Tax amnesties, justice perceptions, and filing behavior: a simulation study

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ABSTRACT

A simulation study demonstrates the influence of perceived justice of a tax amnesty on subsequent tax compliance. In addition, it investigates how the amnesty is perceived to serve the punishment objectives retribution (i.e., giving offenders what they “deserve”) and value restoration (i.e., restoring the values violated by tax evasion). Hierarchical regression analysis revealed the expected positive influence of justice on subsequent tax compliance. However, when the influence of punishment objectives was controlled for, the influence of justice disappeared, while retribution and value restoration showed positive effects on post-amnesty tax compliance.

Keywords: tax amnesty – justice – punishment objectives – tax simulation
INTRODUCTION

Tax amnesties “provide delinquent taxpayers with a one-time opportunity to clear their accounts by paying back taxes and interest without being subject to criminal or civil penalties” (Parle & Hirlinger 1986: 246). Most studies on tax amnesties take an economic perspective, neglecting social psychological variables (Alm & Beck 1991, 1993; Alm, McKee & Beck 1990; Andreoni 1991; Fisher, Goddeeris & Young 1989; Malik & Schwab 1991). We argue that justice perceptions are relevant in explaining filing behavior following amnesties (cf. Wenzel 2003).

The benefits of tax amnesties for the government are the opportunity to raise revenues in the short run, the chance to bring tax evaders back on the right track of tax compliance as well as a facilitation to monitor their future compliance, to provide a soft option for those who evaded out of a mistake, and to show that the government cares about tax evasion (Hasseldine 1998; Lerman 1986; Malik & Schwab 1991; Parle & Hirlinger 1986; Torgler, Schaltegger & Schaffner 2003; Wenzel 2003). Furthermore, amnesties may support the transition to a new tax system with stricter enforcement measures (Alm et al. 1990). The downsides, however, are that amnesties might signal to taxpayers that governmental measures to catch tax evaders are weak, that tax evasion is only a “peccadillo” and that others do not comply with tax laws, which, in further consequence, calls into question social norms prescribing tax compliance. Furthermore, when taxpayers anticipate further amnesties, they may lower their tax compliance. Particularly honest taxpayers could consider it unfair when tax evaders get away without punishment (e.g., Hasseldine 1998; Parle & Hirlinger 1986).

Tax amnesties could be perceived as violating the implicit psychological contract between taxpayers and tax authorities that describes the interactions between taxpayers and regulatory authorities and implies duties and rights for both parties (Feld & Frey 2002, 2007; Vihanto 2003). In order to keep the contract in balance, taxpayers must pay their taxes.
honestly and tax authorities, for their part, “must acknowledge and support the contract with the taxpayers by acting in a respectful way towards them, but also by preventing honest taxpayers from being exploited by the process” (Feld & Frey 2002: 89). That implies not only positive actions, such as the respectful treatment of all taxpayers, but additionally negative sanctions for those who do not comply with tax laws, because otherwise honest taxpayers may feel cheated. If regulatory authorities break the psychological contract, honest taxpayers may no longer feel obliged to stick to their part of the contract and may start to evade taxes themselves (Feld & Frey 2002, 2007). Since conventional punishment for tax evaders is waived, a tax amnesty could be perceived as such a violation of the psychological contract. However, this need not automatically be the case. Honest taxpayers could also take into account that - depending on the exact specifications of amnesties - those tax evaders who participate in an amnesty pay at least part of their tax debt and appear to be willing to honestly pay their tax in the future, in contrast to tax evaders who do not participate and keep evading. In sum, evaluations of a tax amnesty and subsequent tax filing behavior may vary.

Studies about the influence of tax amnesties on subsequent filing behavior yield to inconclusive results. Alm and colleagues (1990) conducted a tax experiment on the effects of tax amnesty on post-amnesty compliance and found decreasing compliance following amnesty. This was particularly true for those taxpayers who were moderately compliant prior to the amnesty. However, compliance increased after an amnesty, if the amnesty was accompanied by increased enforcement efforts. In a later study on the long-term effects of a tax amnesty which was combined with greater post-amnesty enforcement efforts, Alm and Beck (1993) did not confirm a significant influence in either direction on the taxes raised. It is argued here that a deeper understanding of the influence of a tax amnesty on subsequent tax paying requires the consideration of social psychological factors such as perceptions of justice and punishment objectives in addition to the economic factors income, audit probability and penalty rate.
There is empirical evidence of tax compliance being positively influenced by perceived justice, both in terms of distributive (Alm, Jackson & McKee 1992; Kim 2002; Spicer & Becker 1980; Wenzel 2002) and procedural justice (Braithwaite, Murphy & Reinhart 2007; Hartner et al. 2008; Murphy 2005, 2009; Murphy & Tyler 2008; Murphy, Tyler & Curtis 2009; Wenzel 2002). Despite justice considerations being mentioned as important for the acceptance or rejection of tax amnesties (Alm, McKee & Beck 1990; Andreoni 1991; Hasseldine 1998; Lerman 1986; Sausgruber & Winner 2004; Torgler 2007) to the best knowledge of the authors so far no studies empirically tested the influence of perceived justice on subsequent tax compliance. The present study aims to fill this gap by showing that the justice evaluations people made immediately after an amnesty in a tax simulation are positively associated with subsequent tax compliance (Hypothesis 1).

Furthermore, it is also investigated how a tax amnesty relates to relevant objectives that punishments should serve (McFatter 1982; Miller & Vidmar 1981). Retribution and value restoration are considered as relevant punishment objectives with respect to taxation, and in particular with respect to tax amnesties (cf. Rechberger, Hartner & Kirchler subm.; Wenzel & Thielmann 2006). The objective of retribution requires that tax evaders expiate for their offense by getting a sanction they “deserve”. The objective of value restoration takes into account that violations of social rules or laws question values which should be binding on all members of a community. Consequently, punishment may serve to re-establish consensus about the meaning and the validity of the rules that have been violated by the offender (Picciotto 2007; Wenzel & Thielmann 2006). Retribution and value restoration are related to justice perceptions (Wenzel & Thielmann 2006).

In the context of tax offenses, Wenzel and Thielmann (2006) demonstrated that people who prefer a value restoration notion of justice tend to choose alternative punishment (i.e., compulsory education and community service) rather than conventional punishment (i.e., prison sentence), while those with a retributive notion of justice show a preference for
conventional punishment. Because tax amnesties may also be considered as an alternative to traditional punishment, such as fines or prison sentences, it can be expected that post-amnesty tax compliance is positively influenced by the perception that the tax amnesty serves the restoration of values prescribing tax compliance. However, in addition to value restoration the objective of retribution may also be considered as important for the evaluation of a tax amnesty. Gromet and Darley (2006) make a claim for treating offenders in a way that serves both objectives, retribution and value restoration. Consequently, tax compliance following a tax amnesty should be positively influenced by the perceptions of retribution and value restoration being served by the tax amnesty (Hypothesis 2).

METHOD

Sample
In total, 262 students from the University of Vienna took part in a taxpaying simulation that was conducted at the computer laboratories of the Faculty of Psychology, University of Vienna. We restricted our analyses to 239 participants who were not audited during the tax simulation and who stated that they took participation in the tax simulation seriously. A further control item checked whether participants could imagine being a taxpayer during the tax simulation (\( M = 4.13; \ SD = 1.73 \)). Most participants were females (\( n = 168 \)), and the average age was \( M = 23.15 \) years (\( SD = 3.53 \)). More than 60% had either a full-time (\( n = 16 \)) or a part-time job (\( n = 131 \)), and about 28% reported earning taxable income. On average, the monthly income available amounted to \( Md = 500 \) Euro (\( M = 558.19; \ QA = 400; \ SD = 312.55 \)).

Procedure
Students of various disciplines were asked to take part in the online simulation study. As an incentive, a show-up fee of three Euros and an additional amount depending on their behavior
in the tax paying game were promised. The online simulation was programmed with HTML, CSS, PHP and JavaScript and designed to simulate “real” taxpaying behavior. It was split into two phases with five rounds of tax filing in each phase and the execution of a tax amnesty for tax evaders between those phases (i.e., pretest-posttest design). Participants were held uninformed about the number of rounds played and about the execution of a tax amnesty. In each round, participants were endowed with an income of 100 ECU (Experimental Currency Unit). Then they had to decide whether to report the whole income or part of it. The tax rate was 40 % and the probability of being audited was 5 %. In case of an audit tax declarations of the three preceding rounds were controlled for underreported income. When participants were caught evading, they had to pay a fee twice the evaded amount. After the fifth round a one-time tax amnesty was announced. Everyone who had underreported income in the preceding rounds and who was not audited and fined for tax evasion could take part in the amnesty. In case of participation, the income that was concealed in the first five rounds was automatically reduced by an amnesty tax rate of 20 % (instead of a regular tax rate of 40 %). As compared to the regular tax that would have been due, amnesty tax rate was reduced in order to provide an incentive for participation. For those 71 respondents who finally made use of the tax amnesty, all tax debts were deleted and any further punishments were waived. After the execution of the tax amnesty, all participants had to state how just they perceived the tax amnesty, and how they evaluate the tax amnesty in relation to the punishment objectives retribution and value restoration. Subsequently, an additional five rounds of tax filing were conducted with income, tax rate, audit probability and fine being the same as previously. After the socio-demographic characteristics (i.e., age, gender, and income) two control items served to check whether participants had answered the questions seriously and whether they had imagined themselves to be taxpayers during the tax simulation. At the end of the tax paying game, the experimenter calculated the income “earned” at an exchange rate of 100
ECU = 0.50 Euro, added the three Euro show-up fee and handed it to the participants, who, on average received 3.60 Euro.

**Measures**

*Declared income:* In each of the ten rounds of the tax paying game, participants had to declare their income for tax. They were free to declare any amount between 0 and 100 ECU. During the analyses these declarations were taken as indicators of tax compliance by calculating the mean of declared income of the five rounds prior to the amnesty (i.e., pre-amnesty tax compliance) and the mean of declared income of the five rounds subsequent to the amnesty (i.e., post-amnesty tax compliance).

*Perceived justice of tax amnesty:* Three items with high reliability ($\alpha = .82$) were used to assess justice perceptions of tax amnesty (e.g., “This tax amnesty is just.”).

*Retribution:* Four items were used to assess retribution ($\alpha = .87$; e.g., “Because of a tax amnesty tax evaders avoid their “deserved” punishment.” [reversely coded]). When the objective of retribution is served by a sanction, rule violaters get their “deserved” treatment, i.e., a sanction that is proportional to the seriousness of their offense (McFatter, 1982).

*Value restoration:* This objective of punishment addresses the restoration of common societal values regarding tax honesty that may have been violated by tax evasion. With regard to tax amnesties, value restoration was asked by three items with satisfying reliability $\alpha = .84$ (e.g., “Because of this tax amnesty all Austrians can understand that tax evasion is against the values of the Austrians.”). Items on perceived justice, retribution, value restoration were measured on a 7-point scale from 1 for “completely disagree” to 7 for “completely agree”.

Two further *control items* were provided to participants to check whether they took participation serious (“I answered the survey focused and seriously.”; 1 for “yes” and 0 for “no”) and whether they could imagine being taxpayers (“I could easily imagine myself being
an Austrian taxpayer.”; 7-point scale from 1 for “completely disagree” to 7 for “completely agree”).

RESULTS

Descriptive analyses revealed that the average filing behavior prior to the amnesty was lower ($M = 68.07; SD = 27.64$) than the average filing behavior following the amnesty ($M = 73.26; SD = 29.59; t(238) = -3.71; p < .001; Cohen’s $d = .24$) indicating an overall improvement of tax compliance (see Table 1). Perceived justice of tax amnesty was slightly below the midpoint of the scale ($M = 3.83; SD = 1.34$).

Hypotheses about the influences of perceived justice and punishment objectives on post-amnesty tax compliance were tested by means of hierarchical regression analyses. In a first step and prior to hypotheses testing, we controlled for the influence of the background variables age, gender and disposable income as well as for the degree to which participants could imagine being taxpayers during the tax simulation. In a second step, the influence of pre-amnesty tax compliance (i.e., declared income prior to the amnesty) was included, in order to control for the individual variable. In a third step, we accounted for the influence of participation in the tax amnesty. In a fourth step, perceived justice of the tax amnesty was tested for its influence on post-amnesty tax compliance (Hypothesis 1). Finally, in a fifth step, the punishment objectives retribution and value restoration were included simultaneously as predictors of post-amnesty tax compliance (Hypothesis 2).
In a first step, the influence of gender on post-amnesty tax compliance was significant ($\beta = .21$, $p < .01$), indicating that female participants declared higher income than males. This is in line with previous literature (Hasseldine 1999). Furthermore, we found higher tax compliance among those participants who could imagine themselves better as taxpayers during the tax simulation ($\beta = .18$, $p < .01$). In a second step, the filing behavior subsequent to the tax amnesty was regressed on the filing behavior prior to the amnesty. As can be seen in Table 2, the influence of pre-amnesty tax compliance on post-amnesty tax compliance amounted to $\beta = .69$ ($p < .001$) with $R^2 = 52\%$ of explained variance, while gender and imagination of being a taxpayer were no longer significant. Participation in the tax amnesty, which was included as a predictor in the third step, yielded no significant influence ($\beta = .00$, $p = .94$).

After controlling for background variables, hypotheses were tested in the following steps. Perceived justice of tax amnesty was included in a fourth step and revealed a significant positive effect on post-amnesty compliance ($\beta = .10$, $p < .05$), which is in line with Hypothesis 1. The higher the justice of the tax amnesty is perceived, the higher the income participants filed in the five rounds following the tax amnesty. Explained variance significantly improved by the incorporation of perceived justice ($R^2_{\text{change}} = .01$, $p < .05$). When in a fifth step evaluations of the tax amnesty regarding punishment objectives were included as additional predictors, the influence of perceived justice of the tax amnesty disappeared ($\beta = .05$, $p = .31$), while retribution ($\beta = .11$, $p < .05$) and value restoration ($\beta = .11$, $p < .05$) revealed a statistically significant influence on post-amnesty tax compliance.\(^2\) This result could be an indication that retribution and value restoration act as mediator variables for the relation between perceived justice of tax amnesty and post-amnesty tax compliance.

According to Baron and Kenny (1986) a mediation effects requires significant relations between (i) the independent variable (i.e., justice) and the mediator variables (i.e., retribution or value restoration, respectively) and (ii) the mediator variable and the dependent
variable (i.e., post-amnesty tax compliance). In addition, it is required that (iii) the relation between the independent variable and the dependent variable is no longer statistically significant, when the mediation effect is controlled for. Indeed, when retribution and value restoration were tested separately for their mediating effect they satisfied all requirement for mediation. Perceived justice of tax amnesty is significantly related to the mediator retribution ($\beta = .23, p < .01$) and retribution is significantly related to post-amnesty tax compliance ($\beta = .15, p < .01$). The influence of perceived justice on post-amnesty tax compliance ($\beta = .10, p < .05$) becomes statistically non-significant ($\beta = .07, p = .13$), when the influence of retribution is controlled for ($\beta = .13, p < .01$). Similarly, the mediation through value restoration was analyzed. The relations between perceived justice of tax amnesty and the mediator value restoration ($\beta = .26, p < .001$) and between value restoration and post-amnesty compliance ($\beta = .15, p < .01$) are statistically significant. However, when controlling for the influence of value restoration ($\beta = .14, p < .01$) the significant influence of perceived justice on post-amnesty tax compliance ($\beta = .10, p < .05$) becomes non-significant ($\beta = .07, p = .16$). Significant Sobel-tests support the assumption that the relations between justice and post-amnesty filing behavior are fully mediated by the punishment objectives retribution ($z = 2.32, p < 0.05$) and value restoration ($z = 2.50, p < 0.05$).

Insert Table 2 about here

DISCUSSION

This study investigates the influence of perceived justice of a tax amnesty on subsequent tax compliance. Moreover, it was analyzed how tax compliance following an amnesty is
influenced by evaluations of the amnesty with respect to the punishment objectives retribution and value restoration. The objective of retribution is served when offenders are perceived to receive their deserved punishment and the objective of value restoration is served when values regarding tax honesty that may have been violated by the offense are perceived to be restored.

In line with predictions, post-amnesty tax compliance was positively influenced by perceived justice of tax amnesty. The fairer the tax amnesty was perceived the more honestly people reported their income in the filing periods following an amnesty. The influence of justice perceptions on post-amnesty tax compliance disappeared, however, when the punishment objectives retribution and value restoration were included in the analysis. More precisely, through the inclusion of punishment objectives post-amnesty compliance was no longer predicted by perceived justice, while in line with predictions the influences of retribution and value restoration on post amnesty tax compliance were significantly positive. Further analyses revealed full mediation of the relation between perceived justice and post-amnesty tax compliance through the variables retribution and value restoration. This result indicates that the influence of perceived justice of a tax amnesty on subsequent tax compliance is indirect and more closely explained by its relation to the punishment objectives retribution (i.e., makes tax evaders get their deserved treatment) and value restoration (i.e., restoring the social values prescribing tax honesty that may have been violated by tax evasion).

The strength of the study is that it is the first time that social psychological factors such as the perception of justice and punishment objectives have been explicitly studied in the context of tax amnesties. Perceived justice of the tax amnesty did explain a significant amount of variance in post-amnesty behavior. Yet, it is not impossible that other variables than perceived justice may have influenced the result. However, the pattern of results with the two punishment objectives retribution and value restoration mediating the relation between perceived justice and post-amnesty tax compliance make such an alternative explanation less
likely. Even if the study was conducted under controlled conditions, due to the correlational nature of the results, the influence of further variables can not be completely ruled out. Further studies should use a control group with no experience of a tax amnesty, in order to rule out the possibility that increasing tax compliance over time was a general trend independent of the tax amnesty and associated justice perceptions.

It may be argued that a tax amnesty speaks more to the punishment objective of value restoration, while it is against that of retribution. However, in the present study we found both, the objectives of value restoration and retribution being important for the evaluation of the tax amnesty and subsequent tax behavior. Maybe the degree to which an amnesty is considered in line or against the objective of retribution depends on the social norms of taxpayers. When taxpayers have weak social norms prescribing tax compliance, a tax amnesty may be perceived as more appropriate than in case of strong social norms. In line with that, previous studies have shown that tax offenses are not considered as serious offenses and some people may consider it acceptable when tax evaders only pay the withheld tax without an additional fine (cf. Schmölders 1964; Vogel 1974). Consequently, it is argued that further studies should also incorporate social norms of taxpayers who evaluate a tax amnesty. In addition to that, further studies could also investigate the impact of individual variables such as justice sensitivity (Schmitt 1996) as possible moderator of the relation between the perceived justice of a tax amnesty and post-amnesty tax compliance.

Another aspect that may be criticized is that results are based on a sample of students with only about a quarter of participants earning taxable income. Therefore, generalization of the findings should be treated with caution and further studies should be based on a sample of real taxpayers. However, we aimed at a high quality of data by analyzing only data of participants who agreed that they took participation in the tax simulation seriously. A further control item checked, whether they could imagine being a taxpayer during the tax simulation. During the regression analyses, the influence of imagination was controlled for.
When governmental authorities discuss the introduction of a tax amnesty, they should particularly emphasize that it is not their objective to let people get away without a deserved sanction. Instead, they should communicate that in the course of a tax amnesty tax evaders pay their tax debt at least partly and show willingness to honestly pay all their taxes in the future. Through a tax amnesty people who previously evaded tax are provided with a chance to come back on the legal track of compliance, which, in the end benefits all taxpayers. Concluding, this study makes a strong claim for governments and tax authorities to take into account the justice considerations of their citizens when they promote the execution of a tax amnesty. If they want their proposal regarding an amnesty to be supported by the public, they should emphasize that the tax amnesty does not necessarily contradict the objective of retribution and is in line with social values and norms prescribing tax honesty, since it allows citizens who - whether deliberately or not - failed to comply with the tax laws to adopt these social values and to become honest taxpayers in the future.
REFERENCES


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Appendix:

Table 1: Means, standard deviations and inter-correlations of post-amnesty tax compliance (dependent variable) and predictor variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tr>
<td>1 Pre-amnesty tax compliance</td>
<td>68.07</td>
<td>27.64</td>
<td>1</td>
<td>.72***</td>
<td>-.07</td>
<td>.03</td>
<td>.01</td>
</tr>
<tr>
<td>2 Post-amnesty tax compliance</td>
<td>73.26</td>
<td>29.59</td>
<td>1</td>
<td>.05</td>
<td>.17*</td>
<td>.17*</td>
<td></td>
</tr>
<tr>
<td>3 Justice of tax amnesty</td>
<td>3.83</td>
<td>1.34</td>
<td>1</td>
<td>.24***</td>
<td>.25***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Retribution through tax amnesty</td>
<td>3.43</td>
<td>1.39</td>
<td>1</td>
<td>.26***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Value restoration through tax amnesty</td>
<td>2.97</td>
<td>1.52</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: N = 239; * p < .05; ** p < .01; *** p < .001
Table 2: Post-amnesty filing behavior as dependent on socio-demographic variables, imagination of being a taxpayer, pre-amnesty tax compliance, tax amnesty participation, perceived justice of tax amnesty, and perceived punishment objectives (5-step hierarchical regression analysis, \( \beta \)-weights)

<table>
<thead>
<tr>
<th>Predictor variables</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
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<td>Age</td>
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<tr>
<td>Gender</td>
<td>.21**</td>
<td>.06</td>
<td>.06</td>
<td>.05</td>
<td>.03</td>
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<tr>
<td>Disposable income</td>
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<td>-.04</td>
<td>-.04</td>
<td>-.04</td>
<td>-.02</td>
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<tr>
<td>Imagination of being a taxpayer</td>
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<td>.06</td>
<td>.06</td>
<td>.07</td>
<td>.06</td>
</tr>
<tr>
<td>Pre-amnesty tax compliance</td>
<td>.69***</td>
<td>.69***</td>
<td>.70***</td>
<td>.70***</td>
<td></td>
</tr>
<tr>
<td>Tax amnesty participation</td>
<td>.00</td>
<td>.00</td>
<td>.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justice of tax amnesty</td>
<td></td>
<td></td>
<td>.10*</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>Retribution</td>
<td></td>
<td></td>
<td>.11*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value Restoration</td>
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<td></td>
<td></td>
<td>.11*</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.082</td>
<td>.519</td>
<td>.519</td>
<td>.529</td>
<td>.556</td>
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<tr>
<td>( R^2 ) change</td>
<td>.082</td>
<td>.437</td>
<td>.000</td>
<td>.010</td>
<td>.026</td>
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<tr>
<td>( F ) change</td>
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<td>208.876***</td>
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<td>4.822*</td>
<td>6.713**</td>
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<td>1, 229</td>
<td>1, 228</td>
<td>2, 226</td>
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</table>

Notes: \( N = 239 \); * \( p < .05 \); ** \( p < .01 \); *** \( p < .001 \)

Gender was coded into 1 for female and 0 for male participants.
In each round of the taxpaying game participants faced a 5% probability of being audited and fined in case of income underreporting. For reasons of comparability and because they could not take part in the tax amnesty data of eleven participants that have been audited were removed from further analysis.

When the influences of retribution and value restoration on post-amnesty tax compliance were calculated separately, a similar pattern of regression coefficients occurred (retribution: $\beta = .13; p < .01$; value restoration: $\beta = .14; p < .01$).

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