WHAT MAKES A TAX EVADER?

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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.

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A data appendix is available at http://www.nber.org/data-appendix/w28235

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

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[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

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[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

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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

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[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-

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[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

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[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,O,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-

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[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,

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[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

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[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

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[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

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[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

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[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.

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[28] For 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.

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[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."

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[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

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[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

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[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

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[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,

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[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-

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[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

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[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

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[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

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[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

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[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-

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[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.

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[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

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[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

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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

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[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?

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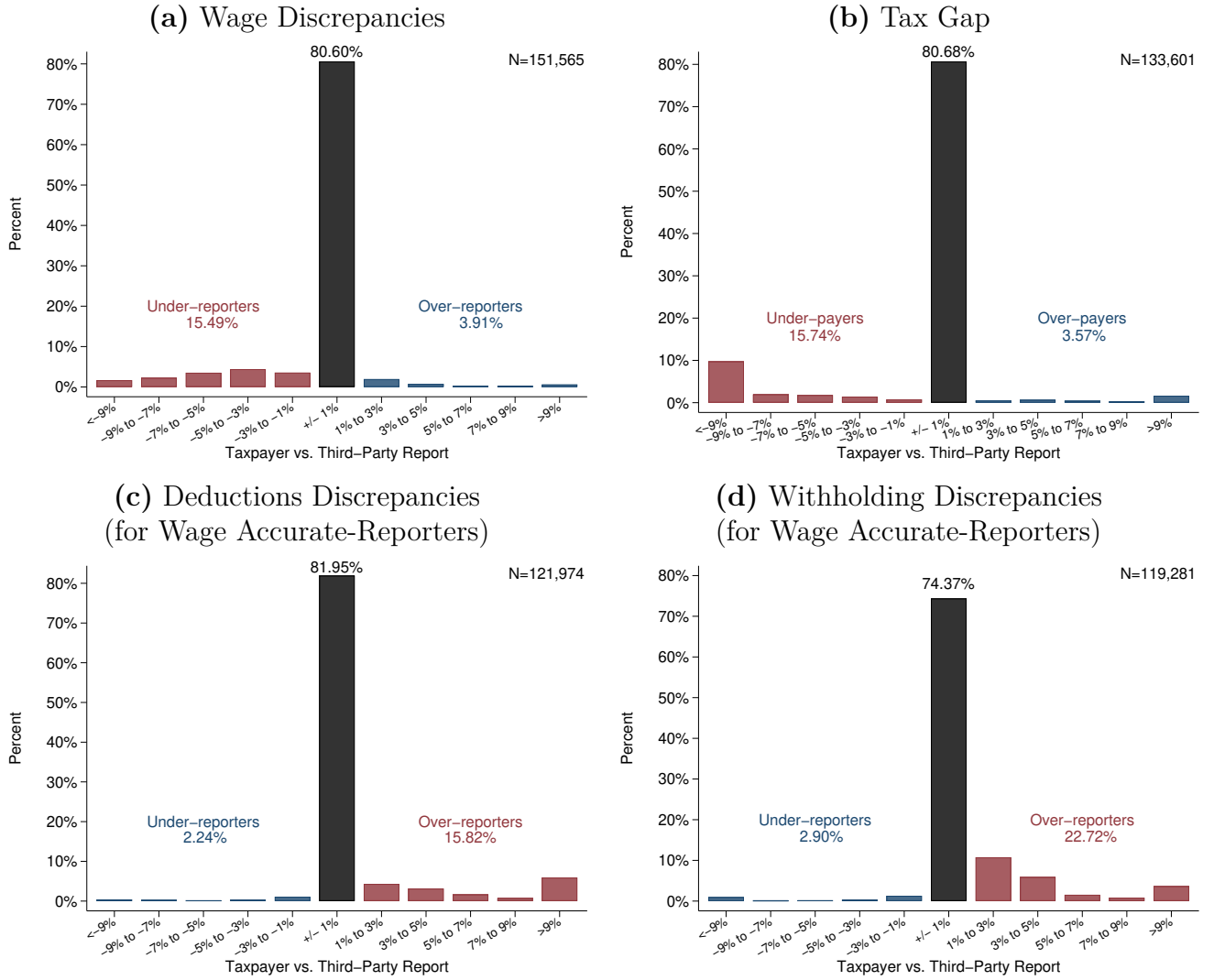
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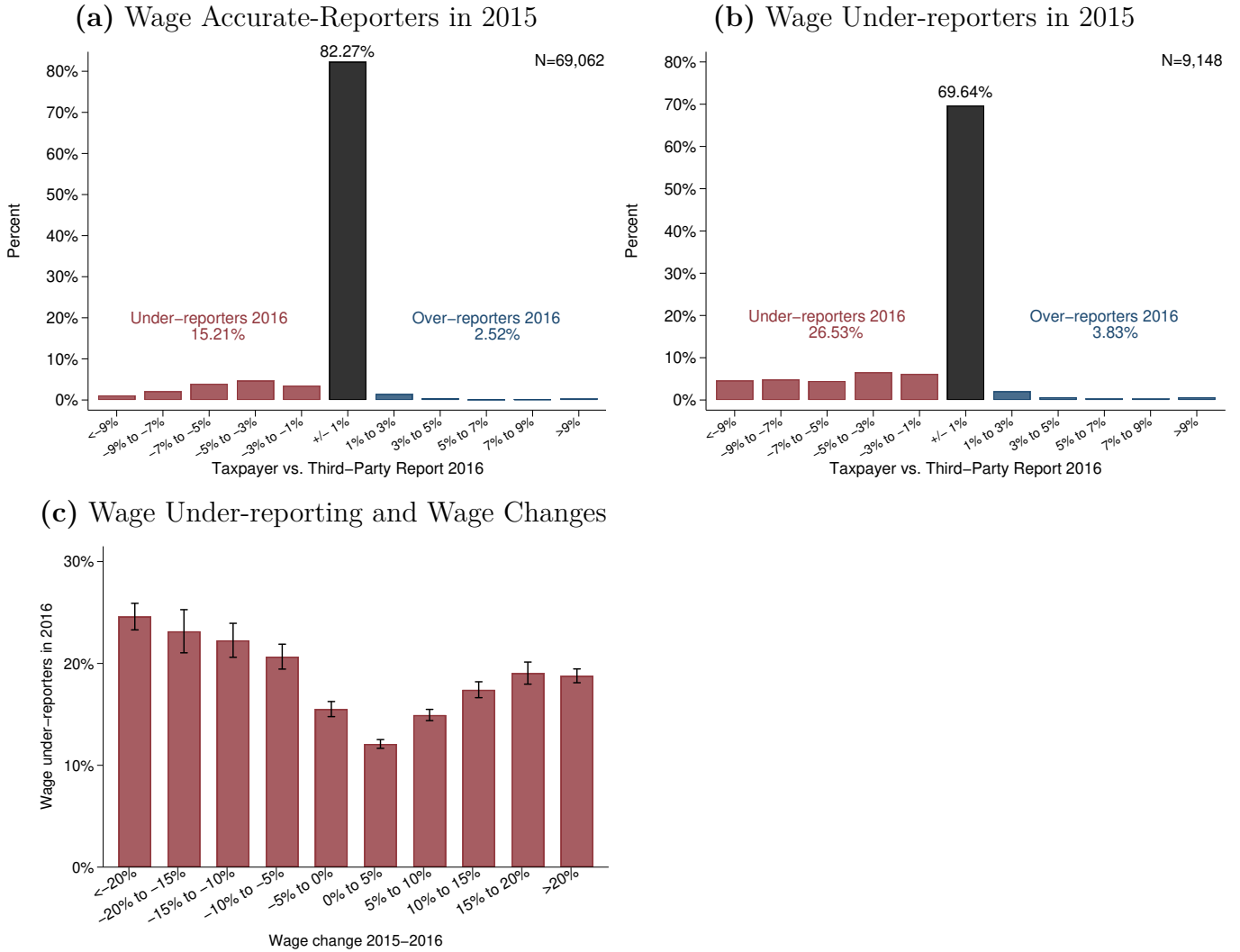Levitt, S. D. and J. A. List (2007). What Do Laboratory Experiments Measuring Social Preferences

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Figure 1: Measures of Tax Evasion

(a) Wage Discrepancies

(b) Tax Gap

(c) Deductions Discrepancies
(for Wage Accurate-Reporters)

(d) Withholding Discrepancies
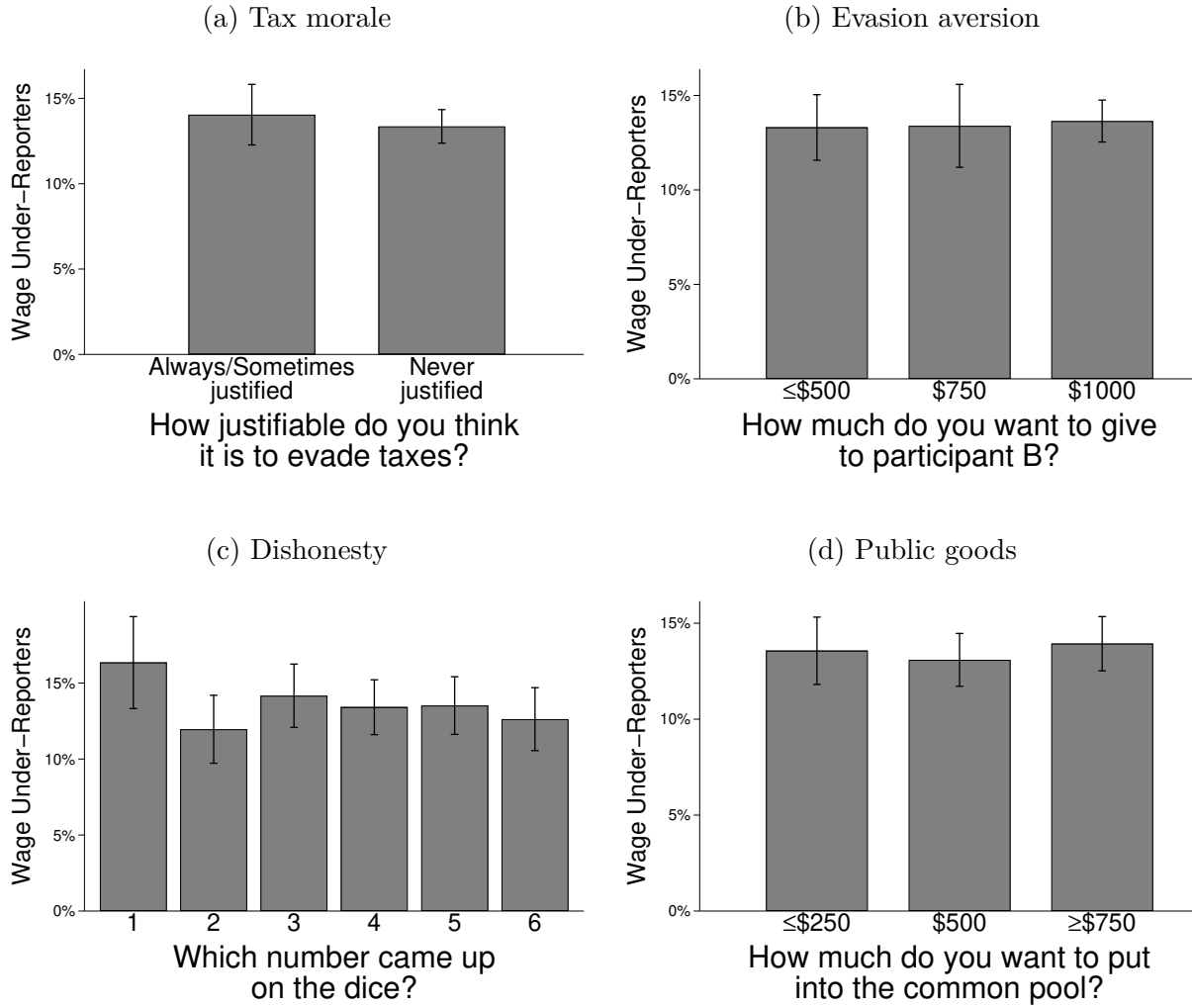(for Wage Accurate-Reporters)

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

(a) Wage Accurate-Reporters in 2015

(b) Wage Under-reporters in 2015

(c) Wage Under-reporting 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

(a) Tax morale

(b) Evasion aversion

(c) Dishonesty

(d) Public goods

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 respondentsâ placement in the left-right spectrum (10 = right)
Perceived progressiveness	It indicates the respondentsâ 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.Coef. (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		0.001		
		(0.005)		(0.005)		
	Public goods	-0.001		-0.003		
		(0.005)		(0.005)		
	Dishonesty	0.000		0.000		
		(0.004)		(0.004)		
	Giving to strangers	0.009*		0.007		
		(0.005)		(0.005)		
	Giving to charity	0.014***		0.013***		
		(0.005)		(0.005)		
	Giving to government	0.016***		0.008		
		(0.004)		(0.005)		
	Trust	-0.005		-0.004		
		(0.005)		(0.005)		
	Ultimatum	0.006		0.005		
		(0.004)		(0.004)		
	Inequality aversion	0.001		0.002		
		(0.004)		(0.004)		
	Meritocratic preferences	0.003		0.004		
		(0.005)		(0.005)		
	Impatience	0.007		0.006		
		(0.004)		(0.005)		
	Risk aversion	0.002		0.003		
		(0.005)		(0.005)		
Survey-Based Social Preferences	Tax morale		-0.003	-0.005		
			(0.004)	(0.005)		
	Workers' evasion		0.004	0.005		
			(0.006)	(0.005)		
	Firms' evasion		0.020***	0.019***		
			(0.005)	(0.005)		
	Trust in others		0.004	0.005		
			(0.005)	(0.005)		
	Trust in government		-0.002	-0.002		
			(0.006)	(0.006)		
	Government efficiency		0.007	0.005		
			(0.006)	(0.006)		
	Preferences for redistribution		-0.001	-0.002		
			(0.005)	(0.005)		
	Left-right spectrum		-0.011**	-0.008		
			(0.006)	(0.006)		
	Perceived progressiveness		-0.001	0.000		
			(0.004)	(0.004)		
	Desired progressiveness		0.012**	0.011**		
			(0.006)	(0.006)		
	Perceived inequality		0.003	0.002		
			(0.005)	(0.005)		
	Role of luck		0.007	0.006		
			(0.005)	(0.005)		
Peer	Current coworkers under-reporting				0.470***	
					(0.017)	
	Former coworkers under-reporting				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 R²	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.