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NOT ONLY FINES: THE IMPACT OF FINANCIAL AND SHAME PENALTIES ON TAX EVASION

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In this paper, we consider the impact of financial and social penalties on the propensity to evade taxes. Apart from financial fines, social penalties, such as social disapproval, may result from an illegal tax decision. Rigorous social norms regarding payment of taxes impose additional costs on violators such as fear of exclusion and stigmatization. We conducted an experiment among Polish taxpayers ($N = 303$) on the effect of single and combined financial and shame penalties on propensity to evade taxes. Results of the study confirmed that taxpayers respond not only to economic penalties, but are aware that tax evasion may also be associated with other, non-economic costs. The threat of social disapproval for illegal tax reduction may serve as an additional factor preventing individuals from breaking social and legal norms regarding tax evasion. Social consequences of dishonest tax behavior have rarely been analyzed in the literature so far.

Keywords: tax evasion; non-financial penalty; financial penalty; shame; tax administration

Tax administrations in all countries are tasked with collecting taxes to pay for public goods and to ensure redistribution of public money in line with the government's stated goals. Since tax liability represents a financial loss for the taxpayer, the conflicting goals of the tax administration and taxpayers are

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the subject of many analyses undertaken in the area of taxation. Many of them adopt a classic economic approach and presume that tax evasion is the dominant behavior. Allingham and Sandmo (1972) applied the expected utility framework developed by von Neumann and Morgenstern to tax decisions and proposed a deterrence model. In line with the model's assumptions rational, self-interested, risk-averse individuals maximize expected utility and compare the burden of paying taxes against the costs of being subsequently audited and fined. The last involves a broad category of fines, from monetary penalties, late payment interest to bank account freezing and confiscation of assets. The model predicts that high tax rates encourage tax evasion due to potential profits, but a high audit probability and severity of legal sanctions reduces expected gains. The results of surveys and experiments have supported the crucial role of audit probability as a deterrent (Advani et al., 2017; Alm et al., 1992; Cummings et al., 2009; DeBacker et al., 2018; Fortin et al., 2007; Gemmell & Ratto, 2012; Gërxhani & Schram, 2006; Ghosh & Crain, 1996; Kleven et al., 2011; Lewis et al., 2009). However, the results pertaining to legal sanctions severity are less consistent. Some research demonstrated a significant relationship between legal sanctions severity and tax evasion (Alm et al., 1995; Carnes & Englebrecht, 1995; De Juan et al., 1994; Friedland, 1982; Klepper & Nagin, 1989), but other studies did not support the postulated role of this factor (Bayer & Sutter, 2009; Bergman & Navarez, 2006; Elffers et al., 1987; Feld et al., 2011; Varma & Doob, 1998; Webley et al., 1991).

Financial and Non-Financial Consequences of Tax Evasion

In Allingham and Sandmo's approach (1972), deterrence factors are purely economic, but the cost associated with tax evasion can also be non-financial in nature, e.g. social disapproval. Research has demonstrated that anticipating social rejection by friends with strict moral standards for paying taxes effectively discouraged respondents from underreporting their income and applying for undue tax relief (Elffers et al., 1992; Niesiobędzka, 2013; Webley et al., 2001; Weigel et al., 1987; Wenzel, 2005a). Strict social norms regarding tax payment impose additional costs on violators such as fear of exclusion and stigmatization (Wenzel, 2004). A survey by Gerber et al. (2016) asked people their opinion about a hypothetical individual who revealed various anti-social behaviors (e.g., being late with tax payments). Results showed that people viewed a hypothetical person less favorably after being informed that this per-

son was late with tax payments relative to someone who pays taxes on time. Belief in the permissiveness of social norms regarding tax payment may serve to rationalize tax evasion (Alm et al., 1999; Blanthorne & Kaplan, 2008; Bobek et al., 2007; Bolek et al., 2023; Wenzel, 2005b). Therefore, providing information about social norms regarding tax payment may be considered a promising tool to enhance tax discipline. Wenzel (2005a) with the Australian Tax Office conducted an experiment to demonstrate a close link between social norms and tax compliance. In the first phase, the Australian Tax Office asked participants to what extent they believe most taxpayers value honesty. Three weeks later, randomly selected taxpayers received the feedback on the survey results describing the finding that people have underestimated the honesty norm among other taxpayers. Providing information about the strictness of social norms regarding tax payment discouraged respondents from underreporting their income (Wenzel, 2005a).

Similar results were demonstrated in large field experiments (Del Carpio, 2014; Hallsworth et al., 2017; Perez-Truglia & Troiano, 2018). Hallsworth et al. (2017) used administrative data from more than 200,000 individuals in the United Kingdom and demonstrated that messages referring to social norms, public services, and financial information significantly increased payment rates for overdue tax. Reminder letters with references to social norms significantly strengthened tax compliance among taxpayers who did not pay their taxes on time. The effect of social norms also was noted among property owners (Del Carpio, 2014). The municipality sent to random taxpayers with only one residential property in the district an official letter with information about the average rate of compliance, the average level of municipal enforcement, or both. The information that the majority of property owners in the taxpayer's district honestly paid their taxes had a significant positive impact on property tax payments. Disclosing information regarding the level of compliance raised compliance by 20%. The results of these experiments demonstrated why the mutual relationship between social norms and tax compliance should attract the interest of tax administrations. The strictness of social norms regarding tax payment imposes additional costs on violators, and therefore providing information about social norms regarding tax payment may discourage tax evasion or induce delinquent taxpayers to pay off existing tax debts. Perez-Truglia and Troiano (2018) studied shaming penalties in the context of the collection of tax delinquencies. Since in many U.S. states, lists with the names, addresses, and other information regarding individuals and businesses with delinquent taxes are publicly revealed, letters to more than 34,000 tax

delinquents from three U.S. states were sent by the research group, without mentioning the tax agency. Two of the letters referred to financial and shaming penalties. The authors found that both types of consequences induced payment of tax debts. Information about financial penalties had a positive effect on all tax payments, while increasing the visibility of delinquency status increased overdue tax payments in the case of debts below $2500, but had no significant effect on individuals with larger debt amounts. In line with the social signaling model proposed by the authors, the obtained results might arise from the fact that the financial penalty is proportional to the debt amount, while the shame penalty decreases in proportion to the debt amount. Thus, social incentives do not scale up like financial consequences.

Interesting data about non-monetary sanctions came from California's "Top 500" program. Angaretis et al. (2024) used administrative tax microdata from the program concerning response to notices warning of the imminent publication. An official letter was sent to the 500 taxpayers with the highest debts, informing them that their account qualifies for disclosure and Internet posting, and if they do not pay their tax liabilities, their names, addresses, and the unpaid balance amount will be published. Non-monetary sanctions turned out to be efficient tax enforcement tools. The delinquent taxpayers made overdue payments, particularly those with high reported income (Angaretis et al., 2024).

To summarize, social norms and social costs of illegal tax behavior, like financial penalties, may play a crucial role in shaping taxpayers' decisions. As Perez-Truglia and Troiano (2018) showed, information about the visibility of delinquency status among neighbors—who probably are not in their immediate circle of social relations—led to greater tax discipline, as this information could threaten their public image. Therefore, in this paper, apart from financial penalties, we focus on social costs related to disclosing information on taxpayer underpayment of taxes. Concern for maintaining a positive social image is an essential motive for human actions (Aronson, 1992; Goffman, 1959; Mazar et al., 2008).

Disclosing information regarding tax evasion makes the behavior more visible. The visibility of an instance of tax evasion threatens taxpayers' social image and undermines their reputation as honest people. As Sandro and Mittone (2016) demonstrated, avoiding social blame is especially important for occasional tax-dodgers. In the experiment setting they are very prone to buy anonymity to be sure that their dishonest behavior will remain private. Moreover, empirical data demonstrated that detected evaders feel regret and guilt, and if their cheating behavior is made public, they are ashamed. Coricelli et al.

(2010) used a physiological measure of the emotional arousal uncontrolled by the individuals (skin conductance response) and affective self-reports that inform the valence and intensity of emotions. They found that the decision to evade and the proportion of evaded income were related to the anticipation and the experience of emotional responses. A picture of the perpetrator displayed on all participants' screens increased emotional arousal and consequently enhanced tax compliance. Thus, shame avoidance might have a significant impact on taxpayers' decisions. Keeping a reputation requires less effort and difficulties than coping with a tarnished reputation. Furthermore, the publicizing of convictions and punishments of tax evaders by the tax authority significantly influences third-party observers' perceptions of retributive justice. The empirical results from two experiments showed that perceptions of retributive justice mediate the relationship between shaming and tax compliance intentions of taxpayers who observe the shaming punishments (Okafor, 2023).

The negative social consequences of disclosing information about an individual's discreditable behavior are related to the notion of punishment through shaming (Braithwaite; 1989; Hansberg, 2000; Kahan & Posner, 2019; Perez-Truglia & Troiano, 2018). Shame, like guilt, is a pro-social emotion promoting moral, cooperative behavior, since it is related to moral values, whereas guilt connects with moral norms (Blitvich, 2022). According to Hansberg (2000), moral shame is evoked following cowardly, cruel, or unjust behavior and intensifies when it happens publicly, in front of other people. Braithwaite (1989) divided the process of inducing somebody to feel shame into two main types: reintegrative shaming, when community disapproval is followed by reacceptance, and stigmatizing shame, when a person, not just their behavior, is rejected. Regardless of the type of the shaming process, the practice of public shaming as a punishment for an offence has a long history. One of the oldest examples of the shaming penalty is a perp walk, when suspects are paraded before the crowd or—nowadays—the media. The purpose of this is to show a person as someone whose behavior requires investigation and custody. Public shaming, therefore, was aimed at protecting the morals of the community and punishing a person who acted against generally accepted rules of conduct (Boudana, 2014). Brocas et al. (2021), using an experimental design equivalent to a classic dictator game, showed that stealing decreased significantly when the nominal fee in case of being caught was reinforced by shaming through showing the subject's picture to other participants and being labeled as a cheater. The decrease in theft occurred regardless of the fact that stealing

is an economically profitable strategy in this game, sanctions were random, and subjects played multiple times with changing partners.

The Present Study

The present study examines the impact of financial and social penalties on the inclination to evade taxes. In particular, we analyze the single and combined effect of financial and shame penalties. Financial consequences of tax evasion are an inherent legal component in all functioning tax systems; hence, determining its actual impact on taxpayers' behavior is undoubtedly important. Monetary punishments are a purely economic deterrent. As previously noted, Allingham and Sandmo (1972) assume that tax evasion is motivated by taxpayers' maximization of their own utility. The risk of incurring a financial penalty lowers the attractiveness of illegal action aimed at tax payment reduction. Thus, in our study, we predicted that

H1. Propensity for tax evasion is lower when a financial penalty is imposed.

We also examined the impact of the shame penalty on tax evasion. In previous research, the social visibility of a norm-violating behavior deterred not only tax delinquency (Del Carpio, 2014; Hallsworth et al., 2017; Perez-Truglia & Troiano, 2018), but also fare avoidance on public transport (Ayal et al., 2021), stealing (Brocas et al., 2021), and federal white-collar crime (Kahan & Posner, 2019). In the tax domain, Perez-Truglia and Troiano (2018) and Angaretis et al. (2024) demonstrated the efficacy of shaming punishment of tax offenders, who were more likely to decide to settle their tax debts after receiving a letter informing them about the visibility of their delinquency status. However, Perez-Truglia and Troiano (2018), as well as Angaretis et al. (2024), focused on tax delinquents who have already committed a tax offence and found that the strength of the shame penalty was limited to relatively small amounts of tax debt.

We examined whether disclosing information about tax evasion acts as a deterrence factor, decreasing the propensity to illegally reduce tax liabilities in the first place. The shame punishment introduced in the current study relates to the basis of an individual's activity in a public sphere—their social image. Disclosing information about non-compliant behavior may adversely

affect a person's credibility in subsequent social interactions, and thus we predicted that

H2. Tax evasion propensity is lower when a shame penalty is imposed.

According to Coricelli et al. (2010), coexistence of monetary fines with non-monetary sanctions decreases the probability of cheating and the value of evaded taxes. The detection of tax evasion raises emotions, especially when fines are high. The emotional arousal further increases when tax evasion is exposed publicly. Detected evaders feel regret, anger, and guilt, and shame when their behavior becomes socially visible. Thus, we expected that

H3. The propensity for tax evasion decreases when both types of penalties are imposed compared to when only one type of penalty is applied.

Those two types of sanctions have different impact on future taxpayers' decisions—monetary fines increase later evasion, while non-monetary sanctions connected with revealing a tax evader's public exposure has the opposite effect (Coricelli et al., 2010). Perez-Truglia and Troiano (2018) results suggest that the effect of monetary and non-monetary sanction may be related to the amount of tax waived. For this reason, the study did not compare the level of tax evasion reduction of the two types of sanctions applied.

The present study contributes to the existing literature in two essential ways. First, unlike previous studies that analyzed two types of penalties together, this research focuses on active taxpayers who are legally obligated to submit annual tax returns. Laboratory experiments in this area typically rely on economic games, where individual behavior and outcomes are influenced by the decisions of other participants. These scenarios often fail to accurately reflect real-world economic conditions. By contrast, this study examines tax decision-making in a context more closely aligned with the direct experiences of taxpayers and the conditions under which tax evasion occurs. Second, the strength of non-material sanctions is closely tied to the level of tax morale within a given group. The findings of this study, therefore, offer valuable insights into the effectiveness of non-material sanctions in improving tax compliance among Polish taxpayers, shedding light on an alternative approach to enhancing tax discipline.

On our scenario, we focused on taxpayers running a business due to their wider possibility of influencing the amount of taxes they paid compared to

employees. We refer to one relatively common method of tax evasion observed in economic practice—underreporting income (Morse et al., 2009). Since some studies showed that being observed by others may lead to higher risk tolerance (Tymula & Wang, 2021), we introduced a risk propensity measure in the study to control for risk propensity among respondents.

METHOD

Procedure

The protocol for the study was approved by the Human Research Ethics Committee at the first author's institution. Participation in the studies was voluntary and written consent was obtained prior to the study.

The research was conducted on a sample of Polish taxpayers recruited from an online national research panel. Respondents were awarded points for their participation, which they could later exchange for rewards in a pool of several hundred products offered by the platform running the panel.

Participants

An a priori power analysis was conducted using G*power version 3.1.9.6 (Faul et al., 2007) to determine the minimum sample size required to test the study hypothesis. According to the results, the required sample size to achieve 80% power for detecting a medium effect, at a significance criterion of $\alpha = .05$, was $N = 269$ for two-way analysis of variance (ANOVA). A medium effect size is a commonly accepted threshold in behavioral and social sciences.

A total of 303 taxpayers participated in the study, 162 women and 141 men ranging in age from 18 to 77 years old ($M = 40.86$, $SD = 13.91$). Almost all respondents (92.7%) were active taxpayers, obliged to submit an annual tax return for the year preceding the study. Four out of ten participants (40.9%) filled tax returns by themselves, while every fifth respondent (19.8%) had an accountant do it. 25.1% accepted annual tax returns prepared by the Polish National Revenue Administration and less than one out of ten (6.9%) used tax return forms drawn by the employer. Participants were randomly assigned to a control group ($n = 88$) and three experimental groups: a group focused on a financial penalty for tax evasion ($n = 82$), a group focused on a shame penalty

(n = 69), and a group focused on both shame and financial penalties for tax evasion (n = 64). Participants in the experimental and control groups did not differ by gender, $\chi^2(3) = 3.09$, $p = .378$, age, $F(3, 299) = 2.25$, $p = .083$ or method of annual tax return preparation, $\chi^2(3) = 19.20$, $p = .067$. In all four groups the most frequently respondents prepared it by themselves.

Materials

After completing questions on demographic data, participants read information about possible actions taken by tax authorities for tax evasion.

Financial Penalty

Participants in the first experimental group read that the tax administration imposes financial and criminal sanctions on an entrepreneur in the event of detecting irregularities in the payment of liabilities. An entrepreneur who evaded taxes must pay the tax with interest and a fine.

Shame Penalty

Participants in the second experimental group read information about other possible actions taken by tax authorities for tax evasion. They read that the tax administration introduced a new penalty—a public record that contains data regarding entrepreneurs who evaded taxation. The public record allows members of the public to check on dishonesty promptly by other market participants (both private and public) and therefore could impose a social cost of tax evasion: a shame penalty.

Shame and Financial Penalty

Participants in the third experimental group received information about two types of penalties provided by tax administration in case of tax evasion: the financial penalty and a shame penalty. According to the information provided, entrepreneurs who evaded taxation must pay the tax with interest and a fine. In addition, information about their dishonest behavior would be publicly available.

The control group did not receive information about penalties for tax evasion.

After reading information about possible actions taken by tax authorities for tax evasion, participants were asked to imagine being an entrepreneur.

Tax Evasion

All four groups of respondents were presented with a situation where the possibility of tax evasion occurred. According to the scenario, the entrepreneur considered underreporting income by not registering every cash transaction. Next, respondents decided whether they would engage in this type of tax evasion. They indicated their proneness to underreport income by not registering every cash transaction on a 5-point Likert scale, from 1 (*definitely not*) to 5 (*definitely yes*).

Risk Propensity

We used the General Risk Propensity Scale (GRiPS) to measure risk propensity (Zhang et al., 2019). In this approach, risk propensity is treated as a domain-general disposition. The scale consists of eight items (e.g., "I commonly make risky decisions") on which responses are made on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

At the end of the study, we thanked respondents for completing the questionnaire.

Data Analyses

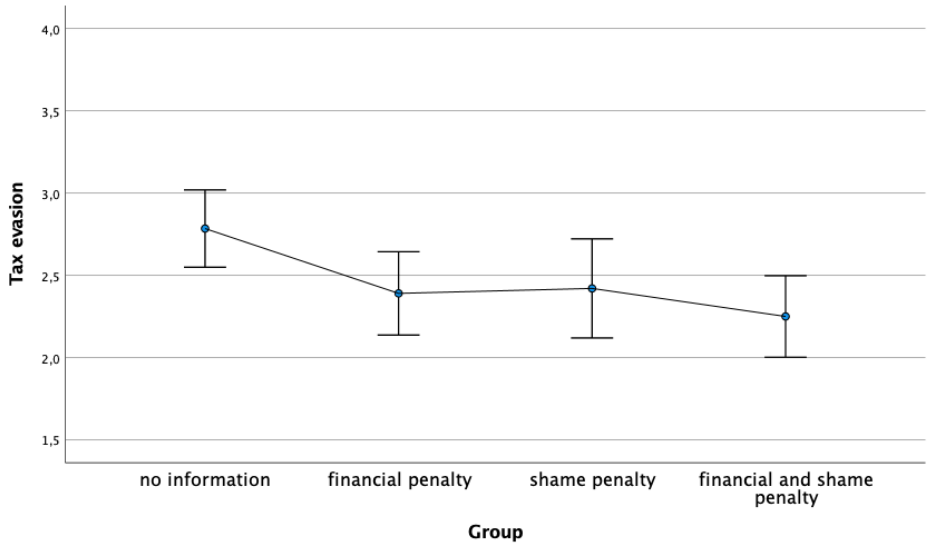
The data was computed using SPSS version 29. We conducted a two-way (financial vs shame penalty) analysis of variance (ANOVA) to evaluate differences between control group and both types of penalty as well as the potential effect of interaction.

RESULTS

Initially, we examined differences in risk propensity between groups. The analysis of variance did not demonstrate significant differences in propensity for risk between four groups, $F(3, 299) = .44$, $p = .721$.

Figure 1

Tax Evasion Propensity in Groups With Different Information About the Possible Penalty



Note. Error bars represent 95% confidence intervals (CIs).

Figure 1 illustrates propensity for tax evasion in groups with varying information about a potential penalty. A two-way factorial ANOVA was used to determine the effects of both types of penalty on the propensity for tax evasion. The analysis revealed a significant main effect of financial penalty, $F(1, 299) = 4.63$, $p = .032$, $\eta_p^2 = .02$, and on the tendency level main effect of shame penalty, $F(1, 299) = 3.69$, $p = .056$, $\eta_p^2 = .01$. Participants who received information about financial penalty were less prone to tax evasion ($M = 2.33$, $SD = 1.08$) than participants who received no information ($M = 2.62$, $SD = 1.18$), which supported H1. The results of analysis also supported H2. Participants who received information about shame penalty were less prone to tax evasion ($M = 2.25$, $SD = .99$) than participants who received no information ($M = 2.39$, $SD = 1.15$).

No significant interaction effect between financial and shame penalties was observed, $F(1, 299) = 0.73$, $p = .395$, $\eta_p^2 = .00$.

The difference between the group informed about two kinds of penalties and the group informed about the financial penalty was nonsignificant ($p = .458$). Of no significance was also the difference between the group focused on both penalties and the group focused on social cost of tax evasion ($p = .387$). The results did not support H3.

DISCUSSION

Improving tax discipline is one of the basic tasks of tax administrations, which use legal regulations to discourage taxpayers from tax evasion. The main tax evasion deterrent in most tax systems is a financial penalty imposed on the taxpayer when a tax non-payment has been revealed.

The aim of the present study was to examine the tax evasion preventive impact of single and combined financial and shame penalties. Therefore, on experimental scenarios, information about financial (fine) and/or shame (publicly available information about revealed tax evasion) penalties was provided to respondents, and their propensity for underreporting income by not registering every cash transaction was measured. In line with our expectations, we found a tax evasion preventive effect of both single and combined financial and shame penalties in comparison to when the information about possible negative consequences of revealing tax evasion was not provided.

The study confirmed the assumptions of the deterrence model that financial penalties discourage tax evasion (Allingham & Sandmo, 1972). The threat of a financial penalty reduces the utility of illegal tax minimization and results in greater tax discipline, which is consistent with previous research demonstrating a significant correlation between legal sanctions severity and tax evasion (Alm et al., 1995; Carnes & Englebrecht, 1995; De Juan et al., 1994; Friedland, 1982; Klepper & Nagin, 1989). This relationship is postulated in rational choice theory (Hardin, 2001).

The study also demonstrated the effect of the shame penalty on the tendency level. Participants who were informed about the existence of a public record allowing members of the public to promptly see dishonesty on the part of specific taxpayers were less prone to tax evasion. The results are in line with Perez-Truglia's & Troiano's study (2018), and Angaretis et al.'s (2024) results showing that information about the visibility of delinquency status led to higher tax discipline. Thus, disclosing information about tax evasion may be considered a non-economic deterrent, decreasing the readiness to engage in illegal activities aimed at reducing tax liabilities. Making tax evasion more visible may threaten social image and damage reputation and therefore impose additional costs of tax evasion. Wang et al. (2019) studied the effect of the "name and shame" penalty on shareholder firms' valuation, showing a limited but significant effect of behavior visibility on illegal business practices reduction. In this study, we focused on individual taxpayers acting as entrepreneurs. Entrepreneurs strive to project an image of reliable business partners, where

a reliable settlement of taxes due can be one of the pillars of this image. Therefore, disclosing information about illegal minimization of tax payments may affect not only the image of taxpayers themselves, but may extend to their business, lowering its future business credibility. The consequences of disclosing information about tax evasion may therefore be much more significant in the case of entrepreneurs in comparison to individual taxpayers. The importance of our study results is supported by the the Fair Tax Foundation's report *Fair Tax Nation: UK public attitudes to corporate tax conduct* (2023), which highlights that taxes have become a reputational issue for companies, as consumers and employees favor businesses that uphold responsible tax practices and reject artificial tax avoidance.

The study demonstrates the potential of shame penalties as a tax evasion deterrent. As Perez-Truglia and Troiano (2018) proposed, social penalties do not scale up like financial consequences in the case of tax evasion, but their effect may be prolonged, influencing the course of subsequent social interactions. Thus, monetary consequences are associated with a direct financial loss incurred in the short term, while non-monetary consequences are indirect, and the time span of their impact may be extended. However, the findings of this study suggest that the combination of deterrence mechanisms (financial and shame penalties) does not produce a synergistic effect on tax compliance, at least not in the context examined. These results indicate that the relationship between financial and non-financial deterrents may be more complex and context-dependent. Future research should further explore the boundary conditions under which these deterrents interact, including factors such as the intensity of social exposure, perceived fairness, and taxpayer identity.

Practical Implications

The similar deterrent effect on proneness to evade taxes when financial and shame penalties are (on a hypothetical scenario) threatened indicates the potential for influencing taxpayers' behavior through a wider range of means than just financial penalties. In particular, a shame penalty could extend the range of punishments applied on repetitive tax evaders to maximize and diversify negative consequences of this behavior. Providing information about a "name and shame" penalty could highlight the social consequences of breaking the rules for this group of taxpayers. Furthermore, empirical findings show that making tax cheating public should be associated with reintegration pos-

sibility. Coricelli et al. (2014) demonstrated if disclosing information about evaders is immediately followed by reintegration the total amount of cheating significantly diminishes. Then, when shaming turns into stigmatization, the propensity to tax evasion might increase. Therefore, shame penalties should be carefully introduced and administered by tax authorities.

Since this kind of shame penalty would be difficult to apply in the tax sphere, we proposed a social cost of detected tax evasion adequate to the existing possibilities and solutions available to tax administrations. In future research, it would be interesting to explore the possible effect of introducing a factor opposite to shame penalty, by making tax compliance publicly visible. It seems intriguing to consider the possibility that information about accurate and timely payment of taxes could be seen as evidence of a business partner's credibility and therefore enhance tax compliance. Since nowadays tax authorities in many countries introduce service-oriented administration based on mutual trust and cooperation, revealing a list of credible taxpayers could be an example of action aimed at reinforcing desirable behaviors in the sphere of taxes (OECD, 2022).

Limitations

The study suffers from some some limitations, as our experimental design was questionnaire-based. Although the tax situation used in the study to measure the likelihood to engage in tax evasion referred to relatively common practice, it cannot be treated as a universal example. Moreover, our respondents were taxpayers, but only some of them had entrepreneurial experience. According to many authors, this approach does not allow the the results to be generalized, therefore our results should be regarded with caution (Holleman et al., 2020; Wojciszke & Bocian, 2018). It is important to note that the observed effect size in the study was small, potentially reducing the statistical power to detect significant effects. This suggests that the impact of financial and shame penalties may be context-dependent, highlighting the need to consider country-specific factors influencing tax decisions.

Conclusions

This study contributes to the existing literature by examining the deterrent effects of financial and shame penalties on active taxpayers legally required

to submit annual tax returns. Unlike laboratory experiments relying on economic games, this research captures tax decision-making in a more realistic context, highlighting the role of social reputation in compliance behaviors. The findings underscore the potential of non-material sanctions to enhance tax discipline, particularly in environments where tax morale influences enforcement effectiveness.

Our findings support the hypothesis that both financial and shame penalties contribute to reducing tax evasion, though their effectiveness may differ depending on taxpayers' circumstances. Entrepreneurs, in particular, seem more susceptible to social penalties due to their need to maintain a credible business reputation. The results emphasize the relevance of integrating financial and social deterrents into tax compliance frameworks, although their joint use may not produce additive effects beyond individual application.

The study carries practical implications for tax administrations. It suggests that leveraging social penalties, such as publicly disclosing tax non-compliance, could serve as an additional tool to discourage tax evasion, particularly for habitual offenders. Reintegration mechanisms should be considered to balance deterrence with opportunities for taxpayers to restore their reputations. Additionally, publicly recognizing compliant taxpayers could be explored as a strategy to reinforce positive tax behavior. However, further research is this area is needed.

Despite these insights, the study has several limitations. The experimental design was questionnaire-based, which, while useful for controlled testing, does not fully capture real-world tax decisions. Additionally, not all respondents had experience as entrepreneurs, which may limit the generalizability of the findings. The observed effect size was small, indicating that the deterrent impact of financial and shame penalties may be influenced by broader contextual and cultural factors.

Future research should explore the potential effects of positive reinforcement strategies, such as recognizing compliant taxpayers, and investigate the impact of tax administration policies tailored to different business and cultural contexts. Additionally, further studies using real-world tax compliance data could provide deeper insights into the practical application of financial and social penalties. Expanding research in this area could help develop more effective tax compliance strategies that balance deterrence with trust-building measures.

CRediT Author Statement

SABINA KOŁODZIEJ (60%): conceptualization, methodology, data collection, analysis, writing (original draft), supervision, writing (review and editing).

MAŁGORZATA NIESIOBĘDZKA (40%): conceptualization, methodology, analysis, writing (original draft), writing (review and editing).

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