month (Coller and Williams, 1999), *risk aversion* is the extra-share of the safe payment that must be offered to the respondent in order for them to prefer a 50-50 lottery instead of the safe payment (Dohmen et al., 2010). Survey-measures: *tax morale* is the share of respondents that think evading taxes is never justifiable (*), *trust in others* is the share of respondents that think most people can be trusted (*), *trust in government* is the share of respondents that think always, almost always or most of the time, can trust in the government acting properly (*), *government efficiency* is the share of respondents that think the government is efficient or very efficient (*), *preferences for redistribution* is the share of respondents that think the government should take steps to reduce the income gap between rich and poor (*), *Left-Right spectrum* is the average response to a question about where the individual would be located in a range in which 0 is left and 1 is right (**), *perceived progressiveness* is the respondents' perceived difference in tax rate paid between the upper 20% and the bottom 20% of the income distribution (***), *desired progressiveness* is the share of respondents that totally or partially agree with making the tax system more progressive (**), *perceived inequality* is the share of respondents that think that inequality is too high (**), *role of luck* is the share of respondents that think that luck and other circumstances beyond individual control are more important than individual effort in becoming both rich and poor (*). The benchmarks for the survey measures are based on our own calculations with the following data sources: (*) World Values Survey Association (2014); (**) 2011 Latinobarometro (<https://www.latinobarometro.org/latContents.jsp>); (***) 2015/16 ELBU (<http://fcea.edu.uy/datos/bases-de-datos.html>).

Figure A.6: Honesty Measures



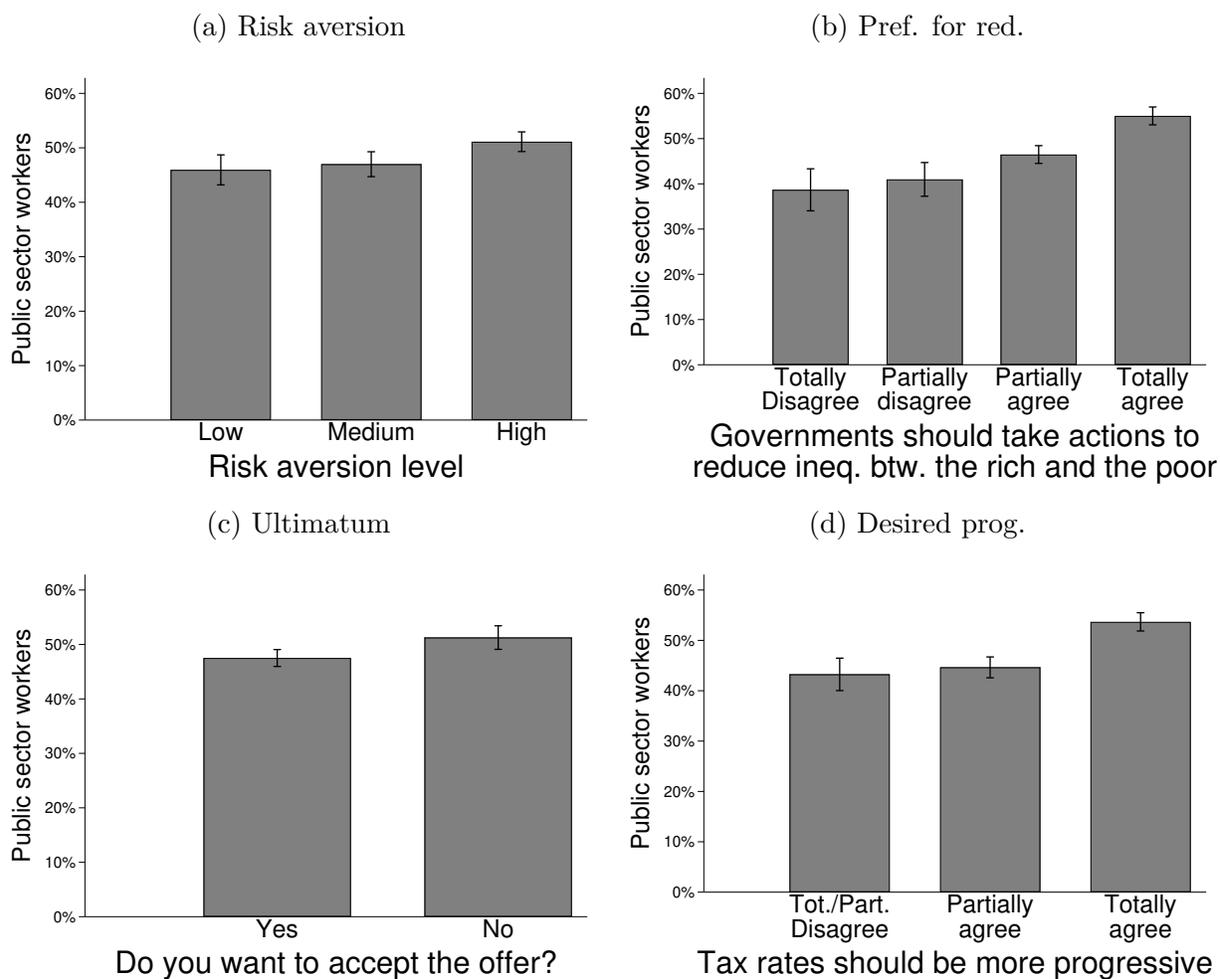
Notes: Panel (a) shows the distribution of reported die rolls. The bars represent the raw frequencies of amounts claimed, while the blue line describes the full honesty expected distribution of frequencies as benchmark. The red area represents the subject above the uniform distribution and it provides a measure of dishonesty. Panel (b) depicts the raw frequencies of participants' answers whether their year of birth is an even or odd number. The questionnaire includes an additional game in which participants who were born on an even year had a strong financial incentive to declare that they were born on an odd year.

Figure A.7: Correlation between Actual Tax Evasion Choices and Selected Social Preferences



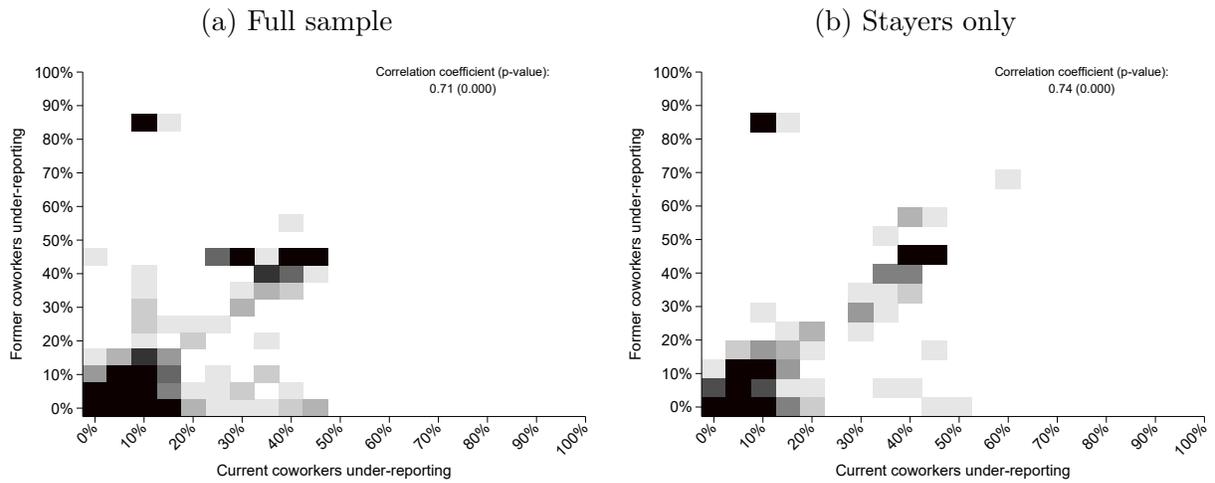
Notes: Results based on the 6,078 survey respondents. Each bar corresponds to the share of wage under-reporters (i.e., taxpayers who reported wage income below 1% of the third-party report filed by their employers), with 95% robust confidence intervals. Each panel breaks the same sample of 6,078 taxpayers into subgroups based on selected lab or survey measures: e.g., panel (a) breaks them down by the responses to the question on firms' evasion.

Figure A.8: Correlation between working in Public Sector and Selected Social Preferences



Notes: Results based on the 6,078 survey respondents. Each bar corresponds to the share of Public Sector workers (i.e., taxpayers whose main job is in the public sector), with 95% robust confidence intervals. Each panel breaks the same sample of 6,078 taxpayers into subgroups based on selected lab or survey measures: e.g., panel (a) breaks them down by the responses to the Risk aversion lab game.

Figure A.9: Sources of Variation in Peer Behavior: Correlation between *former* and *current* Coworker Under-reporting



Notes: This figure shows the correlation between *former* and *current* coworker under-reporting. Panel (a) includes the entire sample of survey participants (N=6,078). Panel (b) excludes individuals who have changed firms from the analysis (N=1,798). In panel (b), all variation in individual's *i* former coworker behavior comes from other employees joining individual's *i* firm(s) and not from individual *i* moving to different a firm(s).

Table A.1: Descriptive Statistics: Sample Selection

	All	Tax filers	Pure WE	Invited		Responded	
	(1)	(2)	(3)	No (4)	Yes (5)	No (6)	Yes (7)
Female (%)	46.74 (0.04)	47.26 (0.11)	44.85 (0.13)	38.37 (0.17)	52.78 (0.19)	52.25 (0.20)	58.16 (0.63)
Age	43.32 (0.01)	45.74 (0.03)	45.20 (0.03)	45.81 (0.04)	44.45 (0.04)	44.54 (0.04)	43.54 (0.13)
Total income (USD)	20.78 (0.04)	39.57 (0.11)	37.86 (0.12)	34.54 (0.17)	41.90 (0.17)	41.96 (0.18)	41.36 (0.40)
Wage earners (%)	96.58 (0.02)	86.89 (0.08)	100.00 (0.00)	100.00 (0.00)	100.00 (0.00)	100.00 (0.00)	100.00 (0.00)
Wage (USD)	19.44 (0.03)	39.15 (0.09)	36.45 (0.09)	33.03 (0.11)	40.64 (0.15)	40.66 (0.16)	40.41 (0.38)
Public sector (%)	21.87 (0.04)	40.97 (0.11)	43.30 (0.13)	41.05 (0.17)	46.05 (0.19)	45.78 (0.20)	48.79 (0.64)
Wage Under-reporters (%)			15.49 (0.09)	16.90 (0.13)	13.76 (0.13)	13.78 (0.14)	13.52 (0.44)
Autom. Deductions Over-reporters (%)			15.95 (0.10)	11.21 (0.12)	21.50 (0.17)	21.08 (0.18)	25.82 (0.62)
Withholding Over-reporters (%)			22.72 (0.12)	17.56 (0.15)	28.79 (0.19)	28.81 (0.20)	28.60 (0.65)
Observations	1,271,509	200,519	151,565	83,357	68,208	62,130	6,078

Notes: Average characteristics for the year 2016, with robust standard errors in parentheses. Column (1) corresponds to the whole universe of registered employees. Column (2) corresponds to the group of taxpayers that file a tax return. Column (3) corresponds to the group of taxpayers that file a tax return and are pure wage earners (i.e do not receive self-employment income). Additionally, column (3) excludes those pure wage earners that have missing wage income data on their third-party report. Column (4) to column (7) correspond to sub groups of column (3). Column (4) and (5) correspond to the group of taxpayers that were not and were invited to the survey, respectively. Column (6) and (7) correspond to the group of taxpayers that did not respond and did respond to the survey, respectively. *Female* is the percentage of females. *Age* is the age average in years. *Total income* is the total annual income average in thousands of 2016 USD. *Wage earners* is the percentage of wage earners. *Wage* is the average wage in thousands of 2016 USD. For those that don't file a tax return, *Wage* is the third-party reported wage including bonus. For those that file a tax return, *Wage* is the self-reported wage including bonus income. *Wage Under-reporters* is the percentage of taxpayers that under-report their wage. *Autom. Deductions Over-reporters* is the percentage of taxpayers that over-report their automatic deductions. Finally, *Withholding Over-reporters* is the percentage of taxpayers that over-report their withholding income.

Table A.2: Descriptive Statistics about the Lab- and Survey-Measures of Social Preferences

	Observations	Mean	SD	Min	p25	p50	p75	Max
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Evasion aversion	6,078	0.831	0.236	0.000	0.750	1.000	1.000	1.000
Public goods	6,078	0.596	0.308	0.000	0.500	0.500	1.000	1.000
Dishonesty	6,078	0.110	0.108	0.000	0.000	0.064	0.191	0.263
Giving to strangers	6,078	0.346	0.242	0.000	0.250	0.500	0.500	1.000
Giving to charity	6,078	0.467	0.302	0.000	0.250	0.500	0.500	1.000
Giving to government	6,078	0.316	0.313	0.000	0.000	0.250	0.500	1.000
Trust	6,078	0.511	0.500	0.000	0.000	1.000	1.000	1.000
Ultimatum	6,078	0.340	0.474	0.000	0.000	0.000	1.000	1.000
Inequality aversion	6,078	0.853	0.354	0.000	1.000	1.000	1.000	1.000
Meritocratic preferences	6,078	0.770	0.185	0.000	0.750	0.750	1.000	1.000
Impatience	6,078	0.731	0.378	0.200	0.400	0.800	1.200	1.200
Risk aversion	6,078	0.722	0.369	0.000	0.500	1.000	1.000	1.000
Tax morale	6,078	2.743	0.470	1.000	3.000	3.000	3.000	3.000
Workers evasion	6,078	3.506	2.039	1.000	2.000	3.000	4.000	10.000
Firms evasion	6,078	4.274	2.186	1.000	3.000	4.000	6.000	10.000
Trust in others	6,078	1.420	0.494	1.000	1.000	1.000	2.000	2.000
Trust in government	6,078	2.631	0.991	1.000	2.000	3.000	3.000	5.000
Government efficiency	6,078	2.145	0.716	1.000	2.000	2.000	3.000	4.000
Preferences for redistribution	6,078	3.154	0.881	1.000	3.000	3.000	4.000	4.000
Left-Right spectrum	6,078	4.191	2.549	0.000	2.000	5.000	5.000	10.000
Perceived progressiveness	6,078	9.325	23.266	-100.000	0.000	9.000	23.000	100.000
Desired progressiveness	6,078	3.267	0.871	1.000	3.000	3.000	4.000	4.000
Perceived inequality	6,078	2.805	0.442	1.000	3.000	3.000	3.000	3.000
Role of luck	6,078	1.431	0.785	0.000	1.000	2.000	2.000	2.000

Notes: This table contains descriptive statistics for the 24 lab- and survey-measures of social preferences: mean, standard deviation, minimum, maximum and 25th, 50th, and 75th percentiles. All these results corresponds to the sample of 6,078 observations used for the main analysis of Table 2. For variables definitions, see the notes to Table 2.

Table A.3: Pairwise Correlations with Different Evasion Measures

	(1)	(2)	(3)	(4)	(5)	(6)	
	Wage UR	Wage under-reported (%)	Deductions OR	Withholdings OR	Multiple margins	Number of margins	
Lab-Based Social Preferences	Evasion aversion	0.008 [-0.017,0.033]	0.012 [-0.013,0.037]	0.025 [-0.002,0.053]	0.043 [0.014,0.071]	0.031 [0.006,0.056]	0.045 [0.020,0.070]
	Public goods	0.003 [-0.022,0.028]	0.006 [-0.019,0.031]	0.010 [-0.017,0.038]	0.044 [0.016,0.072]	0.024 [-0.001,0.049]	0.035 [0.010,0.060]
	Dishonesty	-0.000 [-0.025,0.025]	-0.013 [-0.039,0.012]	0.015 [-0.013,0.043]	0.002 [-0.026,0.030]	0.017 [-0.008,0.042]	0.011 [-0.014,0.036]
	Giving to strangers	0.040 [0.015,0.065]	0.039 [0.014,0.064]	-0.007 [-0.034,0.021]	0.038 [0.010,0.066]	-0.005 [-0.030,0.021]	0.024 [-0.001,0.049]
	Giving to charity	0.046 [0.021,0.071]	0.039 [0.014,0.064]	0.032 [0.004,0.060]	0.023 [-0.005,0.051]	0.024 [-0.001,0.049]	0.044 [0.019,0.069]
	Giving to government	0.048 [0.023,0.073]	0.033 [0.008,0.058]	-0.018 [-0.046,0.009]	0.004 [-0.024,0.032]	-0.026 [-0.051,-0.001]	0.002 [-0.023,0.027]
	Trust	-0.008 [-0.033,0.017]	-0.013 [-0.038,0.012]	-0.022 [-0.050,0.005]	0.027 [-0.001,0.055]	-0.008 [-0.033,0.017]	-0.000 [-0.025,0.025]
	Ultimatum	0.026 [0.000,0.051]	0.024 [-0.001,0.049]	0.022 [-0.006,0.050]	0.021 [-0.007,0.049]	0.029 [0.004,0.054]	0.033 [0.007,0.058]
	Inequality aversion	0.007 [-0.018,0.033]	0.012 [-0.013,0.037]	-0.031 [-0.059,-0.004]	-0.045 [-0.073,-0.017]	-0.037 [-0.062,-0.012]	-0.040 [-0.065,-0.015]
	Meritocratic preferences	-0.001 [-0.026,0.024]	0.003 [-0.022,0.028]	0.011 [-0.016,0.039]	-0.002 [-0.030,0.026]	0.027 [0.002,0.052]	0.007 [-0.018,0.033]
	Impatience	0.021 [-0.005,0.046]	0.027 [0.001,0.052]	-0.105 [-0.133,-0.078]	-0.096 [-0.124,-0.068]	-0.094 [-0.119,-0.069]	-0.110 [-0.135,-0.086]
	Risk aversion	0.013 [-0.012,0.038]	0.007 [-0.018,0.032]	-0.036 [-0.064,-0.009]	-0.020 [-0.048,0.008]	-0.041 [-0.066,-0.016]	-0.025 [-0.050,-0.000]
	Tax morale	-0.006 [-0.032,0.019]	-0.004 [-0.029,0.021]	0.001 [-0.027,0.029]	0.026 [-0.002,0.054]	0.012 [-0.013,0.037]	0.015 [-0.010,0.040]
	Workers' evasion	0.038 [0.013,0.064]	0.013 [-0.012,0.038]	-0.027 [-0.055,0.001]	-0.040 [-0.068,-0.012]	-0.042 [-0.067,-0.017]	-0.029 [-0.055,-0.004]
	Firms' evasion	0.067 [0.042,0.092]	0.037 [0.012,0.062]	-0.003 [-0.030,0.025]	-0.029 [-0.057,-0.001]	-0.028 [-0.053,-0.003]	-0.004 [-0.030,0.021]
	Survey-Based Social Preferences	Trust in others	0.024 [-0.001,0.049]	0.023 [-0.002,0.048]	0.129 [0.102,0.156]	0.122 [0.094,0.149]	0.078 [0.053,0.103]
Trust in government		0.028 [0.003,0.054]	0.027 [0.002,0.052]	0.039 [0.012,0.067]	0.040 [0.012,0.068]	0.026 [0.001,0.051]	0.049 [0.024,0.074]
Government efficiency		0.046 [0.021,0.071]	0.035 [0.010,0.061]	-0.032 [-0.060,-0.005]	-0.034 [-0.062,-0.006]	-0.037 [-0.062,-0.012]	-0.023 [-0.048,0.002]
Preferences for redistribution		0.042 [0.017,0.067]	0.032 [0.007,0.057]	0.033 [0.005,0.060]	0.024 [-0.004,0.052]	0.017 [-0.008,0.042]	0.042 [0.016,0.067]
Left-right spectrum		-0.062 [-0.087,-0.037]	-0.049 [-0.074,-0.024]	-0.042 [-0.069,-0.014]	-0.014 [-0.042,0.014]	-0.007 [-0.032,0.018]	-0.046 [-0.071,-0.021]
Perceived progressiveness		-0.010 [-0.035,0.015]	-0.019 [-0.044,0.007]	0.100 [0.072,0.127]	0.088 [0.060,0.115]	0.082 [0.057,0.107]	0.099 [0.074,0.123]
Desired progressiveness		0.058 [0.033,0.084]	0.047 [0.022,0.073]	0.011 [-0.017,0.038]	-0.013 [-0.041,0.015]	-0.025 [-0.050,0.001]	0.015 [-0.010,0.041]
Perceived inequality		0.029 [0.003,0.054]	0.018 [-0.007,0.043]	-0.005 [-0.033,0.022]	-0.040 [-0.068,-0.012]	-0.028 [-0.053,-0.003]	-0.016 [-0.042,0.009]
Role of luck		0.047 [0.022,0.072]	0.039 [0.014,0.064]	0.033 [0.005,0.061]	-0.011 [-0.039,0.017]	-0.005 [-0.030,0.020]	0.025 [-0.000,0.050]
Peer		Current coworkers evasion	0.599 [0.583,0.615]	0.446 [0.425,0.468]	0.281 [0.255,0.306]	0.299 [0.273,0.324]	0.152 [0.125,0.178]
	Former coworkers evasion	0.462 [0.442,0.481]	0.317 [0.294,0.341]	0.302 [0.277,0.327]	0.448 [0.425,0.470]	0.193 [0.168,0.218]	0.363 [0.340,0.386]
Economic	MTR	0.092 [0.067,0.117]	0.054 [0.029,0.079]	0.194 [0.167,0.221]	0.314 [0.289,0.339]	0.190 [0.166,0.214]	0.323 [0.301,0.346]
	Log. of labor income	0.030 [0.005,0.055]	0.011 [-0.014,0.036]	0.250 [0.224,0.276]	0.545 [0.525,0.565]	0.341 [0.319,0.363]	0.459 [0.439,0.478]
	Experienced filer	0.071 [0.046,0.096]	0.042 [0.017,0.067]	0.168 [0.141,0.195]	0.169 [0.141,0.196]	0.120 [0.095,0.145]	0.213 [0.189,0.237]
Mean of Dep. Variable	0.135	0.749	0.258	0.286	0.093	0.577	
Observations	6,078	6,078	5,008	4,874	6,078	6,078	

Notes: This table presents pairwise correlations between each of social preferences, peer behavior, and economic factors measures and multiple measures of tax evasion: an indicator of whether the individual under-reported wage (column (1), which replicates column (1) in Table 2), the percent of wage under-reported (column (2)), an indicator of whether the individual over-reported automatic deductions (column (3)), an indicator of whether the individual over-reported withholdings (column (4)), an indicator of whether the individual evaded taxes on more than one margin (column (5)), and the number of margins the individual used to evade (column (6)). All outcomes are measured for 2016. Results for the 6,078 wage earners who filed a tax return in 2016 and responded to our survey, except for our measure of withholdings over-reporter (column (4)), which is based on the subsample of individuals who had positive withholdings (5,912). For the peer evasion measures, we lose a few observations for those who do not have current (65 taxpayers) or former (82 taxpayers) coworkers in 2016. Correspondent 95% confidence intervals in brackets. Lab and survey variables are defined as in Table 2.

Table A.4: Measurement Error Correction: Re-Scaling Approach

	Corr. Coef (1)	Scaling factor (2)	Source (3)	Rescaled Bounds (4)
Evasion aversion	0.008	0.09-0.69	Combined	[0.011,0.087]
Public goods	0.003	0.12-0.28	Carlsson et al. (2014)	[0.011,0.025]
Dishonesty	-0.000	0.09-0.69	Combined	[-0.003,-0.000]
Giving to strangers	0.040	0.09-0.48	Brosig et al. (2007)	[0.083,0.443]
Giving to charity	0.046	0.09-0.69	Combined	[0.067,0.514]
Giving to government	0.048	0.09-0.69	Combined	[0.070,0.538]
Trust	-0.008	0.354-0.69	Chuang and Schechter (2015) & Lönnqvist et al. (2015)	[-0.024,-0.012]
Ultimatum	0.026	0.09-0.69	Combined	[0.037,0.284]
Inequality aversion	0.007	0.09-0.69	Combined	[0.011,0.083]
Meritocratic preferences	-0.001	0.09-0.69	Combined	[-0.013,-0.002]
Impatience	0.021	0.4-0.67	Meier and Sprenger (2015) & Dean and Sautmann (2021)	[0.031,0.052]
Risk aversion	0.013	0.20-0.38	Levin et al. (2007)	[0.033,0.063]

Notes: Each row corresponds to one of the 12 lab-measures of social preferences used in the paper. Column (1) corresponds to the correlation coefficient between each of the lab measures and the measure of tax evasion (reproduced from column (1) of Table 2). Column (2) presents the range of the scaling factor used in other papers. Column (3) identifies the data source for the scaling factor. “Combined” implies that lower and upper scaling factors are not available for these measures, so we take the highest and lowest values across all measures from Brosig et al. (2007) and Lönnqvist et al. (2015). Column (4) presents the rescaled bounds for the correlation coefficients.

Table A.5: Measurement Error Correction: Obviously Related Instrumental Variables

Endogenous variable (1)	Instrument(s) (2)	OLS Coeff. (3)	IV Strategy	
			2SLS Coeff. (4)	F-stat (5)
Evasion aversion	Tax morale	0.008 [-0.017,0.033]	-0.017 [-0.085,0.050]	989.284
Giving to government	Trust in government & Government efficiency	0.048 [0.023,0.074]	0.105 [0.045,0.165]	650.189
Trust	Trust in others	-0.008 [-0.033,0.017]	0.164 [-0.011,0.339]	131.902

Notes: Estimates based on the Obviously Related Instrumental Variables approach for correcting measurement error. Each row corresponds to a different regression with a single right-hand-side variable, which is normalized to have a mean of 0 and a standard deviation of 1. The dependent variable is always an indicator variable for whether the taxpayer under-reported wages in 2016. *Evasion aversion* is the share of the endowment given to the partner who thinks evading taxes is never justifiable, *tax morale* indicates in a 1–3 scale if evading taxes is justifiable with 3 being never justifiable, *giving to government* is the share of the endowment given to the government program, *trust in government* indicates in a 1–5 scale whether one can trust the government in acting properly, *government efficiency* indicates in a 1–4 scale the perceived efficiency of the government, *trust* indicates if the respondent invested in the partner, and *trust in others* indicates in a 1–2 scale if most people can be trusted. Columns (1) and (2) presents the endogenous variable and the instrument(s) used in each case. Column (3) shows the OLS coefficients. Column (4) shows the 2SLS coefficients. 95% confidence intervals reported in brackets and based on robust standard errors. Column (5) present the the F-test of weak instruments for each 2SLS regression.

Table A.6: Multivariate Regression with Different Sets of Controls

	(1)	(2)	(3)	(4)	
Lab-Based Social Preferences	Evasion aversion	-0.001 (0.005)	0.000 (0.005)	0.003 (0.004)	
	Public goods	-0.002 (0.005)	-0.003 (0.005)	0.001 (0.004)	
	Dishonesty	-0.000 (0.004)	0.001 (0.004)	0.000 (0.003)	
	Giving to strangers	0.007 (0.005)	0.007 (0.005)	0.003 (0.004)	
	Giving to charity	0.013*** (0.005)	0.013*** (0.005)	0.008*** (0.004)	
	Giving to government	0.013*** (0.004)	0.008 (0.005)	0.002 (0.004)	
	Trust	-0.003 (0.005)	-0.004 (0.005)	-0.003 (0.004)	
	Ultimatum	0.004 (0.004)	0.004 (0.004)	0.000 (0.003)	
	Inequality aversion	-0.002 (0.005)	0.002 (0.004)	-0.003 (0.003)	
	Meritocratic preferences	0.003 (0.005)	0.005 (0.005)	-0.000 (0.004)	
	Impatience	0.004 (0.005)	0.006 (0.004)	0.000 (0.004)	
	Risk aversion	0.001 (0.005)	0.003 (0.005)	0.002 (0.003)	
	Tax morale		-0.003 (0.004)	-0.005 (0.005)	-0.004 (0.004)
	Workers' evasion		0.005 (0.006)	0.005 (0.005)	0.000 (0.004)
	Firms' evasion		0.019*** (0.005)	0.018*** (0.005)	0.009*** (0.004)
Survey-Based Social Preferences	Trust in others		0.001 (0.005)	0.005 (0.005)	
	Trust in government		-0.001 (0.006)	-0.002 (0.006)	
	Government efficiency		0.006 (0.006)	0.005 (0.006)	
	Preferences for redistribution		-0.001 (0.005)	-0.002 (0.005)	
	Left-right spectrum		-0.009* (0.005)	-0.009 (0.006)	
	Perceived progressiveness		0.001 (0.005)	0.001 (0.004)	
	Desired progressiveness		0.009 (0.006)	0.011** (0.006)	
	Perceived inequality		0.002 (0.005)	0.002 (0.005)	
	Role of luck		0.004 (0.005)	0.006 (0.005)	
	Role of luck		0.004 (0.005)	-0.002 (0.004)	
Sociodemographic characteristics	✓	✓			
Income change			✓		
Economic factors				✓	
Peer behavior				✓	
AUC	0.613	0.616	0.585	0.895	
Pseudo R^2	0.026	0.031	0.024	0.403	
Observations	6,078	6,078	6,078	6,078	

Notes: This table replicates some of the estimations of Table 3 but adds different sets of controls. Marginal effects with robust standard errors in parentheses. Columns (1) and (2) replicate columns (1) and (2) of Table 3 but include sociodemographic characteristics (gender, age, education, and income (both third-reported and the income bracket self-reported in the survey)) as controls. Column (3) replicates column (3) of Table 3 but includes the 2015-2016 percent income change as a control (expressed in the same categories as in panel (c) of Figure 2). Since 3,729 of the individuals are comparable pure wage earners that filed a tax return in 2015, we assume no change for the remaining 2,349 individuals of the sample, and add a dummy controlling for not having income change information. Finally, column (4) replicates column (3) of Table 3 but includes coworkers under-reporting (current and former) and economic factors as controls, all of them measured as in columns (4)–(5) of Table 3. Again, we included indicators of no peer under-reporting information as controls. For each column, we include the out-of-sample AUC.

Table A.7: Multivariate Regression Analysis for Multiple Evasion Measures

	(1)	(2)	(3)	(4)	(5)	(6)	
	Wage UR	Wage under-reported (%)	Deductions OR	Withholdings OR	Multiple margins	Number of margins	
Lab-Based Social Preferences	Evasion aversion	0.001 (0.005)	0.017 (0.036)	0.009 (0.007)	0.017** (0.007)	0.007* (0.004)	0.024*** (0.009)
	Public goods	-0.003 (0.005)	-0.002 (0.032)	-0.001 (0.006)	-0.011 (0.007)	0.003 (0.004)	0.007 (0.009)
	Dishonesty	0.000 (0.004)	-0.033 (0.030)	0.006 (0.006)	-0.000 (0.006)	0.005 (0.004)	0.006 (0.008)
	Giving to strangers	0.007 (0.005)	0.059 (0.039)	-0.005 (0.006)	0.013* (0.007)	-0.001 (0.004)	0.007 (0.009)
	Giving to charity	0.013*** (0.005)	0.072* (0.037)	0.008 (0.006)	-0.001 (0.007)	0.004 (0.004)	0.015 (0.009)
	Giving to government	0.008 (0.005)	0.028 (0.034)	-0.015** (0.007)	0.003 (0.007)	-0.007* (0.004)	-0.009 (0.010)
	Trust	-0.004 (0.005)	-0.050 (0.033)	-0.019*** (0.006)	-0.001 (0.007)	-0.008** (0.004)	-0.019** (0.009)
	Ultimatum	0.005 (0.004)	0.035 (0.032)	0.013** (0.006)	0.014** (0.006)	0.011*** (0.004)	0.027*** (0.008)
	Inequality aversion	0.002 (0.004)	0.022 (0.027)	-0.000 (0.006)	-0.009 (0.006)	-0.004 (0.004)	-0.009 (0.009)
	Meritocratic preferences	0.004 (0.005)	0.034 (0.031)	0.006 (0.006)	-0.000 (0.007)	0.007* (0.004)	0.006 (0.009)
	Impatience	0.006 (0.005)	0.063* (0.035)	-0.034*** (0.006)	-0.029*** (0.006)	-0.020*** (0.004)	-0.054*** (0.009)
	Risk aversion	0.003 (0.005)	-0.002 (0.031)	-0.006 (0.006)	0.003 (0.006)	-0.007* (0.004)	0.001 (0.009)
	Tax morale	-0.005 (0.005)	-0.033 (0.034)	-0.004 (0.007)	0.005 (0.007)	-0.000 (0.004)	-0.003 (0.009)
	Workers' evasion	0.005 (0.005)	-0.007 (0.040)	-0.005 (0.008)	-0.007 (0.008)	-0.008 (0.005)	-0.004 (0.011)
	Firms' evasion	0.019*** (0.005)	0.091** (0.041)	0.006 (0.008)	-0.003 (0.008)	-0.001 (0.005)	0.007 (0.011)
	Survey-Based Social Preferences	Trust in others	0.005 (0.005)	0.046 (0.033)	0.049*** (0.006)	0.043*** (0.006)	0.018*** (0.004)
Trust in government		-0.002 (0.006)	0.007 (0.039)	0.022*** (0.008)	0.022*** (0.008)	0.015*** (0.005)	0.033*** (0.011)
Government efficiency		0.005 (0.006)	0.012 (0.044)	-0.037*** (0.008)	-0.037*** (0.008)	-0.020*** (0.005)	-0.058*** (0.011)
Preferences for redistribution		-0.002 (0.005)	-0.013 (0.034)	0.014* (0.007)	0.022*** (0.008)	0.014*** (0.005)	0.028*** (0.010)
Left-right spectrum		-0.008 (0.006)	-0.042 (0.036)	-0.016** (0.008)	-0.001 (0.008)	-0.004 (0.005)	-0.017* (0.010)
Perceived progressiveness		0.000 (0.004)	-0.026 (0.031)	0.036*** (0.006)	0.030*** (0.006)	0.018*** (0.004)	0.052*** (0.008)
Desired progressiveness		0.011** (0.006)	0.061** (0.031)	-0.006 (0.007)	-0.014* (0.008)	-0.013*** (0.004)	-0.011 (0.010)
Perceived inequality		0.002 (0.005)	-0.002 (0.038)	-0.004 (0.006)	-0.014** (0.006)	-0.006 (0.004)	-0.016* (0.009)
Role of luck		0.006 (0.005)	0.042 (0.038)	0.012* (0.007)	-0.005 (0.007)	0.001 (0.004)	0.009 (0.009)
AUC		0.575		0.626	0.610	0.648	
Pseudo R ²		0.018		0.039	0.032	0.049	
R ²		0.009				0.048	
Observations	6,078	6,078	5,008	5,008	6,078	6,078	

Notes: This table replicates the estimation in column (3) of Table 3 but for multiple evasion measures as dependent variables: an indicator of whether the individual under-reported wage (column (1), which replicates column (3) in Table 2), the percent of wage under-reported (column (2)), an indicator of whether the individual over-reported automatic deductions (column (3)), an indicator of whether the individual over-reported withholdings (column (4)), an indicator of whether the individual evaded taxes on more than one margin (column (5)), and the number of margins the individual used to evade. All the outcomes are measured for 2016. Both lab and survey measures are standardized so they have a mean of zero and a standard deviation of one. Because of the nature of the dependent variables, while most of the estimations correspond to probit models, we used OLS regression for the estimations in columns (2) and (6). We present marginal effects for probit regressions and regression coefficients for OLS regressions, and standard errors in parenthesis. For each probit regression, we present the out-of-sample AUC.

Table A.8: Regression: Wage Under-reporting and Peer Behavior

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Current coworkers under-reporting	0.470*** (0.017)	0.469*** (0.017)	0.468*** (0.017)	0.469*** (0.017)	0.405*** (0.016)	0.436*** (0.017)	0.399*** (0.016)	0.381*** (0.015)	0.298*** (0.027)	0.505*** (0.018)	0.510*** (0.019)	0.562*** (0.022)	0.389*** (0.014)	0.459*** (0.022)	0.688*** (0.099)
Former coworkers under-reporting	0.164*** (0.025)	0.162*** (0.026)	0.155*** (0.026)	0.151*** (0.026)	0.225*** (0.024)	0.198*** (0.025)	0.231*** (0.023)	0.248*** (0.022)	0.319*** (0.030)	0.155*** (0.028)	0.163*** (0.029)	0.164*** (0.034)	0.145*** (0.026)	0.091*** (0.032)	0.198** (0.095)
Sociodemographic Controls		✓	✓	✓											
Economic Incentives Controls			✓	✓											
Lab and survey measures Controls				✓											
Exclude secondary jobs					✓										
Exclude coworkers outside +/- 50% wage band						✓									
Exclude coworkers outside +/- 30% wage band							✓								
Exclude coworkers outside +/- 20% wage band								✓							
Exclude firms with >30,000 employees									✓						
Exclude firms with <5 employees										✓					
Exclude firms with <10 employees											✓				
Exclude firms with <50 employees												✓			
Exclude multiple-employer individuals													✓		
Sector FE														✓	
Firm FE															✓
Mean of Current coworkers under-reporting	0.163	0.163	0.163	0.163	0.151	0.160	0.160	0.159	0.132	0.171	0.175	0.187	0.143	0.163	0.163
Mean of Former coworkers under-reporting	0.161	0.161	0.161	0.161	0.144	0.162	0.161	0.160	0.142	0.165	0.167	0.175	0.148	0.161	0.161
AUC	0.899	0.898	0.902	0.897	0.884	0.903	0.901	0.899	0.866	0.902	0.901	0.900	0.932		
Pseudo R ²	0.386	0.387	0.397	0.403	0.366	0.390	0.389	0.384	0.330	0.402	0.400	0.401	0.495	0.395	0.357
Observations	6,078	6,078	6,078	6,078	6,078	6,078	6,078	6,078	5,937	5,578	5,315	4,494	3,834	5,924	2,898

Notes: This table explores the relationship between individuals' and their coworkers' wage under-reporting behavior. To do that, we include current and former coworkers separately. Column (1) replicates column (4) in Table 3. Columns (2)–(4) replicate column (1) but include different controls. Column (2) includes sociodemographic controls (gender, age, and education, all measured as in Table A.6). In addition to these controls, column (3) includes economic factors (log of income, marginal tax rate, and filing experience, all measured as in column (5) of Table 3). Column (4) includes the 24 social preferences measures, all measured as in Table 3. Column (5) restricts individual's coworkers to those who work in the individual's main job. Columns (6)–(8) restrict individual's coworkers to those who have a wage income in a range of 50%, 30%, and 20% around the individual's wage income, respectively. Column (9) restricts individual's coworkers to those who work in firms with less than 30,000 employees. Columns (10)–(12) exclude individuals whose main job takes place in firms with fewer than 5, 10, and 50 employees that file tax returns. Column (13) excludes individuals with multiple employers. Finally, columns (14)–(15) include sector and firm fixed effects, respectively.

Table A.9: Regression: Wage Under-Reporting and Peer Behavior Varying Time Window Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Current coworkers under-reporting	0.470*** (0.017)	0.466*** (0.017)	0.469*** (0.017)	0.478*** (0.018)	0.479*** (0.018)	0.483*** (0.019)	0.385*** (0.032)
Former coworkers under-reporting	0.164*** (0.025)	0.170*** (0.026)	0.159*** (0.026)	0.137*** (0.026)	0.130*** (0.026)	0.120*** (0.026)	0.189*** (0.033)
Former coworkers from 2009-2015	✓						
Former coworkers from 2010-2015		✓					
Former coworkers from 2011-2015			✓				
Former coworkers from 2012-2015				✓			
Former coworkers from 2013-2015					✓		
Former coworkers from 2014-2015						✓	
Former coworkers from 2015							✓
Mean of Current coworkers under-reporting	0.163	0.163	0.163	0.163	0.163	0.163	0.163
Mean of Former coworkers under-reporting	0.161	0.160	0.159	0.158	0.156	0.152	0.154
AUC	0.899	0.900	0.900	0.899	0.899	0.898	0.897
Pseudo R ²	0.386	0.387	0.386	0.384	0.384	0.383	0.384
Observations	6,078	6,078	6,078	6,078	6,078	6,078	6,078

Notes: This table explores the relationship between individuals' and their coworkers' wage under-reporting behavior when we vary the time window used to construct the former coworkers networks. Therefore, columns (1)–(7) report the results when we construct the *former* coworkers networks using the 2009-2015 period—as in column (4) of Table 3—, 2010-2015, 2011-2015, 2012-2015, 2013-2015, 2014-2015, and 2015 alone, respectively. The measure of *current* coworkers under-reporting is constant across specifications.

Table A.10: Summary Statistics of Coworkers Networks

	Current coworkers		Former coworkers	
	Mean/Median	SD	Mean/Median	SD
	(1)	(2)	(3)	(4)
Median number of coworkers	1,073	7740.165	4,275	9878.177
Characteristics of coworkers				
Fraction female	0.599	0.229	0.599	0.193
Mean Age	45.465	4.437	46.054	4.509
Evasion-related aspects of coworkers				
Fraction wage under-reporters	0.165	0.208	0.163	0.153
Mean wage under-reported (%)	0.887	1.253	0.885	0.928
Fraction deductions over-reporters	0.224	0.170	0.233	0.148
Fraction withholdings over-reporters	0.295	0.182	0.337	0.205
Fraction multiple-margin evaders	0.108	0.128	0.123	0.107
Mean number of evasion margins	0.643	0.312	0.694	0.299
Observations	5,996	5,996	6,013	6,013

Notes: This table presents summary statistics of the construction of the coworkers networks. Columns (1)–(2) present the information for the networks of *current* coworkers, while columns (3)–(4) do so for the networks of *former* coworkers. Columns (1) and (3) present the means or medians, while columns (2) and (4) present the standard deviations. We first show the median number of a coworkers network, then some demographics (gender and age), and finally summary statistics on the evasion behavior of the coworkers networks. The number of observations corresponds to 5,996 for *current* coworkers networks, and 6,013 for *former* coworkers networks, as some individuals have no *current* or *former* coworkers (82 and 65 individuals, respectively).

B Email Invitation: English Translation

We invite you to participate in a survey on economic attitudes among Uruguayans. This survey is part of a research study performed in collaboration with researchers from the Universidad de la República, the Universidad de San Andrés (Argentina), and the University of California, Los Angeles (USA). The information you provide will be treated confidentially and will only be used for academic purposes by the researchers.

As a token of our appreciation for your participation, you'll be eligible for one of the raffle prizes of \$5,000. Completing the survey will take about 20 minutes, and the information collected will be treated as strictly confidential.

Please follow this link to access the survey: [Click here](#)

Your participation helps us improve public policies in our country!

Thank you very much,

The Research Team.

C Survey Questionnaire: English Translation



Introduction to the survey

We invite you to participate in an academic research survey on economic opinions and attitudes in Uruguay.

Completing the survey takes about 20 minutes. As a token of our gratitude, 20 participants selected at random will each be awarded a gift card worth \$5,000. If you are one of the raffle winners, we will notify you and send you the prize by email.

In compliance with research confidentiality rules, the information collected in this questionnaire will be treated as strictly confidential. This research is being conducted by academics from the University of the Republic, the University of San Andrés (Argentina), and the University of California in Los Angeles (United States).

On behalf of the entire working team, we thank you for your participation, which helps us to improve public policies in our country.

- I agree to participate in the survey.
- I do not agree to participate in the survey.

Note: If you have any questions about this study, you can contact us at the following email: encuesta@iecon.ccee.edu.uy

What is your sex?

- Male
- Female

What is your age?

Indicate the highest level of education that you have achieved.

We divide Uruguayan workers into the following three personal income groups. Please indicate the one that best describes your income level.

- Low income** (nominal annual income below \$100,000, represents the poorest 20%)
- Middle income** (nominal annual income between \$100,000 and \$650,000, represents the "middle" 60%)
- High income** (nominal annual income greater than \$650,000, represents the richest 20%)

In the next segment, you are asked to take part in 14 decision-making games. Keep in mind that there is a chance your decisions will have real-world consequences, so it will be in your own best interest to report honestly what you would do in each game.

We will choose 50 participants at random, and if you are one of them, the decisions you have made in one of the games will be implemented and have real-world consequences. In other words, your decision in that game will affect your payout, and in the case of games with more than one participant, your decision will also affect the payouts of the other players involved.

First we ask you to play all 14 games. On June 14, we will select 50 participants at random. If you are among the 50 selected, we will contact you by email to send your cash reward. If you are not among the 50 selected participants, all the decisions you have made in the games will remain hypothetical and will have no real-world consequences.

Game 1 of 14

In the following game, you are designated as player A, and another randomly selected survey participant is player B. As player A, you receive \$1,000, and player B receives \$0. **In this game, you have the option of either keeping the entire \$1,000 or sharing part of it with participant B.**

How much of the money do you want to share?

- Share \$0
- Share \$250
- Share \$500
- Share \$750
- Share \$1,000

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 2 of 14

In this game, you are given \$1,000. **Your role is to decide how much of that money to keep for yourself and how much to donate to a non-governmental non-profit organization that works for the social inclusion of vulnerable children and adolescents.**

How would you distribute this award?

- Keep \$1,000 for yourself and donate \$0
- Keep \$750 for yourself and donate \$250
- Keep \$500 for yourself and donate \$500
- Keep \$250 for yourself and donate \$750
- Keep \$0 for yourself and donate \$1,000

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 3 of 14

Your role in this game is to distribute donations between two charitable programs. You will receive \$1,000 regardless of your decision.

You are asked to decide how to distribute \$1,000 worth of donations between a social program run by MIDES (Ministry of Social Development of Uruguay) and a non-governmental non-profit organization that has the same objective.

How would you distribute this award?

- \$1,000 for MIDES and \$0 for the NGO
- \$750 for MIDES and \$250 for the NGO
- \$500 for MIDES and \$500 for the NGO
- \$250 for MIDES and \$750 for the NGO
- \$0 for MIDES and \$1,000 for the NGO

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 4 of 14

In this game, you are participant A and two other randomly chosen survey participants are B and C. **Your role is to decide how much to pay B and C.** You will receive \$1,000 regardless of this decision.

Which of the two distributions do you prefer?

- \$250 for B and \$250 for C
- \$250 for B and \$750 for C

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 5 of 14

Two other randomly chosen survey participants are now B and C.

Again, your role is to decide how much to pay B and C. You will receive \$1,000 regardless of your decision.

To earn a chance at entering the raffle, participant B had to work at performing simple tasks on the computer for 15 minutes. Participant C did not have to do anything.

How would you allocate \$1,000 between B and C?

- \$1,000 for participant B and \$0 for participant C
- \$750 for participant B and \$250 for participant C
- \$500 for participant B and \$500 for participant C
- \$250 for participant B and \$750 for participant C
- \$0 for participant B and \$1,000 for participant C

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 6 of 14

Two other randomly chosen survey participants are now B and C.

Again, your role is to decide how to allocate the payments for B and C. You will receive \$1,000 regardless of your decision. We asked B and C if they think it is acceptable to evade taxes in Uruguay. Participant B thinks that it is not acceptable to evade taxes under any circumstances, while participant C thinks that avoiding taxes may be acceptable.

How would you allocate \$1,000 in payments between B and C?

- \$1,000 for participant B and \$0 for participant C
- \$750 for participant B and \$250 for participant C
- \$500 for participant B and \$500 for participant C
- \$250 for participant B and \$750 for participant C
- \$0 for participant B and \$1,000 for participant C

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 7 of 14

Your payout in this game depends on whether the year of your birth is odd or even. If it is even, we will pay you \$500. If it is odd, we will pay you \$2500.

Indicate whether the year of your birth is even or odd:

- Even
- Odd

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 8 of 14

In the next game you are participant A, and another randomly chosen survey participant is B. B's role is to propose how to split \$1,000 between the two of you. **Your role in this game is to accept or reject the proposal of participant B.**

Participant B proposed to keep \$800 and offer you \$200. If you accept the offer, those would be the final payments. If you decline the offer, both of you get \$0.

Do you want to accept or decline the offer?

- Accept the offer
- Reject the offer

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 9 of 14

We ask you to roll a die once. If you don't have a die nearby, you can use the digital die at the following link [here](#).

Your payout in this game will depend on the number you roll on the die: if you roll a 1, then you win \$300; if you roll a 2, then you win \$600; if you roll a 3, you win \$900; if you roll a 4, you win \$1,200; if you roll a 5, you win \$1,500; and if you roll a 6, you win \$1,800.

Enter the number that you rolled:

- 1
- 2
- 3
- 4
- 5
- 6

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 10 of 14

In the next game, you are participant A, and another randomly chosen person is participant B. You both have \$1,000. **You are asked to choose whether to invest money in B given the following two options:**

Option 1: Do not invest the \$1,000 in B. Your final payment would be \$1,000 and Participant B's final payment would be \$1,000.

Option 2: Invest the \$1,000 in B. In that case, the payouts will depend on what participant B does. If participant B chooses to share the earnings, you and participant B each get \$2,000. If participant B chooses not to share, then participant B takes \$4,000 and you take \$0.

Before making your decision, we want to know what you expect will happen.

If you choose to invest, how likely do you think it is that Participant B will choose to share the earnings?

- Very likely
- Somewhat likely
- Not very likely
- Not likely at all

What option do you want to choose?

- Do not invest in B
- Invest \$1,000 in B

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 11 of 14

In the following game, you are playing with 4 other randomly chosen participants. Each of the participants has received \$1,000. **The game consists of deciding how much of this \$1,000 to put in a common pot.** The money collected in this pot will be doubled, and the resulting total amount will be divided equally between you and the other 4 participants. Each player will receive a fifth of the pot, regardless of whether or not they contributed.

How much of your \$1,000 do you want to contribute to the pot?

- Contribute \$1,000
- Contribute \$750
- Contribute \$500
- Contribute \$250
- Contribute \$0

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 12 of 14

In this game, you will choose between receiving a payment on June 1, 2019, or receiving a payment 12 months later (on June 1, 2020). We ask you to choose between different pairs of options:

Scenario 1: Among the following two options, which one would you prefer?

- Receive \$1,000 in June 2019
- Receive \$1,200 in June 2020

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Scenario 2: Among the following two options, which one would you prefer?

- Receive \$1,000 in June 2019
- Receive \$1,400 in June 2020

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Scenario 3: Among the following two options, which one would you prefer?

- Receive \$1,000 in June 2019
- Receive \$1,600 in June 2020

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Scenario 4: Among the following two options, which one would you prefer?

- Receive \$1,000 in June 2019
- Receive \$1,800 in June 2020

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Scenario 5: Among the following two options, which one would you prefer?

- Receive \$1,000 in June 2019
- Receive \$2,000 in June 2020

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Scenario 6: Among the following two options, which one would you prefer?

- Receive \$1,000 in June 2019
- Receive \$2,200 in June 2020

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 13 of 14

For this game, we have flipped a coin. You are asked to choose between receiving a guaranteed payment or a payment that depends on whether the coin came up heads or tails. Please mark your choices from the following pairs of options:

Scenario 1: Among the following two options, which one would you prefer?

- A guaranteed payment of \$1,000
- \$2,000 if the coin lands on heads and \$0 if it lands on tails

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Scenario 2: Among the following two options, which one would you prefer?

- A guaranteed payment of \$1,000
- \$2,500 if the coin lands on heads and \$0 if it lands on tails

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Scenario 3: Among the following two options, which one would you prefer?

- A guaranteed payment of \$1,000
- \$3,000 if the coin lands on heads and \$0 if it lands on tails

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Scenario 4: Among the following two options, which one would you prefer?

- A guaranteed payment of \$1,000
- \$3,500 if the coin lands on heads and \$0 if it lands on tails

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Scenario 5: Among the following two options, which one would you prefer?

- A guaranteed payment of \$1,000
- \$4,000 if the coin lands on heads and \$0 if it lands on tails

Note: Remember that there is a chance that this decision will be implemented and may therefore have real-world consequences.

Game 14 of 14

This game consists of guessing two figures.

To evade personal income taxes, employees can underreport their wages – that is, they can report to the authorities a lower wage than they actually receive from their employers. What do you estimate is the percentage of employees who underreport their salaries?

We are going to compare your answer with the results of a recent academic study, and if you have chosen the correct option, you could win \$1,000.

- 0-10%
- 10-20%
- 20-30%
- 30-40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- 80-90%
- 90-100%

To avoid taxes, companies can underreport their Value Added - that is, they can report to the authorities lower sales and higher costs than they incurred in reality. What do you estimate is the percentage of Value Added that companies underreport on average?

We are going to compare your answer with the results of a recent academic study, and if you have chosen the correct option, you could win \$1,000.

- 0-10%
- 10-20%
- 20-30%
- 30-40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- 80-90%
- 90-100%

Thank you very much for marking your decisions for all 14 games. The next and final part of the survey consists of a series of questions about your opinions and beliefs.

In your opinion, which of the following reasons best explains why a person is poor?

- Because that person worked less than other people
- Because of unfavorable circumstances that are beyond that person's control

In your opinion, which of the following reasons best explains why a person is rich?

- Because that person worked harder than other people
- Because of favorable circumstances that are beyond that person's control

Consider a child who was born in the poorest 10% of families in Uruguay. What is the probability that this child, as an adult, could belong to 50% of the richest families?

- Very likely
- Somewhat likely
- Unlikely
- Very unlikely

Based on a lottery, we will decide whether or not you will receive additional information related to tax evasion in Uruguay.

To find out whether you have been selected to receive this information, continue to the next screen.

As a result of the lottery, you were assigned the following information:

According to the most recent research, the percentage of wage earners who underreport their earnings is in the 10%-20% range.*

* This refers to wage earners who submitted affidavits and payroll registered by hiring companies.

We will now ask you again about underreporting by employees and companies. We do this with all respondents, regardless of what they answered in the game and whether or not they received information.

This time we are not asking you to guess, we just want your opinion.

What do you think will be the percentage of employees who will underreport their salaries in 2019?

- 0-10%
- 10-20%
- 20-30%
- 30-40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- 80-90%
- 90-100%

What do you think will be the percentage of Value Added that an average company will underreport in 2019?

- 0-10%
- 10-20%
- 20-30%
- 30-40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- 80-90%
- 90-100%

To what extent do you agree or disagree with the following statement?

"Governments should take steps to reduce the income gap between rich and poor."

- Strongly agree
- Partially agree
- Partially disagree
- Strongly disagree

Generally speaking, would you say that most people can be trusted, or that one can never be careful enough when dealing with others?

- One can trust most people
- One can never be careful enough when dealing with others

Do you think that the government is efficient in the way it manages public resources?

- The government is very efficient
- The government is efficient
- The government is inefficient
- The government is very inefficient

Which of the following best describes how often you believe the government can be trusted to act correctly?

- Always
- Usually
- Most of the time
- Sometimes
- Almost never

What do you think about income differences between the rich and the poor in Uruguay?

- Inequality is too high
- Inequality is moderate
- Inequality is very low

How justifiable do you think it is to evade taxes?

- Not at all justifiable
- Justifiable on some occasions
- Fully justifiable

In 2017, what percentage of their nominal personal income do you think that the following social groups actually paid in personal taxes, on average? For your reference, individuals paid 21% of their income as taxes in 2017 on average.

%

Low income (nominal annual income below \$100,000, represents the poorest 20%)

%

Middle income (nominal annual income between \$100,000 and \$650,000, represents the "middle" 60%)

%

High income (nominal annual income greater than \$650,000, represents the richest 20%)

How much do you agree with the following statement?

"Tax rates should be more progressive (that is, higher for the rich and lower for the poor)"

- Strongly agree
- Somewhat agree
- Somewhat disagree
- Strongly disagree

Politics is generally viewed in terms of "left" and "right." On a scale where 0 leans the most to the "left" and 10 leans the most to the "right," where would you locate yourself?

- 0 (left)
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 (right)

Recent studies on decision-making show that decisions are affected by the context in which they are made and reflect people's feelings, prior knowledge and experience, and environment. Thank you for helping to make the survey results meaningful by following the instructions. To help us confirm that you have read these instructions, please select the "none of the above" option from the following alternatives:

- Anger
- Joy
- Sadness
- Fear
- Surprise
- None of the above

How well did you understand the survey questions?

- I understood everything
- I understood almost everything
- I understood some questions
- I did not understand anything

Would you like to share with us any comments or thoughts about the survey?

D Email Invitation: Spanish (Original)

Le invitamos a participar de una encuesta con fines académicos sobre las actitudes económicas de los uruguayos. La misma es parte de una investigación en colaboración con investigadores de la Universidad de la República, la Universidad de San Andrés (Argentina) y la Universidad de California en Los Ángeles (EEUU). La información que usted nos proporcione será tratada con el criterio de secreto estadístico y sólo se utilizará con objetivos académicos por parte de los investigadores responsables de esta encuesta.

Como contrapartida por participar, usted obtiene la chance de recibir un premio de \$5.000. Completar la encuesta le llevará alrededor de 20 minutos y la información relevada es confidencial.

Por favor use el siguiente enlace para acceder a la encuesta:

[Click aquí](#)

¡Su participación nos ayuda a mejorar las políticas públicas en nuestro país!

Muchas gracias,

El equipo de investigación.

Por favor no responda este mail. Si usted tiene alguna duda o pregunta, escribanos a encuesta@iecon.ccee.edu.uy. Para no recibir más estos correos, siga el siguiente enlace: [Click aquí](#)

E Survey Questionnaire: Spanish (Original)



Introducción a la encuesta

Le invitamos a participar de una encuesta con fines académicos sobre las opiniones y actitudes económicas en Uruguay.

Completar la encuesta lleva alrededor de 20 minutos. Como muestra de nuestra gratitud, 20 participantes elegidos al azar recibirán como premio una tarjeta de obsequio de Punta Carretas Shopping por el valor de \$5000 cada una. Si Ud. es beneficiado por el sorteo, coordinaremos el envío del premio por email.

La información relevada en este cuestionario será tratada con carácter estrictamente confidencial, cumpliendo con el criterio de secreto estadístico. Esta investigación está a cargo de investigadores de la Universidad de la República, la Universidad de San Andrés (Argentina) y la Universidad de California en Los Ángeles (Estados Unidos).

De parte de todo el equipo de trabajo le agradecemos por su colaboración. Su participación nos ayuda a entender cómo mejorar las políticas públicas en nuestro país.

- Acepto participar de la encuesta
- No acepto participar de la encuesta

Nota: si usted tiene alguna pregunta sobre este estudio, se puede comunicar con nosotros al siguiente email: encuesta@iecon.ccee.edu.uy

¿Cuál es su sexo?

- Masculino
- Femenino

¿Cuál es su edad?

Indique cuál es el máximo nivel educativo que Ud. ha alcanzado

Si agrupamos a los trabajadores de Uruguay en tres estratos según el siguiente rango de ingresos personales nominales, ¿en cuál se ubica usted?

- Estrato bajo** (ingreso nominal anual menor a \$100.000, representa el 20% más pobre)
- Estrato medio** (ingreso nominal anual entre \$100.000 y \$650.000, representa el 60% "del medio")
- Estrato alto** (ingreso nominal anual mayor a \$650.000, representa el 20% más rico)

A continuación Ud. deberá tomar decisiones en 14 juegos. Tenga en cuenta que existe una chance de que sus decisiones tengan consecuencias reales, por lo que a Ud. le conviene declarar honestamente lo que haría en cada uno de estos juegos.

Vamos a elegir 50 participantes al azar. Si Ud. es uno de esos 50 participantes, entonces la decisión que Ud. tomó en uno de los juegos será implementada y tendrá consecuencias reales. Es decir, su decisión en ese juego afectará su pago y, para los juegos que involucran más de un participante, también afectará los pagos de los otros jugadores involucrados.

Primero Ud. va a tener que jugar los 14 juegos. El 14 de junio vamos a seleccionar los 50 participantes al azar. Si Ud. está entre los 50 favorecidos nos comunicaremos por email para enviarle el dinero en efectivo. Si no es seleccionado entre los 50 afortunados, todas las decisiones que tomó en los juegos quedarán como hipotéticas y no tendrán consecuencias reales.

Juego 1 de 14

En el siguiente juego usted está participando como participante A, y otro participante de la encuesta elegido al azar está jugando como participante B. Como participante A, Ud. recibió \$1000, y el participante B recibió \$0. **En este juego, Ud. tiene la posibilidad de quedarse con la totalidad de los \$1000, o compartir parte con el participante B.**

¿Cuánto quiere compartir?

- Compartir \$0
- Compartir \$250
- Compartir \$500
- Compartir \$750
- Compartir \$1000

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 2 de 14

En este juego a Ud. le han asignado \$1000, y **su rol consiste en decidir cuánto de ese dinero quedarse para Ud. mismo y cuánto donarlo a una organización no gubernamental sin fines de lucro, orientada a la inclusión social de niños/as y adolescentes vulnerables.**

¿Cómo asignaría este premio?

- \$1000 para usted y \$0 para donación
- \$750 para usted y \$250 para donación
- \$500 para usted y \$500 para donación
- \$250 para usted y \$750 para donación
- \$0 para usted y \$1000 para donación

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 3 de 14

Su rol en este juego es repartir donaciones entre dos programas con fines caritativos. Ud. va a recibir \$1000 independientemente de esta decisión.

Tiene que repartir \$1000 entre una donación a un Programa social del MIDES o a una organización no gubernamental sin fines de lucro que tiene el mismo objetivo.

¿Cómo asignaría este premio?

- \$1000 para el MIDES y \$0 para la organización no gubernamental
- \$750 para el MIDES y \$250 para la organización no gubernamental
- \$500 para el MIDES y \$500 para la organización no gubernamental
- \$250 para el MIDES y \$750 para la organización no gubernamental
- \$0 para el MIDES y \$1000 para la organización no gubernamental

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 4 de 14

Otros dos nuevos participantes de la encuesta elegidos al azar están jugando como participantes B y C.

Su rol es decidir los pagos de B y C. Ud. va a recibir \$1000 independientemente de esta decisión.

¿Cuál de las dos asignaciones prefiere?

- \$250 para B y \$250 para C
- \$250 para B y \$750 para C

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 5 de 14

Otros dos nuevos participantes de la encuesta elegidos al azar están jugando como participantes B y C.

Nuevamente, su rol es decidir los pagos de B y C. Ud. va a recibir \$1000 independientemente de esta decisión.

Para obtener la chance de participar en el sorteo, el participante B tuvo que trabajar en unas tareas simples en la computadora por 15 minutos. El participante C no tuvo que hacer nada.

¿Cómo asignaría \$1000 entre B y C?

- \$1000 para el participante B y \$0 para el participante C
- \$750 para el participante B y \$250 para el participante C
- \$500 para el participante B y \$500 para el participante C
- \$250 para el participante B y \$750 para el participante C
- \$0 para el participante B y \$1000 para el participante C

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 6 de 14

Otros dos nuevos participantes de la encuesta elegidos al azar están jugando como participantes B y C.

Nuevamente, su rol es decidir los pagos de B y C. Ud. va a recibir \$1000 independientemente de esta decisión. Le preguntamos a B y C si creen que es aceptable evadir impuestos en Uruguay. El participante B piensa que bajo ninguna circunstancia es aceptable evadir impuestos, mientras que el participante C piensa que evadir impuestos puede ser aceptable.

¿Cómo asignaría \$1000 entre B y C?

- \$1000 para el participante B y \$0 para el participante C
- \$750 para el participante B y \$250 para el participante C
- \$500 para el participante B y \$500 para el participante C
- \$250 para el participante B y \$750 para el participante C
- \$0 para el participante B y \$1000 para el participante C

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 7 de 14

Su pago en este juego depende de si el año de su nacimiento es par o impar. Si es par, le pagaremos \$500 y si es impar, le pagaremos \$2500.

Indique si el año de su nacimiento es:

- Par
- Impar

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 8 de 14

En el siguiente juego usted está jugando como participante A, y otro participante de la encuesta elegido al azar está jugando como participante B.

El rol de B es proponer cómo repartir \$1000 entre ustedes dos. **Su rol en este juego es aceptar o rechazar la propuesta del participante B.**

El participante B propuso quedarse con \$800 y darle \$200. Si Ud. acepta la oferta, esos serían los pagos finales. Si Ud. rechaza la oferta, los dos se llevan \$0.

¿Quiere aceptar o rechazar la oferta?

- Acepta la oferta
- Rechaza la oferta

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 9 de 14

Le pedimos que tire una vez un dado. Si no tiene un dado cerca, puede utilizar el dado digital en el siguiente enlace [aquí](#).

Su pago en este juego dependerá del valor del dado: si sale 1, entonces ganará \$300; si sale 2, entonces ganará \$600; si sale 3, ganará \$900; si sale 4, ganará \$1200; si sale 5, ganará \$1500; y si sale 6, ganará \$1800.

Indique el número que salió en el dado:

- 1
- 2
- 3
- 4
- 5
- 6

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 10 de 14

En el siguiente juego Ud. está participando como participante A, y otra persona elegida al azar participa como B.

Ambos tienen \$1000. **Ud. tiene que elegir si invertir dinero en B sabiendo que existen dos opciones:**

Opción 1: no invierte los \$1000 en B. Su pago final sería \$1000 y el del participante B sería \$1000.

Opción 2: invierte los \$1000 en B. En ese caso, los pagos dependerán de lo que haga el participante B. Si el participante B elige compartir las ganancias, Ud. y el participante B se llevan \$2000 cada uno. Si el participante B elige no compartir, entonces el participante B se lleva \$4000 y Ud. se lleva \$0.

Antes de tomar su decisión, queremos saber lo que Ud. espera.

Si Ud. elige invertir, ¿qué tan probable es que el participante B comparta sus ganancias?

- Muy probable
- Algo probable
- Poco probable
- Para nada probable

¿Qué decisión quiere tomar?

- No invierte en B
- Invierte los \$1000 en B

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 11 de 14

El siguiente juego lo está jugando Ud. junto a otros 4 participantes elegidos al azar. Cada uno de los participantes recibió \$1000. **El juego consiste en decidir cuánto dinero de estos \$1000 poner en un pozo común.** El dinero que se acumule en este pozo se duplicará, y el monto total resultante se repartirá en partes iguales entre Ud. y los restantes 4 participantes. Cada jugador recibirá un quinto del pozo, independientemente de si contribuyeron o no.

¿Cuánto de sus \$1000 quiere contribuir Ud. al pozo común?

- Contribuyo \$1000
- Contribuyo \$750
- Contribuyo \$500
- Contribuyo \$250
- Contribuyo \$0

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 12 de 14

Ahora tiene que elegir entre recibir un pago el 1º de junio de 2019, o un pago 12 meses después (el 1º de junio de 2020). Le pedimos que elija entre diferentes pares de alternativas:

Escenario 1: entre las siguientes dos opciones, ¿cuál preferiría?

- Recibir \$1000 en junio de 2019
- Recibir \$1200 en junio de 2020

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Escenario 2: entre las siguientes dos opciones, ¿cuál preferiría?

- Recibir \$ 1000 en junio de 2019
- Recibir \$1400 en junio de 2020

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Escenario 3: entre las siguientes dos opciones, ¿cuál preferiría?

- Recibir \$1000 en junio de 2019
- Recibir \$1600 en junio de 2020

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Escenario 4: entre las siguientes dos opciones, ¿cuál preferiría?

- Recibir \$1000 en junio de 2019
- Recibir \$1800 en junio de 2020

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Escenario 5: entre las siguientes dos opciones, ¿cuál preferiría?

- Recibir \$1000 en junio de 2019
- Recibir \$2000 en junio de 2020

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Escenario 6: entre las siguientes dos opciones, ¿cuál preferiría?

- Recibir \$1000 en junio de 2019
- Recibir \$2200 en junio de 2020

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 13 de 14

Para este juego, nosotros hemos tirado una moneda. Ahora tiene que elegir entre recibir un pago seguro, o un pago que depende de si salió cara o cruz. Le pedimos que elija entre diferentes pares de alternativas:

Escenario 1: entre las siguientes dos opciones, ¿cuál preferiría?

- Un pago seguro de \$1000
- \$2000 si salió cara o \$0 si salió cruz

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Escenario 2: entre las siguientes dos opciones, ¿cuál preferiría?

- Un pago seguro de \$1000
- \$2500 si salió cara o \$0 si salió cruz

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Escenario 3: entre las siguientes dos opciones, ¿cuál preferiría?

- Un pago seguro de \$1000
- \$3000 si salió cara o \$0 si salió cruz

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Escenario 4: entre las siguientes dos opciones, ¿cuál preferiría?

- Un pago seguro de \$1000
- \$3500 si salió cara o \$0 si salió cruz

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Escenario 5: entre las siguientes dos opciones, ¿cuál preferiría?

- Un pago seguro de \$1000
- \$4000 si salió cara o \$0 si salió cruz

Nota: recuerde que existe la chance de que esta decisión sea implementada y por lo tanto tenga consecuencias reales.

Juego 14 de 14

Este juego consiste en adivinar dos cifras.

Para evadir impuestos a los ingresos personales, los asalariados pueden sub-declarar su salario -es decir, declarar a las autoridades un salario menor al que realmente reciben de sus empleadores-. ¿Cuál estima Ud. es el porcentaje de asalariados que sub-declaran su salario?

Vamos a comparar su respuesta con los resultados de un estudio académico reciente, y si elige la opción correcta podría ganar \$1000.

- 0-10%
- 10-20%
- 20-30%
- 30-40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- 80-90%
- 90-100%

Para evadir impuestos, las empresas pueden sub-declarar su Valor Agregado -es decir, declarar a las autoridades menores ventas y mayores costos a los reales-. ¿Cuál estima Ud. es el porcentaje del Valor Agregado que las empresas sub-declaran en promedio?

Vamos a comparar su respuesta con los resultados de un estudio académico reciente, y si elige la opción correcta podría ganar \$1000.

- 0-10%
- 10-20%
- 20-30%
- 30-40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- 80-90%
- 90-100%

Muchas gracias por tomar las decisiones en los 14 juegos. La siguiente y última parte de la encuesta consiste en una serie de preguntas sobre sus opiniones y creencias.

En su opinión, ¿cuál de las siguientes razones explica mejor por qué una persona es pobre?

- Porque se esforzó menos que otras personas
- Por circunstancias desfavorables que están más allá de su control

En su opinión, ¿cuál de las siguientes razones explica mejor por qué una persona es rica?

- Porque se esforzó más que otras personas
- Por circunstancias favorables que están más allá de su control

Considere un niño/a que nació en el 10% de familias más pobres de Uruguay. ¿Cuál es la probabilidad de que este niño/a, cuando sea adulto, pueda pertenecer al 50% de las familias más ricas?

- Muy probable
- Algo probable
- Poco probable
- Muy poco probable

Ahora vamos a decidir mediante un sorteo si Ud. va a recibir información adicional relacionada a la evasión de impuestos en Uruguay.

Para conocer si Ud. fue seleccionado/a para recibir información, continúe a la siguiente pantalla.

Como resultado del sorteo, Ud. fue asignado a la siguiente información:

Según la investigación más reciente, el porcentaje de asalariados que sub-declaran está en el rango 10%-20%.*

* Refiere a los asalariados que presentaron declaraciones juradas y a las nóminas registradas por las empresas contratantes.

Le vamos a preguntar nuevamente sobre la sub-declaración de los asalariados y las empresas - esto lo hacemos con todos los encuestados, independientemente de lo que contestaron en el juego, o de si recibieron información o no -.

Esta vez no le pedimos que adivine, simplemente queremos su opinión.

¿Cuál cree Ud. será el porcentaje de asalariados que sub-declararán su salario en 2019?

- 0-10%
- 10-20%
- 20-30%
- 30-40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- 80-90%
- 90-100%

¿Cuál cree Ud. será el porcentaje del Valor Agregado que una empresa promedio sub-declarará en 2019?

- 0-10%
- 10-20%
- 20-30%
- 30-40%
- 40-50%
- 50-60%
- 60-70%
- 70-80%
- 80-90%
- 90-100%

¿Hasta qué punto usted está de acuerdo o en desacuerdo con la siguiente afirmación?

"Los gobiernos deberían tomar medidas para reducir las diferencias de ingresos entre ricos y pobres"

- Totalmente de acuerdo
- Parcialmente de acuerdo
- Parcialmente en desacuerdo
- Totalmente en desacuerdo

Hablando en general, ¿diría usted que se puede confiar en la mayoría de las personas o que uno nunca es lo suficientemente cuidadoso en el trato con los demás?

- Se puede confiar en la mayoría de las personas
- Uno nunca es lo suficientemente cuidadoso en el trato con los demás

¿Cree que el Estado es eficiente en la forma en que administra los recursos públicos?

- El Estado es muy eficiente
- El Estado es eficiente
- El Estado es ineficiente
- El Estado es muy ineficiente

¿Diría usted que, por lo general, se puede confiar en que el Estado actúa correctamente?

- Siempre
- Casi siempre
- La mayor parte del tiempo
- A veces
- Casi nunca

¿Qué piensa Ud. sobre las diferencias de ingresos entre los ricos y los pobres en Uruguay?

- La desigualdad es demasiado alta
- La desigualdad es adecuada
- La desigualdad es muy baja

¿Cuán justificable cree Ud. que es evadir impuestos?

- Nada justificable
- Justificable en algunas ocasiones
- Totalmente justificable

En el año 2017, ¿qué porcentaje de sus ingresos personales nominales usted cree que efectivamente pagaron de impuestos personales, en promedio, los siguientes estratos sociales? Para que Ud. tenga una referencia, en promedio, los individuos pagaron en 2017 el 21% de sus ingresos como impuestos.

%

Estrato bajo (ingreso nominal anual menor a \$100.000, representa el 20% más pobre)

%

Estrato medio (ingreso nominal anual entre \$100.000 y \$650.000, representa el 60% "del medio")

%

Estrato alto (ingreso nominal anual mayor a \$650.000, representa el 20% más rico)

¿Qué tan de acuerdo está Ud. con la siguiente afirmación?

"Las tasas de impuestos deberían ser más progresivas (es decir, más altas para los ricos y más bajas para los pobres)"

- Totalmente de acuerdo
- Parcialmente de acuerdo
- Parcialmente en desacuerdo
- Totalmente en desacuerdo

En política se habla normalmente de "izquierda" y "derecha". En una escala donde 0 es la "izquierda" y 10 es la "derecha",

¿dónde se ubicaría Ud.?

- 0 (izquierda)
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10 (derecha)

Estudios recientes sobre la toma de decisiones muestra que éstas se encuentran afectadas por el contexto en el que se toman. Hay diferencias en cómo las personas se sienten, en su conocimiento y experiencia previa, y en el ambiente. Gracias por prestar atención a las instrucciones; de lo contrario, los resultados de la encuesta no serían muy útiles. Para ayudarnos a confirmar que Ud. ha leído estas instrucciones, por favor seleccione la opción "ninguna de los anteriores" entre las siguientes alternativas:

- Enojo
- Alegría
- Tristeza
- Miedo
- Sorpresa
- Ninguna de las anteriores

¿Qué tanto entendió las preguntas de la encuesta?

- Entendí todo
- Entendí casi todo
- Entendí parcialmente
- No entendí nada

¿Quiere hacernos llegar algún comentario o impresión sobre la encuesta?