Impact of Tax Advisers and Corrupt Tax Auditors on Taxpayer Compliance

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PRÉCIS
Se fondant sur deux expériences, cette étude examine les décisions des contribuables quant au montant de revenu à déclarer lorsqu'ils et elles sont en présence de vérificateurs de l'impôt et, après la déclaration, en présence de conseillers fiscaux, respectivement. Dans la première expérience, nous examinons l'observation fiscale des contribuables en présence et en l'absence de vérificateurs corrompus. Dans la deuxième expérience, nous examinons l'observation fiscale des contribuables en présence de vérificateurs de l'impôt corrompus, et nous la comparons avec l'observation fiscale des contribuables en présence de conseillers fiscaux dont ils ont retenu les services après avoir fait l'objet d'une vérification. Les pots-de-vin demandés par des vérificateurs corrompus aux contribuables faisant l'objet d'une vérification sont exprimés sous la forme d'un pourcentage des impôts et des pénalités à payer.

La séquence des événements dans la première expérience est la suivante : 1) le contribuable décide du pourcentage de revenu à déclarer à l'administration fiscale; 2) le contribuable apprend si il ou elle fait l'objet ou non d'une vérification; et 3) le contribuable paie les impôts impayés et les pénalités s'il fait l'objet d'une vérification par un vérificateur non corrompu, ou le contribuable décide de payer ou non un pot-de-vin si le vérificateur est corrompu. Dans la deuxième expérience, la 3e étape est remplacée par la suivante : le contribuable doit décider d'offrir ou non un pot-de-vin au vérificateur de l'impôt sans engager de conseiller fiscal, ou de retenir les services d'un conseiller fiscal (pour le règlement des litiges) en l'absence d'un vérificateur de l'impôt corrompu pour contester les pénalités et la sous-déclaration de revenu. Les enseignements que les participants ont tirés aux premières étapes de l'expérience peuvent influer sur leur choix de déclaration aux étapes suivantes.

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Les résultats de notre première expérience montrent que l'observation des règles par les contribuables est globalement réduite par la simple présence d'un vérificateur de l'impôt corrompu, même lorsque la recherche de pots-de-vin n'offre aucun avantage pécuniaire net après impôt aux contribuables. Cela démontre les effets corrosifs des vérificateurs corrompus. L'observation des règles par les contribuables diminue encore davantage lorsque les contribuables tirent des avantages pécuniaires nets de l'octroi d'un pot-de-vin au vérificateur corrompu.

La deuxième expérience consiste à examiner si l'intervention d'un conseiller fiscal professionnel augmente ou diminue le pourcentage du revenu déclaré par rapport à l'observation de base en présence d'un vérificateur de l'impôt corrompu. Si le conseiller fiscal joue le rôle de contrôleur et d'autorité morale, le pourcentage de revenu déclaré par le client contribuable pourrait augmenter en présence d'un conseiller fiscal. Cependant, si le conseiller fiscal ne fait qu'annuler les pénalités fiscales imposées au contribuable, le pourcentage de revenu déclaré par le client contribuable pourrait diminuer. Les résultats de nos expériences montrent qu'en l’absence de vérificateurs corrompus, les conseillers fiscaux sont plus à même d’améliorer l’observation fiscale du contribuable que l’observation de base en présence d’un vérificateur de l’impôt corrompu, agissant de connivence avec le contribuable. Cela suggère que les conseillers fiscaux servent effectivement de gardiens de la morale du système fiscal.

**ABSTRACT**

Using two experiments, this study examines taxpayers’ decisions on how much income to report in the presence of tax auditors and post-reporting tax advisers, respectively. In the first experiment, we examine taxpayers’ compliance in the presence and absence of corrupt auditors. In the second experiment, we examine taxpayers’ compliance in the presence of corrupt tax auditors and compare it with their compliance in the presence of tax advisers retained by the taxpayers upon being audited. The bribes sought by corrupt auditors from audited taxpayers are expressed in the form of a percentage of taxes and penalties payable.

The sequence of events in the first experiment is as follows: (1) the taxpayer decides what percentage of income to report to the tax authority; (2) the taxpayer finds out whether or not he or she is audited; and (3) the taxpayer pays any unpaid taxes and penalties if audited by a non-corrupt auditor, or decides whether to pay a bribe if the auditor is corrupt. In the second experiment, step 3 is replaced by the taxpayer having to decide whether to bribe the corrupt tax auditor without hiring a tax adviser, or to retain a (dispute resolution) tax adviser in the absence of a corrupt tax auditor to contest the penalties and underreporting of income. Participants’ learning from earlier rounds of the experiment can affect their reporting choice in subsequent rounds.

The results of our first experiment show that overall taxpayer compliance is reduced in the mere presence of a corrupt tax auditor, even when bribe-seeking may offer no net after-tax monetary benefits to the taxpayers. This demonstrates the corrosive effects of corrupt auditors. Taxpayer compliance declines even further when taxpayers receive net monetary benefits from bribing the corrupt auditor.

The second experiment examines whether the involvement of a professional tax adviser increases or decreases the percentage of income reported compared to the baseline compliance in the presence of a corrupt tax auditor. If the tax adviser serves as a gatekeeper and moral authority, the percentage of income reported by the taxpayer client could increase in the presence of a tax adviser. However, if the tax adviser
effectively serves to simply override the tax penalties imposed on the taxpayer, the percentage of income reported by the taxpayer client could decrease. Our experimental results show that in the absence of corrupt auditors, tax advisers are better at improving taxpayer compliance compared to the baseline compliance in the presence of a collusively corrupt tax auditor. This suggests that tax advisers do serve as moral gatekeepers for the tax system.

KEYWORDS: CORRUPTION □ TAX AUDITS □ COMPLIANCE □ ADVISERS □ EXPERIMENTAL □ ECONOMICS

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INTRODUCTION

Underreporting of income for tax purposes—or tax evasion—is costly for many jurisdictions, including Canada and the United States. On the basis of Statistics Canada data, the Canada Revenue Agency (CRA) estimated that the underground economy in Canada created a tax gap of $6.5 billion in federal income taxes for the 2014 tax year.1 The Internal Revenue Service (IRS) in the United States estimated the average net tax gap for the 2011-2013 period to be $381 billion.2 Tax authorities

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1 Canada Revenue Agency, Tax Assured and Tax Gap for the Federal Personal Income Tax System (Ottawa: CRA, 2017) (www.canada.ca/content/dam/cra-arc/migration/cra-arc/gncy/tx-gp/Tax_Gap_2017-eng.pdf).
2 Internal Revenue Service, “The Tax Gap” (www.irs.gov/newsroom/the-tax-gap).
counter this behaviour with tax audits and the assessment of penalties when the taxpayer is found to be underreporting income. Underreporting of income may be facilitated by collusively corrupt tax auditors who demand bribes as high as the legally sanctioned penalty for underreporting, plus unpaid taxes, or tax advisers who can mitigate the impact of a tax audit and collect a fee for their service.

Corruption and taxpayer non-compliance are pervasive in developing countries as well as being present in western industrialized countries. A global survey on fraud published in 2014 found that 19 percent of executives had encountered bribery or corruption in developed markets (including Canada), compared to 54 percent in emerging markets. Hindriks, Keen, and Muthoo refer to some high-profile tax evasion cases in Italy, the United Kingdom, and the United States. In Canada, investigations of alleged tax fraud in the Quebec construction industry led to the dismissal or suspension of nine officials employed in the CRA’s Montreal tax services office. Senior team leaders and auditors were implicated in the case, in which two construction companies conspired with CRA insiders to defraud the government of $4 million in taxes owing. The review by the CRA indicated that such tax fraud extended beyond the construction industry. In another case, a CRA auditor was alleged to have received $150,000 from a taxpayer for allowing the deduction of a $2.3 million business investment loss to which the taxpayer was not entitled. It has been suggested that high-profile cases constitute only a fraction of the reported cases.

3 See, for example, Prakash Chander, “Corruption in Tax Administration” (1992) 49 Journal of Public Economics 333-49; Keto Genix, “21 IT Officers Accused of Corruption Asked To Retire,” The Economic Times, November 27, 2019 (https://economictimes.indiatimes.com/news/politics-and-nation/government-compulsorily-retires-21-tax-officials-on-graft-charges/articleshow/72241194.cms); and Pan Che and Wang Xiaoxia, “Beijing Tax Officials Convicted of Bribery,” Caixin, January 23, 2018 (www.caixinglobal.com/2018-01-23/beijing-tax-officials-convicted-of-bribery-101201610.html).

4 Anastasia Litina and Theodore Palivos, “Corruption, Tax Evasion and Social Values” (2016) 124 Journal of Economic Behavior & Organization 164 - 77 (https://doi.org/10.1016/j.jebo.2015.09.017).

5 EY, “Overcoming Compliance Fatigue: Reinforcing the Commitment to Ethical Growth,” 13th Global Fraud Survey, 2014, at 12, figure 8 (www.ey.com/publication/vwluassets/ey-13th-global-fraud-survey/$file/ey-13th-global-fraud-survey.pdf).

6 Jean Hindriks, Michael Keen, and Abhinay Muthoo, “Corruption, Extortion and Evasion” (1999) 74 Journal of Public Economics 395 - 430, at 396.

7 See Daniel Leblanc, “Canada Revenue Agency Fires Six, Suspends Three in Montreal Office,” Globe and Mail, December 10, 2010 (www.theglobeandmail.com/news/politics/canada-revenue-agency-fires-six-suspends-three-in-montreal-office/article563747).

8 Ibid.

9 Daniel Leblanc, “RCMP Alleges Ex-CRA Auditor Received Payment,” Globe and Mail, May 16, 2011 (www.theglobeandmail.com/news/politics/rcmp-alleges-ex-cra-auditor-received-payment/article4182671).
instances of “high-risk misconduct” within the CRA.\textsuperscript{10} Corruption and tax evasion often coexist and reinforce each other.\textsuperscript{11} In a globalized economy, the impact of corruption on tax evasion is a matter of concern in all countries of the world.

Tax auditors and tax advisers differ on many dimensions. Tax auditors work on behalf of the government to ensure (if they are not corrupt) that taxpayers are complying with the tax code and to collect the right amount of taxes (no more and no less). By contrast, a tax adviser is an advocate of the taxpayer (the client) and works to reduce the amount of taxes owing as much as is legally possible. A tax adviser may serve as a “moral gatekeeper” and refuse to accept clients that chronically underreport their income, whether he or she does so altruistically or to protect his or her professional standing (since the adviser’s licence to practise and future insurance premiums may be at stake if he or she develops a reputation for attracting dishonest clients).

Devaney and Mohamed\textsuperscript{12} have discussed how audited taxpayers can rely on tax advisers to assist them, after the assessment, with reducing taxes payable and penalties assessed. In most jurisdictions, tax authorities cannot automatically apply the penalty when the taxpayer understates his or her income. In Canada, subsection 163(2) of the Income Tax Act\textsuperscript{13} provides for penalties of up to 50 percent of the additional tax assessed where the taxpayer made a false statement “knowingly, or under circumstances amounting to gross negligence.”\textsuperscript{14} If the dispute goes to court, the tax authority must demonstrate that the taxpayer knew that the amount was taxable, that the taxpayer had sufficient knowledge of tax, and that the underreporting

\textsuperscript{10} Daniel Leblanc, “Documents Reveal Hundreds of ‘High-Risk Misconduct’ Cases at CRA,” \textit{Globe and Mail}, April 29, 2012 (www.theglobeandmail.com/news/politics/documents-reveal-hundreds-of-high-risk-misconduct-cases-at-cra/article4104022). While the incidence of corrupt tax auditors as a proportion of all tax auditors is likely low in Canada and other industrialized countries, the fact remains that it is quite high in other jurisdictions. We are interested in whether the directional findings among Canadian participants are similar to the directional findings in other jurisdictions where corruption may be more prevalent.

\textsuperscript{11} Inge Amundsen, \textit{Political Corruption: An Introduction to the Issues}, CMI Working Paper no. 1999:7 (Bergen: Chr. Michelsen Institute, 1999); and Raul A. Barreto and James Alm, “Corruption, Optimal Taxation, and Growth” (2003) 31:3 \textit{Public Finance Review} 207-40 (https://doi.org/10.1177%2F1091142103031003001).

\textsuperscript{12} Joe Devaney and Riaz Mohamed, “Filing Returns and Elections—Assessments, Reassessments and Penalties,” in \textit{2015 Prairie Provinces Tax Conference} (Toronto: Canadian Tax Foundation), 13:1-65.

\textsuperscript{13} RSC 1985, c. 1 (5th Supp.), as amended.

\textsuperscript{14} See Daniel J. Morrison, “A New Approach to Subsection 163(2) Penalties” (2018) 8:1 \textit{Canadian Tax Focus} 7-8, at 7 (www.ctf.ca/ctfweb/EN/Newsletters/Canadian_Tax_Focus/2018/1/180109.aspx). See also Carolyn Hogan, “Escaping Penalties After Admitting False Statements” (2016) 6:3 \textit{Canadian Tax Focus} 7-8 (www.ctf.ca/ctfweb/EN/Newsletters/Canadian_Tax_Focus/2016/3/160309.aspx).
of income could not have arisen simply as a result of misplacing a tax slip.\textsuperscript{15} A penalty assessed for gross negligence requires showing that the taxpayer’s actions were intentional and dishonest, as established in the \textit{Venne} case:

“Gross negligence” must be taken to involve greater neglect than simply a failure to use reasonable care. It must involve a high degree of negligence tantamount to intentional acting, an indifference as to whether the law is complied with or not.\textsuperscript{16}

Tax advisers engaged in dispute resolution can help by pointing out that the tax authority may not have the evidence to establish intention or suggest indifference. Most taxpayers would not be aware of such defences. Thus, penalties assessed by tax auditors may be mitigated if taxpayers retain professional advisers after being assessed, to challenge the auditors with appropriate filing of documents and more sophisticated arguments based on knowledge of tax law.\textsuperscript{17} It follows that tax advisory fees may serve as a substitute for additional taxes and penalties, or even as a substitute for bribes proposed by corrupt tax auditors.\textsuperscript{18}

Research on the impact of the presence of corrupt tax auditors and tax advisers on taxpayer compliance is sparse. A corrupt tax auditor can benefit the taxpayer by seeking a bribe in return for ignoring income evaded by the taxpayer, thereby saving the taxpayer from having to pay the larger amount of unpaid tax and the penalty thereon. “Collusive” corruption arises when corrupt public auditors and private taxpayers collude to share rents generated by illicit underreporting of income.

Collusive corruption is usually cooperative and cost-reducing for taxpayers, since it involves tax auditors requesting bribes for fully or partially overlooking the incidence of underreported income. Collusive bribery can grease the wheels in workplaces that provide few incentives for tax auditors.

\textsuperscript{15} De Couto (Ako Windows Inc.) v. \textit{The Queen}, 2013 TCC 198.
\textsuperscript{16} \textit{Venne v. The Queen}, 84 DTC 6247, at 6256 (FCTD).
\textsuperscript{17} In most jurisdictions (including developed countries), taxpayers assessed in tax audits are presumed to be guilty until they prove themselves innocent. The onus of proving innocence is on the taxpayers and not the tax auditors because taxpayers uniquely possess the information required to determine their incomes and associated tax liabilities. Taxpayers’ net benefits are affected once they consider the costs associated with proving their innocence. However, when imposing penalties for underreporting income, tax authorities generally have to prove gross negligence.
\textsuperscript{18} As suggested in the text above, in a pre-filing context, a tax adviser may improve taxpayers’ general compliance behaviour by, for example, turning down a tax engagement with a client who seems inconsistent or not forthcoming, since the expected costs of serving such a client (in particular, potential professional insurance payouts) may be higher than the benefits (fees earned).
While a taxpayer’s intrinsic ethical foundation may or may not be invariant to outside influences,\textsuperscript{19} social norm theory\textsuperscript{20} and social identity theory from psychology and economics\textsuperscript{21} allow for the possibility that the presence of a collusive tax auditor could erode the ethics of taxpayers and reduce taxpayer compliance. Bobek, Roberts, and Sweeney\textsuperscript{22} explain how social norms (including beliefs of friends and important others) could also increase taxpayer compliance (relative to the results using economic models alone).

Relative to the benchmark effect of a corrupt tax auditor, taxpayers may be more or less compliant in the presence of a (dispute resolution) tax adviser. If the tax adviser is regarded as a gatekeeper and moral authority, the percentage of income reported by the taxpayer may increase. In contrast, if the tax adviser is seen as legitimizing tax evasion, the percentage of income reported by the taxpayer client may decrease. In this context, as suggested above, tax advisory fees may serve as a substitute for unpaid taxes and penalties, or even as a substitute for bribes requested by corrupt tax auditors. Thus, in an experimental setting, tax advisers as gatekeepers can be compared with the role of tax auditors.

We conduct two experiments using tax terminology and a between- and within-subjects design to examine (1) the impact of the presence of a corrupt tax auditor and (2) the relative impact of the presence of a dispute resolution tax adviser (compared to the presence of a corrupt tax auditor) on individual taxpayer compliance. The sequence of events is as follows:

- The participant (“the taxpayer”) decides what percentage of income to report to the tax authority.
- The taxpayer finds out whether or not he or she is audited.
- If audited, the taxpayer decides to bribe or not to bribe the auditor (in the absence of a tax adviser).

\textsuperscript{19} James Alm and Benno Törgler, “Do Ethics Matter? Tax Compliance and Morality” (2011) 101:4 Journal of Business Ethics 635-51 (https://doi.org/10.1007/s10551-011-0761-9).

\textsuperscript{20} R.B. Cialdini, R.R. Reno, and C.A. Kallgren, “A Focus Theory of Normative Conduct: Recycling the Concept of Norms To Reduce Littering in Public Places” (1990) 58:6 Journal of Personality and Social Psychology 1015 - 26 (https://psycnet.apa.org/doi/10.1037/0022-3514.58.6.1015).

\textsuperscript{21} Marilynn B. Brewer, “The Role of Distinctiveness in Social Identity and Group Behaviour,” in Michael A. Hogg and Dominic Abrams, eds., Group Motivation: Social Psychological Perspectives (New York: Harvester Wheatsheaf, 1993), at 1-16. See also Henri Tajfel, Social Identity and Intergroup Relations (Cambridge, UK: Cambridge University Press, 1982); Henri Tajfel and John Turner, “An Integrative Theory of Intergroup Conflict,” in William G. Austin and Stephen Worchel, eds., The Social Psychology of Intergroup Relations (Monterey, CA: Brooks/Cole, 1979), 33-47; and Henri Tajfel and John Turner, “The Social Identity Theory of Intergroup Behaviour,” in William G. Austin and Stephen Worchel, eds., Psychology of Intergroup Relations (Chicago: Nelson-Hall, 1986), 7-24.

\textsuperscript{22} Donna D. Bobek, Robin W. Roberts, and John T. Sweeney, “The Social Norms of Tax Compliance: Evidence from Australia, Singapore, and the United States” (2007) 74:1 Journal of Business Ethics 49-64 (https://doi.org/10.1007/s10551-006-9219-x).
In experiment 2 only, the taxpayer decides to retain a (dispute resolution) tax adviser to contest the penalties and underreporting of income. Since there are multiple rounds in the experiment, participants’ learning from earlier rounds can affect their reporting choices in subsequent rounds (even though all rounds are independent of each other). In both experiments, the participants were either fourth-year undergraduate accounting majors or first-year graduate students pursuing their master of accountancy degree at a Canadian business school.

The first experiment, using a between-subjects design, examines the impact of the presence of corrupt auditors who—in collusion with the audited taxpayers—seek different levels of bribes in lieu of unpaid taxes and penalties. Once taxpayers know that they are being audited by a collusively corrupt auditor, they can report higher income up to the amount of their true income in an attempt to create moral distance between themselves and the auditor. This reduces the corrupt auditor’s bribe (since such bribes are a function of the unreported income) and may or may not reduce taxpayers’ after-tax income (since higher reported incomes trigger higher taxes). Taxpayers could also underreport income, since the bribe never exceeds the unpaid taxes and penalty (otherwise nobody would agree to pay a bribe), and this could increase their after-tax income. The results of our experiment show that the mere presence of a collusively corrupt auditor in cases where the bribe requested exactly equals the additional taxes and penalties payable (that is, where the taxpayer derives no net after-tax monetary benefit from colluding with the tax auditor) reduces taxpayer compliance. When such an auditor also confers monetary benefits on the taxpayers (by accepting bribes less than the legally sanctioned penalty plus taxes payable), taxpayer compliance is further reduced. In other words, colluding with a corrupt auditor may be in the tax-minimizing citizen’s best interest, whether or not such an auditor confers after-tax monetary benefits on the taxpayer.

Our second experiment examines whether the presence of a professional tax adviser (in the absence of a corrupt tax auditor) improves compliance compared to compliance in the presence of a collusively corrupt auditor (in the absence of a tax adviser) when the after-tax monetary benefits to taxpayers are held constant. Our results show that the percentage of income reported in the presence of a tax adviser (and in the absence of a corrupt auditor) is significantly higher compared to the percentage of income reported in the presence of the corrupt auditor (and in the absence of a tax adviser).

Our study contributes to the existing literature on taxpayer compliance in multiple ways. Prior literature documents that interactions of taxpayers with tax auditors and (dispute resolution) tax advisers can have a significant influence on taxpayer compliance.23 Prior studies on the impact of corrupt auditors on compliance have

23 Jonathan Farrar, Steven E. Kaplan, and Linda Thorne, “The Effect of Interactional Fairness and Detection on Taxpayers’ Compliance Intentions” (2019) 154:1 Journal of Business Ethics 167–80 (https://doi.org/10.1007/s10551-017-3458-x); James Alm, “Measuring, Explaining, and Controlling Tax Evasion: Lessons from Theory, Experiments, and Field Studies” (2012)
focused mainly on corporate taxpaying behaviour and/or have used high-level data on individuals derived from national surveys. These studies have generally found that corruption has a negative impact on overall compliance.

In contrast, this study focuses on individual compliance decisions. Compliance decisions by firms are the culmination of complex decisions involving multiple individuals and competing business objectives. Thus, the tax compliance decisions of firms may not reflect how individuals make compliance decisions in the presence of corruption. Further, high-level survey data can obscure how specific stimuli influence individual tax compliance decisions. More specifically, the studies cited above have not differentiated between the impact of the mere presence of corrupt tax auditors offering no net after-tax monetary benefit to taxpayers and the impact of corrupt auditors offering different levels of positive monetary benefits to taxpayers (which this study examines). As noted above, our results indicate that even when the taxpayer receives no after-tax monetary benefit, the mere presence of a corrupt tax auditor may still reduce taxpayer compliance. When the presence of a collusively corrupt tax auditor also confers after-tax monetary benefits, taxpayer compliance is further reduced.

In addition, our results show that taxpayer compliance is higher in the presence of a dispute resolution tax adviser (engaged after the assessment is received) compared to compliance in the presence of a collusively corrupt tax auditor. To our knowledge, this is the first study to examine in an experimental context the impact of the presence of a collusively corrupt tax auditor and the impact of the presence of a dispute resolution tax adviser on taxpayer compliance.

Our study uses the experimental methodology to explain certain psychological behaviour observed in individuals’ tax-reporting decisions, with potential implications for policy. Since the mere presence of collusively corrupt auditors can decrease taxpayer compliance, tax authorities aiming to maintain a high level of compliance—not just in countries where corruption is endemic, but also in other countries—should ensure that their organizations are both free and perceived to be free of corrupt auditors. Non-compliance is greater when the collusive auditor offers net after-tax monetary benefits to taxpayers. However, compliance does not

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19 International Tax and Public Finance 54–77 (https://doi.org/10.1007/s10797-011-9171-2); and Michael Pickhardt and Aloys Prinz, “Behavioural Dynamics of Tax Evasion—A Survey” (2014) 40 Journal of Economic Psychology 1-19 (https://doi.org/10.1016/j.joep.2013.08.006).

24 James Alm, Jorge Martinez-Vazquez, and Chandler McClellan, “Corruption and Firm Evasion” (2016) 124 Journal of Economic Behavior & Organization 146–63 (https://doi.org/10.1016/j.jebo.2015.10.006); R.D. Picur and A. Riahi-Belkaoui, “The Impact of Bureaucracy, Corruption and Tax Compliance” (2006) 5:2 Review of Accounting and Finance 174–80 (https://doi.org/10.1108/1475770610668985); David Joulfaian, “Bribes and Business Tax Evasion” (2009) 6:2 European Journal of Comparative Economics 227–44; and Eric M. Uslaner, “Tax Evasion, Corruption, and the Social Contract in Transition,” in James Alm, Jorge Martinez-Vazquez, and Benno Torgler, eds., Developing Alternative Frameworks for Explaining Tax Compliance (London: Routledge, 2010).
decrease monotonically with higher monetary benefits to taxpayers, presumably because taxpayers can enjoy such incremental benefits without further increases in non-compliance. Therefore, tax authorities should design their audit procedures so that audits that do not result in additional taxes and penalties, and audits involving forgiveness of penalties, should require higher-level approvals. Audit procedures should also be designed to be consistent across taxpayers and to minimize the possibility of providing discretionary monetary benefits to taxpayers. Our results suggest that the involvement of tax advisers could be encouraged as well, since this could have a positive impact on overall tax compliance.

The rest of the article is organized as follows. We begin with a description of our model, including references to the literature and theory. We then set out the details of the experiments, followed by a description of the results. We end with some brief concluding remarks.

THE MODEL

Taxpayer Against a Corrupt Tax Auditor

We model in an experimental setting a rational taxpayer who knows the amount of his or her income, the tax law on calculating and reporting income, the penalty for underreporting income, the probability of being audited by a corrupt tax auditor, and the probability of being detected for underreporting income. The taxpayer must decide how much income to report to the tax authority in the presence of a tax auditor who is corrupt.

The taxpayer earns income of $Y$, decides to report $\alpha Y$, where $0 \leq \alpha \leq 1$, and pays a proportional income tax equal to $t \alpha Y$. The amount of taxes evaded is $t(Y - \alpha Y)$. The taxpayer is audited with a fixed probability of $p$. If found to have underreported income, the taxpayer faces a penalty, $s$, in addition to the unpaid tax liability uncovered by the tax auditor.

The taxpayer faces a collusively corrupt auditor with a fixed probability of $k$, where $k$ can be interpreted as the level of corruption in the tax system. Settings of $k = 0$ would imply no corruption and $k = 1$ would imply that all tax auditors are corrupt. To simplify the experimental task, we assume that all auditors are corrupt ($k = 1$) in the corrupt auditor condition and all auditors are not corrupt ($k = 0$) in the no corrupt auditor condition. If audited by a corrupt tax auditor, the taxpayer can escape the penalty and tax on the unreported income by paying a bribe in the amount of $b \times s \times t + c \times t$ on the income evaded of $(Y - \alpha Y)$, where $0 < b \leq 1$ and $0 < c \leq 1$. In other words, the bribe is not greater than the officially sanctioned penalty plus tax on the unreported income, since otherwise no taxpayer would pay the bribe without coercion or extortion. We assume that the auditor knows or is

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25 Note that $(Y - \alpha Y)$ is the amount of income evaded. Higher evasion levels make corruption more profitable for corrupt auditors. Higher levels of underreporting could also increase the bribe ($b$) when a taxpayer is audited by a corrupt tax auditor, especially for systems with a higher prevalence of corrupt auditors.
able to detect the true income of the taxpayer during the audit. We ignore additional costs involved in conducting the audit. The setting with \( b < 1 \) and \( c \leq 1 \) ensures that the taxpayer is always better off when audited by a collusively corrupt tax auditor.

Within the experiment, we fix \( s = 1 \) (or a penalty equal to the unpaid tax liability) to achieve experimental simplicity as well as to provide a sufficient deterrent; therefore, the penalty plus tax owed equals \((s + 1)(1 - \alpha Y)\) or \(2t(1 - \alpha Y)\). If the unpaid tax liability \( t(1 - \alpha Y)\) is $1, the unpaid tax liability plus penalty will be $2. Again, we set \( c = 1 \) in all our treatments, for experimental simplicity. Further, we fix \( b = \frac{1}{2} \) in our “positive” treatment for both experiments 1 and 2, and set \( b = \frac{9}{10} \) in the “almost same” treatment in experiment 1. (These treatments are explained below.) We assume that the taxpayer can afford to pay the bribe and is therefore ready to engage with a corrupt tax auditor. This finding is consistent with Singh’s game theory model.

Our model predicts that taxpayers will reduce the percentage of income reported (\( \alpha \)) in the presence of collusively corrupt tax auditors because such auditors will offer taxpayers an opportunity to pay a lower bribe (\( b < 1 \)) than the required higher penalty (\( s = 1 \)) for underreporting income. If \( b = 1 \) and \( c = 1 \), the taxpayer will report as if there were no corrupt tax auditors (even if corrupt auditors exist in the system), since the taxpayer will not collusively benefit from being audited by a corrupt tax auditor. We test this expectation in our “exact same” treatment of experiment 1, as described further below.

Taxpayers may not always behave as rational economic agents as predicted by our model. Our treatments are therefore designed to reflect the tension between economic and non-economic reasons for compliance. Gino, Ayal, and Ariely, for example, argue that observing others’ behaviour may change one’s own dishonesty by affecting the saliency of the ethical nature of the contemplated decision. As a result, the presence of corrupt tax auditors may influence taxpayers to perceive tax evasion as being less unethical. The change in perception can make taxpayers less compliant in the presence of corrupt tax auditors compared to a setting without corrupt tax auditors. Farrar, Kaplan, and Thorne also explore the role of tax authorities in taxpayers’ compliance decisions.

Observing the unethical behaviour of another person can also change the participant’s understanding of social norms relating to such dishonest behaviour.

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26 Ksh. Jhaljit Singh, “On Tax Edders and Corrupt Auditors” (2008) 17:1 Journal of International Trade & Economic Development 37-67 (https://doi.org/10.1080/09638190701727836).

27 Francesca Gino, Sahar Ayal, and Dan Ariely, “Contagion and Differentiation in Unethical Behaviour: The Effect of One Bad Apple on the Barrel” (2009) 20:3 Psychological Science 393-98 (https://doi.org/10.1111/j.2044-5975.2009.02006.x).

28 Farrar et al., supra note 23.

29 R.B. Cialdini and M.R. Trost, “Social Influence: Social Norms, Conformity, and Compliance,” in Daniel Todd Gilbert, Susan T. Fiske, and Gardner Lindzey, eds., Handbook of Social Psychology, vol. 2 (New York: McGraw-Hill, 1998), 151-92.
Reno, Cialdini, and Kallgren\textsuperscript{30} posit two types of social norms: descriptive norms and injunctive norms. Descriptive norms influence the decisions that people make in specific situations, while injunctive norms influence people’s approval or disapproval of decisions in specific situations. According to norm-focus theory,\textsuperscript{31} the specific norm that comes into play depends on the social context involved. Trivedi, Shehata, and Lynn point out the need for tax authorities to develop programs that “enhance and appeal to a taxpayer’s moral conscience and reinforce social cohesion.”\textsuperscript{32}

In the context of tax evasion, the presence of corrupt tax auditors may change taxpayers’ perception regarding the appropriate social norms relating to such behaviour. Alm\textsuperscript{33} notes that there seems to exist a social norm of tax compliance that can be affected by the institutions that individuals face. In the context of this article, taxpayers may perceive tax auditors as authority figures—consistent with Farrar et al.\textsuperscript{34} Furthermore, the bribe proposed by the collusively corrupt tax auditor could be economically advantageous to the taxpayer since it is no greater than the sum of unpaid taxes plus penalties. The taxpayer may therefore be susceptible to influences of descriptive norms rather than injunctive norms. In such situations, taxpayers may view tax auditors as being pragmatic and like themselves, and thereby identify themselves with the tax auditors and emulate their behaviour. According to social identity theory,\textsuperscript{35} group members use their own group to maintain and enhance a positive social identity and self-esteem, and therefore are impelled to conform to the norms that provide them with an in-group identity. Consequently, the presence of collusively corrupt tax auditors may indicate to taxpayers that tax evasion is socially acceptable, potentially making them less compliant. It is in this context that the presence of a corrupt tax auditor could influence the taxpayer to reduce compliance even when the corrupt auditor does not confer any incremental economic advantage. The presence of a corrupt tax auditor could reduce compliance even further if the request for a bribe is also economically beneficial to the taxpayer.

Our research questions examine whether taxpayer compliance changes in the presence of a corrupt tax auditor and the level of the bribe requested.\textsuperscript{36} We therefore

\textsuperscript{30} Raymond R. Reno, Robert B. Cialdini, and Carl A. Kallgren, “The Transsituational Influence of Social Norms” (1993) 64:1 \textit{Journal of Personality and Social Psychology} 104-12 (https://doi.apa.org/doi/10.1037/0022-3514.64.1.104).

\textsuperscript{31} Supra notes 29 and 30.

\textsuperscript{32} V. Umashanker Trivedi, Mohamed Shehata, and Bernadette Lynn, “Impact of Personal and Situational Factors on Taxpayer Compliance: An Experimental Analysis” (2003) 47:3 \textit{Journal of Business Ethics} 175-97, at 175 (https://doi.org/10.1023/A:1026294332606).

\textsuperscript{33} Alm, supra note 23.

\textsuperscript{34} Farrar et al., supra note 23.

\textsuperscript{35} Supra notes 21 and 22.

\textsuperscript{36} While this study is silent on distribution issues of collusive and coercive corruption, Hindriks et al. conclude that corruption is “unambiguously regressive: the richest have most to gain from evading taxes” whereas the poor “have few taxes to evade”: Hindriks et al., supra note 6, at 397.
propose the following hypothesis about collusively corrupt tax auditors in alternate form:

\[ H_1: \text{Taxpayer compliance will depend on the presence or absence of a} \]
\[ \text{collusively corrupt tax auditor.} \]

**Taxpayer Compliance and the Tax Adviser**

Holmes\(^{37}\) argues that tax lawyers can both facilitate tax evasion and serve as gatekeepers for tax authorities, but that this dual role can sometimes muddle the net impact of their involvement. Wakolbinger and Haigner\(^{38}\) demonstrate in an experimental setting that peer advice—especially from low-compliance participants—reduces taxpayers’ compliance rates.

We restrict our focus to the case where the taxpayer hires the tax adviser after becoming aware that he or she is being audited (as opposed to hiring at the time of filing the tax return). The main reason for setting the timing of this decision is to ensure that the taxpayer’s economic benefit from the presence of a tax adviser is identical to the economic benefit from engaging with a corrupt tax auditor. Some tax advisers specifically promote their services to taxpayers who have been selected for audit scrutiny by tax authorities.\(^{39}\)

A tax adviser may act as a gatekeeper interested in accurate tax reporting or conversely as an advocate for the client who is more interested in reporting the lowest taxable income possible. Relying on the tax adviser’s guidance could either reduce the penalties assessed as a result of a tax audit or reduce the “moral cost” (or both). Individuals may use “moral wiggle room” to act in their self-interest when they have conflicting motivations, or may take advantage of moral wiggle room when a tax adviser is involved, and this could lead to less compliance.\(^{40}\)

The tax adviser is presumed to be familiar with how the tax authority resolved similar compliance issues with other taxpayer clients, and thus to be able to improve the taxpayer’s chances of escaping penalties for underreporting income. If a tax adviser’s services could potentially mitigate tax penalties, it follows that tax advisory fees may serve as a substitute for tax penalties or even as a substitute for bribes proposed by corrupt tax auditors.

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\(^{37}\) Rachelle Y. Holmes, “The Tax Lawyer as Gatekeeper” (2010) 49:2 University of Louisville Law Review 185-230.

\(^{38}\) Florian Wakolbinger and Stefan Daniel Haigner, “Peer Advice in a Tax-Evasion Experiment” (2009) 29:3 Economics Bulletin 1653-69.

\(^{39}\) See, for example, “Canada Revenue Agency CRA Audit,” Barrett Tax Law (http://barretttaxlaw.com/canada-revenue-agency-cra-audit); Farber Tax Solutions (https://farbertax.com); and “CRA Audits, Disputes & Objections,” Koroll and Company (www.koroll.ca/cra-audits-disputes-and-objections).

\(^{40}\) Jason Dana, Roberto A. Weber, and Jason Xi Kuang, “Exploiting Moral Wiggle Room: Experiments Demonstrating an Illusory Preference for Fairness” (2007) 33 Economic Theory 67–80 (https://doi.org/10.1007/s00199-006-0153-2); and Emily C. Haisley and Roberto A. Weber, “Self-Serving Interpretations of Ambiguity in Other-Regarding Behavior” (2010) 68:2 Games and Economic Behavior 614–25 (https://doi.org/10.1016/j.geb.2009.08.002).
We examine in an experimental setting, using a within-subjects design, whether the presence of a professional tax adviser (in the absence of a corrupt auditor) increases or decreases the percentage of income reported compared to the percentage of income reported in the presence of a collusively corrupt tax auditor (and in the absence of a tax adviser). When the after-tax monetary benefit to the taxpayer from the presence of the tax adviser and the benefit from the presence of the tax auditor are held constant, the relative impact on the taxpayer’s compliance in these two different settings is unclear. From the perspective of norm-focus theory, the presence of either a tax adviser or a collusively corrupt tax auditor could influence taxpayers to focus on descriptive norms.

However, tax auditors may be viewed as being more authoritative than tax advisers, and thus better able to guarantee the final tax liability position of audited taxpayers. Taxpayers may therefore prefer bribing the tax auditor compared to engaging a tax adviser and may be more comfortable being less compliant in the presence of the auditor. On the other hand, engaging a tax adviser may provide taxpayers with greater assurance of avoiding penalties and higher taxes imposed by tax auditors. From a social norms and social identity perspective, taxpayers may be better able to maintain or enhance a positive social identity, self-esteem, and social cohesion in the presence of a tax adviser when the adviser is regarded as an in-group member. If this were the case, the percentage of income reported by the taxpayer client could decrease in the presence of the adviser compared to the presence of the auditor. We therefore test the following hypothesis in alternate form:

\[ H_2: \text{Taxpayer compliance in the presence of a (post-filing or dispute resolution) tax adviser will be different from compliance in the presence of a collusively corrupt tax auditor.} \]

EXPERIMENTS

Experiment 1: Compliance in the Presence of a Corrupt Tax Auditor

We conducted a computer-based experiment using z-Tree\(^{41}\) with 82 participants (44 females and 38 males) in fourth-year undergraduate or first-year graduate studies. These participants were enrolled in advanced financial accounting and managerial tax-planning courses at a major Canadian university. Of the 82 participants, 53 indicated that they had previously filed a tax return, with a mean tax-filing experience of 3.1 years.\(^{42}\) Table 1 provides details about the demographic variables relating to the participants.

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\(^{41}\) Urs Fischbacher, “z-Tree: Zurich Toolbox for Ready-Made Economic Experiments” (2007) 10 Experimental Economics 171-78 (https://doi.org/10.1007/s10683-006-9159-4).

\(^{42}\) While all our participants were students, they included individuals with a diversity of tax-filing experience. Further, many of our master’s-level students had returned to university after being in the job market for several years. Our master’s program includes non-traditional students.
The experiment was conducted over 13 sessions with an average of 8 participants per session. The participants took an average of 75 minutes to complete the experiment and earned on average $15 per hour. Participants were told not to disclose the details of the experiment to any other students who may participate in subsequent sessions. Instructions on steps and decisions to be taken by the participants were conveyed via the computer. (These instructions are reproduced in the appendix to this article.) Three practice rounds were administered in each session to allow the participants to become familiar with the procedures of the experiment. These practice rounds did not count toward the participants’ final earnings. We called the currency used “lira,” with 100 liras being equal to Cdn$1.

Participants were provided with an initial endowment of 500 liras for showing up for the experiment. Their cumulative earnings from the experiment were added to or subtracted from their initial endowment, and the final amount (converted to dollars) was paid to them by cheque immediately after the experiment ended.

with backgrounds from the sciences and humanities; thus, our subject pool was not made up of accounting undergraduates alone. Many of our undergraduate students had summer jobs, and therefore taxable incomes to report and taxes to pay. Finally, our university program draws a significant proportion of immigrant and first-generation students from countries where corruption among tax auditors is higher than in Canada. Thus, while our participants may not have experienced interactions with corrupt tax auditors at first hand, they may not be totally unaware of the phenomenon of corrupt government officials, including tax auditors.
Participants were provided with an endowed income of 100 liras for each round of the experiment.\textsuperscript{43} A review of the literature\textsuperscript{44} supports our belief that endowing our participants, instead of requiring them to earn their income, did not introduce any bias that would invalidate the results of our experiment.

Participants were then asked to report to the tax authority any portion from zero to 100 percent of their income and pay a 30 percent income tax on the income reported. After the reporting of their income, participants faced the possibility of their income being audited with a probability of 30 percent—a high rate adopted from prior research.\textsuperscript{45} The high rate was also used to ensure that a sufficiently high proportion of our participants would be exposed to being audited by a corrupt auditor during the course of the experiment. Using an audit rate that is more reflective of the audit rate obtained in the real world (around 2 percent) would imply that a high proportion of our participants would never experience being audited within the scope of the experiment.\textsuperscript{46} The audit uncovered all undisclosed income in the reporting period being audited with a probability of 1. Upon being audited, participants had to pay taxes on the unreported income plus a penalty equal to the unpaid

\textsuperscript{43} We decided to endow our participants with identical incomes, instead of requiring them to earn their income, in order to keep the duration of the experiment within 75 minutes. In our experience, 90 minutes is the maximum time for participation in an experiment before fatigue sets in. We also recognized that most of our students commute, and this placed a premium on their time. The average earnings from the experiment were designed to reflect the participants’ opportunity costs. Earned historical income (instead of endowed income) could potentially introduce another source of variance among participants that we wanted to avoid, namely, differences in incomes and associated wealth. In a tax compliance context such as ours, the impact of requiring participants to earn their income versus endowing them with income is uncertain.

\textsuperscript{44} Scott J. Boylan and Geoffrey B. Sprinkle, “Experimental Evidence on the Relation Between Tax Rates and Compliance: The Effect of Earned vs. Endowed Income” (2001) 23:1 Journal of the American Taxation Association 75-90; Christoph Bühren and Thorben C. Kundt, Worker or Shirker: Who Evades More Taxes? A Real Effort Experiment, Joint Discussion Paper Series in Economics no. 26-2013 (Aachen: University of Aachen, 2013); Yvonne Durham, Tracy S. Manly, and Christina Ritsema, “The Effects of Income Source, Context, and Income Level on Tax Compliance Decisions in a Dynamic Experiment” (2014) 40 Journal of Economic Psychology 220-33 (https://doi.org/10.1016/j.joep.2012.09.012); and Eric Kirchler, Stephan Muehlbacher, Erik Hoelzl, and Paul Webley, “Effort and Aspirations in Tax Evasion: Experimental Evidence” (2009) 58:3 Applied Psychology: An International Review 488-507 (https://psycnet.apa.org/doi/10.1111/j.1464-0597.2009.00403.x).

\textsuperscript{45} Ronald G. Cummings, Jorge Martinez-Vazquez, Michael McKee, and Benno Torgler, “Tax Morale Affects Tax Compliance: Evidence from Surveys and an Artefactual Field Experiment” (2009) 70:3 Journal of Economic Behavior & Organization 447-57 (https://doi.org/10.1016/j.ebwo.2008.02.010).

\textsuperscript{46} Further, the impact of the audit rate on taxpayer compliance is not of primary interest in this study. We are unaware of any reason why our findings relating to the directional impact of the variables of interest in our study, in the presence of a relatively high audit rate, would not extend to a low audit rate environment outside the laboratory.
tax. Each round was independent of the other rounds, and the decisions of other participants had no effect on the economic payoff to a particular participant.

Participants were asked to decide on the percentage of their income that they wanted to report to the tax authority over 16 rounds, divided into two sets of 8 rounds each. The first set of 8 rounds had no corrupt auditor; therefore, no bribes were requested, and the full amount of taxes and penalty was paid to the tax authority. The second set of 8 rounds included a corrupt auditor, offering participants the choice of bribing the auditor instead of paying the unpaid taxes and penalty. The type of corrupt auditor was tested using a between-subjects treatment and included the following three treatments:

1. **Positive.** In this case, the collusively corrupt auditor demanded that the participants (taxpayers) pay a bribe equal to the taxes owed plus half the penalties required under the law (that is, \( c = 1 \) and \( b = \frac{1}{2} \)). If the tax assessed on unreported income was $1 and the penalty was equal to the assessed tax, a non-corrupt auditor would require taxpayers to pay $2, while a positive corrupt auditor would demand $1.50.

2. **Almost same.** In this case, \( b = 0.9 \) and \( c = 1 \). The taxpayer in this context would be asked to pay a bribe of $1.90, derived as the sum of $1 in unpaid taxes and a penalty of $0.90. In this treatment, the cash outflow required to pay the bribe was almost, but not exactly, the same as the cash outflow resulting from refusing to pay the bribe. We administered this treatment in order to examine whether taxpayer compliance would be affected by the modest after-tax monetary benefit conferred by the presence of the collusively corrupt

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47 To control for order effects, we administered separate sessions reversing the within-subjects auditor/no auditor treatment by introducing the corrupt auditor in the first 8 rounds, followed by no corrupt auditor in the next 8 rounds for 21 of the 40 participants in the positive between-subjects treatments. Preliminary analysis did not reveal any order effects. Therefore, we did not reverse the order of administering the auditor/no auditor in the within-subjects treatment for the remaining two treatments, exact same and almost same, since they are similar to the positive treatment. Given the absence of order effects, we combined the data for a specific treatment and lined up the data such that results for the 8 rounds with no corrupt auditor were listed first and the other data listed next. Our analysis reported below is based on this rearranged data set. Our decision not to reverse the order of administering the auditor/no auditor within-subjects treatment for some of our between-subjects treatments meant that the number of participants in those two treatments (25 in the exact same treatment and 17 in the almost same treatment) was less than the number of participants in the other treatment (40 in the positive treatment). In those sessions where no corrupt auditor treatment was administered first, the three practice sessions were also administered without the corrupt auditor. In contrast, in the sessions where the within-subjects corrupt auditor treatment was administered first, the three practice rounds were also administered with the corrupt auditor present. Appropriate instructions were provided at the beginning of the second 8 rounds introducing either the corrupt or the non-corrupt auditor, depending on what was introduced first. No additional practice rounds subsequent to these additional instructions were administered.
The after-tax monetary benefit was made large enough (we hoped) to overcome the psychological or mental cost to taxpayers of changing their compliance behaviour, but not large enough to provide a significant economic advantage to them.

3. **Exact same.** In this case, \( b = 1 \) and \( c = 1 \). The taxpayer in this context would be asked by the corrupt auditor to pay a bribe of $2, derived as the sum of $1 in unpaid taxes and a penalty of $1. This treatment imposes exactly the same cash outflows on taxpayers whether the auditor is corrupt or not. We administered this treatment in order to examine whether taxpayer compliance would be affected by the mere presence of a collusively corrupt tax auditor where such presence conferred no economic advantages or disadvantages to taxpayers. When there is no difference in taxpayers’ monetary outcomes from the presence or absence of a collusively corrupt tax auditor, the research question being examined is whether psychological factors and social norms alone can affect taxpayer compliance.

**Experiment 2: Compliance in the Presence of Collusively Corrupt Tax Auditor Versus a Dispute Resolution Tax Adviser**

A second computer-based experiment was designed using z-Tree,\(^{49}\) with similar economic incentives to those in experiment 1 and similar (but different) participants. The objective was to assess the tax compliance effects in the presence of a collusively corrupt tax auditor and to compare those effects, while holding everything else constant, with the tax compliance effects in the presence of a professional tax

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\(^{48}\) A priori it is unclear whether participants’ compliance behaviour would change in the mere presence of a corrupt auditor, absent any monetary benefits, in our exact same treatment (discussed below). Therefore, we also administered the almost same treatment, with an after-tax monetary benefit of 10 percent to the taxpayer in the presence of the corrupt auditor. Again, a priori it is unclear whether or not this relatively modest after-tax monetary benefit would be sufficient to change participants’ compliance behaviour in the presence of the corrupt auditor. Another reason for administering the almost same treatment—in addition to the positive treatment—is that compliance may not decrease linearly when going from the exact same treatment to the almost same treatment, and then to the positive treatment despite a monotonically increasing positive impact of the bribe on taxpayers’ expected after-tax income. More specifically, the positive impact of the bribe on taxpayers’ expected after-tax income under the positive treatment is sufficiently positive for taxpayers to report higher after-tax incomes (and pay higher taxes) compared to income reported under the almost same treatment and still end up with a higher expected after-tax income. For example, the after-tax expected income when a taxpayer reports 50 percent of 100.00 liras of income results in reported income of 76.00 liras under the exact same treatment and 76.45 liras under the almost same treatment. Under the positive treatment, the expected after-tax income is 76.60 even when 60 percent of 100.00 liras of income is reported. This demonstrates that participants in the positive treatment can increase their compliance without hurting their expected after-tax income compared to taxpayers in the other two treatments.

\(^{49}\) Supra note 41.
adviser (and a non-corrupt tax auditor). The corrupt auditor and the tax adviser were each present only when the other was absent. All auditors were corrupt in the first 8 of a total of 16 rounds, and all auditors were non-corrupt in the last 8 rounds; however, we did not explicitly inform the participants that the auditors in the latter rounds were non-corrupt.

This experiment was conducted using 47 new participants over six different sessions with an average of 8 participants per session. Of the 47 participants, 27 indicated that they had previously filed a tax return, with a mean tax-filing experience of 3.72 years. Table 2 provides details on the demographic variables relating to the participants.

The experiment took an average of 75 minutes to complete, and the participants earned on average $15 per hour. As in experiment 1, participants were told not to disclose the details of the experiment to any other students who may participate in subsequent sessions. Instructions on steps and decisions to be taken by the participants were conveyed via the computer (see the appendix). Participants were asked to decide on the percentage of their income that they wanted to report to the tax authority, first in the presence of a corrupt tax auditor (for 8 rounds), and then in the presence of a tax adviser (and a non-corrupt tax auditor—also for 8 rounds), both of which could reduce taxpayers’ uncertainty regarding their tax liability. Differences in the percentage of income reported between these two contexts were tracked over the 16 rounds to see if learning was taking place, and the differences were computed and analyzed.

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50 We achieved this change by framing the bribe as either a payment of a fee to a tax adviser or a payment of a bribe to a corrupt tax auditor (see the appendix for details). Everything else was kept constant in order to achieve a single manipulation. The experimental design, incentives, and participants were similar to the positive treatment of experiment 1. We used only the positive treatment in experiment 2 since the payoffs to the participants from hiring the tax adviser in this treatment are consistent with the premise that taxpayers will hire tax advisers only when such hiring is beneficial to them. In other words, it is not clear why taxpayers would hire tax advisers if doing so did not result in a net expected after-tax monetary benefit. Participants realized no after-tax monetary benefit from hiring the tax adviser in the exact same treatment and realized only a marginal after-tax monetary benefit in the almost same treatment. By extension, therefore, we also did not employ a fully crossed $2 \times 2$ design with corrupt/non-corrupt and adviser/auditor as the two dimensions.

51 The order of the presence of the tax auditor and the tax professional was reversed for approximately half of the participants. No order effects were detected, and therefore data from all participants were combined for subsequent data analysis. We set the payoffs to our participants in the presence of the tax adviser to be identical to the payoffs in the presence of the corrupt auditor since our intent is to test, ceteris paribus, whether participants’ behaviour would be different in the mere presence of one of these two individuals. We acknowledge that the payoffs to taxpayers in the real world when hiring a tax adviser may very well be different from the payoffs in the presence of a corrupt tax auditor. However, introducing differential payoffs to our participants in the presence of a tax adviser and a corrupt tax auditor respectively would introduce an additional dimension that, while adding mundane realism to our experiment, would not be as helpful in achieving our objective.
RESULTS

Experiment 1: Compliance in the Presence and Absence of a Corrupt Tax Auditor

Overview of the Data Analysis

We are primarily interested in finding out if and how the presence or absence of a corrupt auditor affected participants’ tax reporting behaviour. Our dependent variable is “percentage reported,” or income reported as a proportion of income earned in the individual rounds in two settings: first, in the absence of a corrupt auditor; and second, in the presence of a corrupt auditor. We are particularly interested in the difference in compliance between some of the rounds with and without the corrupt auditor. Since there could be learning occurring in the early rounds of each of the two sets of 8 rounds (with and without the corrupt auditor), using data from all 8 rounds in our analysis could confound our results. On the other hand, using data from only the last 1 or 2 rounds of each set (the 7th and 8th in the first set and the 15th and 16th in the second set) is also beset with the problem of random variation in behaviour across individual rounds, and potential end-of-experiment strategies (even though participants were not told at the outset how many rounds there would be). Therefore, while we present and analyze results using data from all 8 and only the last 4 (3) rounds from the two sets respectively, our inferences are based on results obtained from data from only the last 4 (3) rounds. Our analysis of differences in compliance is within subjects (that is, we examine whether these differences are significant within each between-subjects treatment).

Figure 1 shows the average percentage of income reported in the absence and presence of the collusively corrupt auditor respectively for each of the three
between-subjects treatments. This is further separated by the order in which the within-subjects treatment of the presence of a corrupt auditor was administered in the case of the positive treatment. While there is variation in the level of compliance across the different treatments, we are not interested in such variation. Rather, we are interested in whether or not the presence or absence of a corrupt auditor made

FIGURE 1 Experiment 1—Percentage of Income Reported in the Absence and Presence of a Corrupt Tax Auditor

Notes:
Percentage of income reported denotes the average percentage of income reported by the participants in each of the eight rounds in the two within-subject treatments (presence or absence of the corrupt auditor).

The order of administering the within-subjects auditor/no auditor treatment was reversed in the positive treatment, identified with the legend reverse positive above. There was no difference in the impact of the within-subjects auditor/no auditor treatment regardless of the order of administering the treatment—that is, whether the corrupt auditor was introduced in the first eight or the last eight rounds. Consequently, during data analysis, we combined the data for all positive treatments respectively and lined up the data such that the eight rounds with no corrupt auditor were listed first and the other data listed next. The results reported in the accompanying tables are based on this rearranged data set. Further, we did not reverse the order of administering the auditor/no auditor in the within-subjects treatment for the remaining two treatments (exact same and almost same) since they are similar to the positive treatment.
a difference to the compliance behaviour of our participants, and whether such differences are significantly different between the three between-subject treatments (that is, difference-in-difference). Note that the direction of change in compliance in the presence and absence of the corrupt auditor is identical irrespective of the initial level of compliance and the order of administering our within-subjects treatment in the positive (that is, positive versus reverse positive) treatment. Therefore, we believe that our results are not due to mean reversion from extreme initial compliance levels. As a result, we rule out any impact that the initial difference in compliance may have on the inferences made in our study for the different between-subject treatments.

Within-Subjects Difference

Panel A of table 3 reports results from nine different mixed models, three for each of the three between-subjects treatments using all 8 rounds (the last 4 and the last 3 rounds) from each of the two sets, the first without the corrupt auditor and the second with the corrupt auditor. The two fixed effects in these models are labelled “intercept” and “set,” the latter representing whether the data are from the first set, without the corrupt auditor, or the second set, with the corrupt auditor. “Subject” refers to the participant whose data is included in the model as a random effect. Panel B of table 3 reports tests of significant differences between mean compliance in the first versus the second set for each of the three between-subject treatments.

Both panels A and B of table 3 show that when data from the last 4 (3) rounds in each of the two sets are used, there is a statistically significant difference in compliance ($\alpha = 0.10$) between the two sets of data. For the two between-subjects treatments (positive and almost same), the statistical significance is at $\alpha = 0.05$ for all but one of the eight tests. These results suggest that the mere presence of the corrupt auditor in the exact same treatment is enough to reduce taxpayer compliance, thereby allowing us to reject the null hypothesis in $H_1$. Taxpayers decreased income reported by an average of 8.63 liras (9.11 liras) between the last 4 (3) rounds in the absence and presence of the collusively corrupt auditor respectively. This represents a 13.02 percent (13.97 percent) decrease in compliance relative to the average compliance in the absence of the corrupt auditor. This is a significant decrease in compliance for the exact same treatment given that there is no change in the taxpayers’ after-tax monetary position driven by the presence or absence of the corrupt auditor. Compliance decreased further in the almost same and positive treatments where the corrupt auditor further offered positive net after-tax monetary benefits to the taxpayer. Taxpayers reduced the income reported in the almost same treatment by an average of 12.10 liras (14.73 liras) between the last 4 (3) rounds in the absence and presence of the collusively corrupt auditor. This represents an

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52 We confirmed the results presented in this article by estimating corresponding non-parametric tests (results not presented).

53 All tests are two-tailed.
**TABLE 3 Experiment 1—Results**

Panel A: Results from mixed model using data from all 8, last 4, and last 3 rounds from the 1st and 2nd sets respectively

| Source                  | Type III tests for fixed effects$^a$ | All eight rounds | Last four rounds | Last three rounds |
|-------------------------|--------------------------------------|------------------|------------------|-------------------|
|                         | Numerator df | Denominator df | $F$ | Sig. | Numerator df | Denominator df | $F$ | Sig. | Numerator df | Denominator df | $F$ | Sig. |
| Positive                |             |               |     |      |             |               |     |      |             |               |     |      |
| Intercept               | 1           | 39            | 195.54 | 0.000 | 39          | 189.73        | 0.000 | 39          | 195.32        | 0.000 |
| Set (1st and 2nd)       | 1           | 599           | 27.94 | 0.000 | 279         | 13.19         | 0.000 | 199         | 11.25         | 0.001 |
| Almost same             |             |               |     |      |             |               |     |      |             |               |     |      |
| Intercept               | 1           | 16            | 83.02 | 0.000 | 16          | 77.06         | 0.000 | 16          | 57.65         | 0.000 |
| Set (1st and 2nd)       | 1           | 254           | 2.15 | 0.144 | 118         | 4.35          | 0.039 | 84          | 5.40          | 0.023 |
| Exact same              |             |               |     |      |             |               |     |      |             |               |     |      |
| Intercept               | 1           | 24            | 93.80 | 0.000 | 24          | 100.42        | 0.000 | 24          | 97.84         | 0.000 |
| Set (1st and 2nd)       | 1           | 374           | 1.57 | 0.212 | 174         | 4.14          | 0.044 | 124         | 3.18          | 0.077 |

(Table 3 is concluded on the next page.)
Panel B: Tests of significant difference between mean compliance in the 1st versus 2nd set using data from all 8, last 4, and last 3 rounds respectively

| Positive                      | 1st set mean\(^b\) | 2nd set mean\(^b\) | Standard error | df   | Difference in mean\(^b\) | Standard error | df   | Sig.\(^c\) |
|------------------------------|---------------------|--------------------|----------------|------|--------------------------|----------------|------|------------|
| All 8                        | 70.772              | 59.806             | 4.783          | 42.938 | 10.966                   | 2.075          | 599  | 0.000      |
| Last 4                       | 70.825              | 59.825             | 4.979          | 47.291 | 11.000                   | 3.029          | 279  | 0.000      |
| Last 3                       | 71.650              | 59.400             | 5.031          | 51.496 | 12.250                   | 3.652          | 199  | 0.001      |
| Almost same                  | 62.654              | 56.743             | 6.856          | 19.166 | 5.912                    | 4.035          | 254  | 0.144      |
| All 8                        | 65.647              | 53.544             | 7.382          | 22.278 | 12.103                   | 5.802          | 118  | 0.039      |
| Last 4                       | 64.882              | 50.157             | 8.212          | 21.965 | 14.725                   | 6.340          | 84   | 0.023      |
| Exact same                   | 62.775              | 59.145             | 6.459          | 26.614 | 3.630                    | 2.902          | 374  | 0.212      |
| All 8                        | 66.290              | 57.660             | 6.538          | 29.925 | 8.630                    | 4.244          | 174  | 0.044      |
| Last 4                       | 65.187              | 56.080             | 6.640          | 32.857 | 9.107                    | 5.106          | 124  | 0.077      |

\(\text{df}\) = degrees of freedom; \(F = F\) value; \(\text{Sig.}\) = statistical significance level.

a Dependent variable: Percentage reported denoting the percentage of income reported by the participants in each of the eight (last four, last three) rounds in the two within-subject treatments (presence or absence of the corrupt auditor). Intercept and set (first and second set of eight rounds each) of eight (last four, last three) are the fixed effects and subject is the random effect.

b Represents the estimated marginal mean of the percentage reported over the eight (last four, last three) rounds in the set derived from the model presented in panel A. The mean difference represents the mean compliance in the first set minus the mean compliance in the second set, and thus represents a decrease in compliance from the first set to the second set in all cases.

c Adjustment for multiple comparisons: Bonferroni.
18.44 percent (22.70 percent) decrease in compliance relative to the average compliance in the absence of the corrupt auditor. Taxpayers also reduced the income reported in the positive treatment by an average of 11.0 liras (12.25 liras) between the last 4 (3) rounds in the absence and presence of the collusively corrupt auditor. This represents a 15.53 percent (17.10 percent) decrease in compliance relative to the average compliance in the absence of the corrupt auditor. Such reductions in compliance arising from the introduction of the corrupt auditor are both statistically and economically significant.

We believe that the significant differences in the results for the almost same and exact same treatments are important for at least two reasons. First, the decrease in compliance in the almost same treatment is on average 4.55 liras (or 7.07 percent) greater than the decrease in compliance in the exact same treatment, despite the relatively modest 10 percent advantage provided by the corrupt auditor to the participants in the former treatment. Second, the economic advantage to the participants in the positive treatment from agreeing to bribe the corrupt auditor was high enough that they could choose to increase their compliance (in an attempt to morally distance themselves from the corrupt auditor), relative to their compliance in the absence of the corrupt auditor, without any decrease in their expected after-tax income. In contrast, the participants in the almost same treatment did not have the same advantage and faced a higher compliance cost. This difference in incentives may possibly explain the lack of a further decrease in compliance in the positive treatment as compared with the decrease in the almost same treatment.

We also collected data on the following control variables: gender, age, marital status, having children, history of having filed a previous tax return, number of years of experience in filing tax returns, whether the participant believed that paying taxes was a moral issue, and whether the participant believed that taxes should always be paid. (Table 1 documents the descriptive statistics for these variables.) None of the control variables, with the exception of gender and age, were statistically significant in explaining taxpayer compliance. The insignificance of marital status can be attributed to the absence of married participants in our sample. The statistical significance of gender in taxpayer compliance is consistent with results found by Chung and Trivedi.54 Females were statistically more compliant than males in our study. Age was negatively associated with compliance. However, given that the participants were between 18 and 25 years of age, with a mean age of 20.7 years, the impact of age on compliance has to be analyzed with caution. More importantly, the inclusion or exclusion of gender and age in our model did not affect the overall results relating to our hypotheses.55

54 Janne Chung and Viswanath Unashanker Trivedi, “The Effect of Friendly Persuasion and Gender on Tax Compliance Behaviour” (2003) 47:2 Journal of Business Ethics 133-45.

55 Despite the insignificance of these control variables in explaining the behaviour of the participants in the laboratory, we believe that our experiments were successful in capturing the tax compliance behaviour of the participants and that participants did not view the experiment
Experiment 2: Compliance in the Presence of a Corrupt Tax Auditor (Without a Tax Adviser) and a Tax Adviser (Without a Corrupt Auditor) Respectively

Figure 2 shows that the percentage of income reported is significantly higher in the presence of a tax adviser (and the absence of a corrupt tax auditor) compared to the percentage of income reported in the presence of a corrupt tax auditor alone. Analysis (t-tests) of within-subjects results from experiment 2 show that the presence of a professional adviser improved taxpayer compliance compared to the presence of a collusively corrupt tax auditor (see table 4). The income reported increased by an average of 11.15 (11.89) liras in the presence of the tax adviser alone compared to being in the presence of a collusively corrupt tax auditor alone in the last 4 rounds (the last 3 rounds) of the experiment, thereby allowing us to reject the null hypothesis in H$_2$.56 This represents a 22.92 percent (24.29 percent) increase in compliance relative to the average compliance in the presence of the corrupt auditor. Such increase in compliance arising from the presence of the tax adviser (absent the corrupt auditor) is significant in both a statistical and an economic sense. These results point to taxpayers’ desire for lower uncertainty and the belief that a collusively corrupt auditor could offer greater final resolution without further reassessments. The results may also reflect taxpayers’ awareness that tax advisers have to abide by their professional codes of conduct. While a tax adviser may successfully help the taxpayer to avoid penalties, advisers cannot provide fail-proof insurance that taxpayers will not be reassessed again. Thus, the presence of a tax adviser, hired after the taxpayer has been chosen for an audit, could lead to an overall increase in the level of taxpayer compliance compared to compliance in the presence of a collusively corrupt tax auditor.

Again, we collected data on the following control variables: gender, age, marital status, having children, history of having filed a previous tax return, number of years of experience in filing tax returns, whether the participant believed that paying taxes was a moral issue, and whether the participant believed that taxes should always be paid. (Table 2 provides the descriptive statistics for these variables.) None of these control variables were statistically significant in explaining the participants’ tax compliance behaviour.57

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56 The percentage of income reported increased from 48.65 and 48.96 in the presence of the corrupt tax auditor to 59.80 and 60.85 in the presence of a tax adviser (absent a corrupt tax auditor).

57 It bears repeating that we believe the participants did not view the experimental task as a mere game but responded to the treatment conditions as intended. Specifically, if the participants had viewed the experimental task as a mere game, they would not likely have shown any
Impact of tax advisers and corrupt tax auditors on taxpayer compliance

FIGURE 2  Experiment 2—Percentage of Income Reported by Treatment

Notes:
Percentage of income reported denotes the percentage of income reported by the participants in each of the eight rounds in the two within-subject treatments: the first in the presence of the corrupt auditor alone and the second in the presence of the tax adviser alone.

CONCLUSION

Both collusively corrupt tax auditors and private tax advisers (engaged after the taxpayer has been selected for audit by the tax authority) can increase taxpayer compliance by serving as gatekeepers or monitors. However, both of these actors can also reduce tax compliance if their self-interest trumps public interest and professionalism. In the case of collusively corrupt public tax auditors, taxpayers’ compliance could decrease if the bribes requested by corrupt auditors are lower than the taxes and penalties that taxpayers seek to avoid.58

58 The difference in behaviour in the presence of the tax adviser vis-à-vis the presence of the corrupt auditor, given that the economic outcomes were identical in both cases.

58 Taxpayers’ revealed preference for paying a bribe to a corrupt auditor instead of paying the unpaid tax and penalty thereon to the government may not be inconsistent with a right-wing ideology that may create a preference for giving money to a private citizen rather than to a government.
The impact of the corrupt auditor was examined in an experimental setting by examining taxpayer compliance behaviour across different levels of bribes paid in lieu of taxes and penalties owed on the unreported income. We examined within-subject income reported over several independent rounds in the presence and absence of the corrupt auditor and found that underreporting of income exists with the mere presence of a collusively corrupt auditor, even in the absence of any economic advantage of such presence to the taxpayer. Thus, while the behaviour of the participants in the study was not economically rational, such behaviour is nonetheless consistent with the psychological and behavioural theories discussed earlier in deriving our hypotheses. Taxpayer non-compliance generally increases with after-tax monetary benefits to the taxpayer in the presence of the corrupt auditor.

In the case of a professional tax adviser hired after the taxpayer has been selected for an audit, compliance could decrease if the taxpayer expects the adviser to successfully reduce the tax penalties and/or successfully contest the assessment of underreported income. We compared the relative impact of a collusively corrupt auditor and a tax adviser on taxpayer compliance to assess whether these actors can serve as substitutes to some extent.  

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**TABLE 4  Experiment 2—T-Tests of Significant Differences from Zero**

| Difference in mean compliance | $t$ | df | Sig. (2-tailed) | Mean difference | 90% confidence interval of the difference | Lower | Upper |
|------------------------------|-----|----|----------------|----------------|----------------------------------------|-------|-------|
| All 8 rounds (1st set − 2nd set) | −3.60 | 46 | 0.001 | −9.08 | −14.15 | −4.01 |
| Last 4 rounds (1st set − 2nd set) | −3.32 | 46 | 0.002 | −11.15 | −16.79 | −5.52 |
| Last 3 rounds (1st set − 2nd set) | −3.34 | 46 | 0.002 | −11.89 | −17.87 | −5.92 |

*df = degrees of freedom; Sig. = statistical significance level.*

**Notes:**
Difference in mean compliance represents the difference in the average percentage of income reported by participants in the eight (last four, last three) rounds of the two sets (first and second set of eight rounds each) respectively, in the presence of the corrupt auditor alone and in the presence of the tax adviser alone. This difference represents an increase in mean compliance from the first set to the second set.

The impact of the corrupt auditor was examined in an experimental setting by examining taxpayer compliance behaviour across different levels of bribes paid in lieu of taxes and penalties owed on the unreported income. We examined within-subject income reported over several independent rounds in the presence and absence of the corrupt auditor and found that underreporting of income exists with the mere presence of a collusively corrupt auditor, even in the absence of any economic advantage of such presence to the taxpayer. Thus, while the behaviour of the participants in the study was not economically rational, such behaviour is nonetheless consistent with the psychological and behavioural theories discussed earlier in deriving our hypotheses. Taxpayer non-compliance generally increases with after-tax monetary benefits to the taxpayer in the presence of the corrupt auditor.

In the case of a professional tax adviser hired after the taxpayer has been selected for an audit, compliance could decrease if the taxpayer expects the adviser to successfully reduce the tax penalties and/or successfully contest the assessment of underreported income. We compared the relative impact of a collusively corrupt auditor and a tax adviser on taxpayer compliance to assess whether these actors can serve as substitutes to some extent.  

59 From a government’s perspective, bribes demanded by a corrupt auditor are clearly a deadweight loss since they are not likely to be reported and taxed as income. In contrast, tax advisory fees are at least somewhat recouped by taxing the adviser on his or her income, and potential penalties are collected by the government.
In our within-subjects test, compliance in the presence of a tax adviser alone was higher compared to compliance in the presence of a collusively corrupt tax auditor alone, all else being held equal. This suggests that the tax adviser, hired after the taxpayer has been selected for an audit, can and does serve as a substitute for a collusively corrupt tax auditor. Such behaviour suggests that taxpayers may consider dealing with a corrupt tax auditor as a better alternative for resolving their final tax liability—perhaps because the corrupt auditor may have the power to forgive penalties. Our study focused only on the dispute resolution role of the tax adviser engaged post-filing and post-assessment, and not on tax advisers engaged in tax planning before taxpayers file their income tax returns. Our findings therefore hold only for tax advisers engaged in dispute resolution, whose role can be described as akin to that of a defence lawyer. Our justification for this limited role of an adviser in our study is that we are interested in the impact of the presence of tax advisers versus the presence of corrupt tax auditors on taxpayer compliance—that is, we are only interested in testing whether these two actors are substitutes for each other when the economic outcomes to the taxpayer are identical.

Our study is subject to several limitations. While our two experiments used the language of tax compliance, our laboratory findings may not be generalizable to the outside world. Furthermore, the behaviour of participants from fourth-year undergraduate or first-year master of accountancy programs, with tax-filing experience, may not represent the tax-filing behaviour of taxpayers at large. Nonetheless, a strength of the study is that it was conducted using participants in Canada, a country in which corruption among tax officials appears to be relatively uncommon. Thus, we believe that the results of the study could be of value to a country known for tax corruption.

Another limitation of our study is that we do not explore the impact of the simultaneous presence of a tax adviser and a corrupt tax auditor on taxpayer compliance. The moral gatekeeper role of the tax adviser is likely to be much more crucial in such a context. We defer the issue of the interactive effects of the presence of these two actors to future studies. A further limitation of the study is that while we motivated our hypotheses with theories relating to social norms, we did not elicit the social norms of the participants and test whether such norms affected their compliance behaviour. Finally, while we provided economic incentives for the participants’ decisions, those economic incentives may not have been sufficient to motivate their behaviour.
APPENDIX  INSTRUCTIONS TO PARTICIPANTS, EXPERIMENTS 1 AND 2

Experiment 1: Instructions to Participants in the Presence of a Corrupt Tax Auditor Treatment

WELCOME TO THE EXPERIMENT ON THE ECONOMICS OF DECISION MAKING
WE WILL USE AN EXPERIMENTAL CURRENCY, LIRA, IN THIS STUDY WHERE 100 LIRAS = $1 CANADIAN.

YOU WILL BE PROVIDED WITH AN INITIAL SHOWUP FEE OF 500 LIRAS (EQUIVALENT TO $5 CANADIAN).

You will earn some income in liras each period. Your task will be to decide how much of that income to report to the tax authority. You can choose to report any amount from zero to the full amount of your income for the period.

You will pay tax on the income reported by you. The tax to be paid will be calculated using the tax rate for the period disclosed to you. You will not pay tax on the income not reported by you.

Once you have made your choice on the income to be reported, your report will be audited at a probability equal to the audit rate disclosed to you. A random number generator will be utilized to determine whether your income report will be audited. If the random number generated is equal to or less than the disclosed audit rate, your income report will be audited. Otherwise, your income report will not be audited. The probability of being audited in a period is random and is independent of both the probability of being audited in other periods, as well as the probability of others being audited.

IF YOUR INCOME REPORT IS NOT AUDITED:

After-tax income retained = Income earned in the period − The tax paid in the period.

IF YOUR INCOME REPORT IS AUDITED:

If you are audited, you will have to additionally pay (i) the unpaid tax on the unreported income, and (ii) penalty (calculated as a percentage of the unpaid tax).

After-tax and after-penalty income retained = Income earned in the period − Tax paid on the income − Penalty on the unpaid tax in the period.

THERE WILL BE THREE PRACTICE PERIODS BEFORE THE ACTUAL PERIODS BEGIN. YOUR DECISIONS IN THE PRACTICE ROUNDS WILL NOT IMPACT YOUR EARNINGS FROM THIS EXPERIMENT.

YOUR TOTAL AFTER-TAX AND AFTER-PENALTY EARNINGS IN LIRAS AT THE END OF THE EXPERIMENT WILL BE PAID TO YOU IN CANADIAN DOLLARS AT THE RATE OF 100 LIRAS = $1 CANADIAN.

CHANGE IN THE EXPERIMENTAL DETAILS:

Everything will remain the same as before EXCEPT WHEN YOU GET AUDITED.

IF AUDITED IN A PERIOD: The tax auditor may offer to accept a bribe equal to the tax owed by you on the unreported income + ONLY HALF of the penalty owed by you (i.e., YOU SAVE HALF OF THE PENALTY PAYABLE BY AGREEING TO PAY THE BRIBE).
You can either ACCEPT or DECLINE the request for a bribe.

**IF YOU ACCEPT THE BRIBE REQUEST:** You have to additionally pay only the bribe requested.

Your after-tax and after-bribe income from that period = Your income for the period − Tax paid by you − The bribe you agreed to pay.

**IF YOU DO NOT ACCEPT TO PAY THE BRIBE REQUEST:** You have to additionally pay the tax owed by you on the unreported income + the FULL penalty on such unpaid taxes.

Therefore, your income after tax and penalty from that period = Your income for the period − Tax on the full income − The penalty on the unpaid tax.

**Experiment 2: Instructions to Participants in the Corrupt Tax Auditor Versus Tax Adviser Treatment**

**WELCOME TO THE EXPERIMENT ON THE ECONOMICS OF DECISION MAKING**

**WE WILL USE AN EXPERIMENTAL CURRENCY, LIRA, IN THIS STUDY WHERE 100 LIRAS = $1 CANADIAN.**

**YOU WILL BE PROVIDED WITH AN INITIAL SHOWUP FEE OF 500 LIRAS (EQUIVALENT TO $5 CANADIAN).**

You will earn income in liras each period. Your task will be to decide how much of your income to report to the tax authority. You can choose to report any amount from zero to the full amount of your income for the period.

You will pay tax on the income reported by you. The tax to be paid will be calculated using the tax rate for the period disclosed to you. You will not pay tax on the income not reported by you.

Once you have made your choice on the income to be reported, your report will be audited at a probability equal to the audit rate disclosed to you. A random number generator will be utilized to determine whether your income report will be audited. If the random number generated is equal to or less than the disclosed audit rate, your income report will be audited. Otherwise, your income report will not be audited. The probability of being audited in a period is random and is independent of both the probability of being audited in other periods, as well as the probability of others being audited.

**IF YOUR INCOME REPORT IS NOT AUDITED:**

After-tax income retained = Income earned in the period − The tax paid by you in the period.

**IF AUDITED IN A PERIOD:** The tax auditor will offer to accept a bribe equal to the tax owed by you on the unreported income + ONLY HALF of the penalty owed by you (i.e., YOU SAVE HALF OF THE PENALTY PAYABLE BY AGREEING TO PAY THE BRIBE).

You can either ACCEPT or DECLINE the bribe request.

**IF YOU ACCEPT THE BRIBE REQUEST:** You have to pay the additional bribe requested.

Your after-tax and after-bribe income retained for the period = Your income earned for the period − Tax paid by you − The bribe you agreed to pay.
IF YOU DO NOT ACCEPT THE BRIBE REQUEST: You have to pay the additional tax owed by you on the unreported income + the FULL penalty on such unpaid taxes.

Therefore, your income after tax and penalty retained for the period = Your income earned for the period − Tax on the full income − The penalty on the unpaid tax.

THERE WILL BE THREE PRACTICE PERIODS BEFORE THE ACTUAL PERIODS BEGIN. YOUR DECISIONS IN THE PRACTICE ROUNDS WILL NOT IMPACT YOUR EARNINGS FROM THIS EXPERIMENT.

YOUR TOTAL EARNINGS IN LIRAS AT THE END OF THE EXPERIMENT WILL BE PAID TO YOU IN CANADIAN DOLLARS AT THE RATE OF 100 LIRAS = $1 CANADIAN.

CHANGE IN THE EXPERIMENTAL DETAILS:
Everything will remain the same as before EXCEPT WHEN YOU GET AUDITED.

IF AUDITED IN A PERIOD: A tax advisory firm will offer you a tax-planning scheme that will reduce your entire penalty. The cost of this tax-planning scheme is half the penalty imposed by the tax authority. Therefore, if you acquire the tax-planning services, you will have to additionally pay the tax owed by you on the unreported income plus an advisory fee to the firm equal to HALF of the original penalty assessed on you. (THE NET RESULT IS THAT YOU SAVE 50% OF THE ORIGINAL PENALTY ASSESSED BY ENGAGING THE TAX ADVISORY FIRM.)

You can either ACCEPT or DECLINE the services of the tax advisory firm.

IF YOU ACCEPT THE SERVICES OF THE TAX ADVISORY FIRM: You have to pay the tax owed on the unreported income + a fee to the firm equal to half of the penalty originally assessed on you.

Your after-tax and after-fee income retained for the period = Income earned in the period − Tax paid on that income − The advisory fee.

IF YOU DO NOT ACCEPT THE SERVICES OF THE TAX ADVISORY FIRM: You have to pay the tax owed by you on the unreported income + the FULL penalty on such unpaid taxes.

Therefore, your income after tax and penalty from that period = Income earned in the period − Tax on that income − The penalty on the unpaid tax.