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Perceptions of trust, power and tax compliance motivations among large businesses and their tax auditors

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January 2021

Abstract
This study investigates psychological determinants of tax compliance, particularly the predictions of the Slippery Slope Framework (SSF; Kirchler et al., 2008), among large businesses and their tax auditors. The SSF predicts that trust in tax authorities determines voluntary tax compliance and that the perceived power of tax authorities to detect and penalize tax evasion determines enforced tax compliance. While the predictions of the SSF have consistently been found in studies focusing on individual taxpayers, few studies have tested the SSF in the context of large businesses or focused on tax auditors and their perceptions of businesses’ tax compliance. Nevertheless, trust-based approaches to tax collection have gained popularity, with cooperative tax auditing programs directly targeting large businesses. Using questionnaire data from 366 representatives of large businesses operating in Austria and 208 Austrian tax auditors, I conduct structural equation models testing the applicability of the SSF among these groups. In the group of businesses, the predictions of the SSF appear to hold. However, significant associations between trust and voluntary compliance and power and enforced compliance are mainly driven by the female subsample. Among tax auditors, there is no significant association between trust and voluntary compliance when power is introduced as a control variable. Overall, results suggest limited applicability of the SSF in a large business context and a stark mismatch between businesses’ and tax auditors’ perceptions on tax compliance. More research is needed to investigate the difference in results between female and male business representatives and non-economic determinants of tax compliance in a large business context.

Acknowledgments
I acknowledge valuable comments and suggestions from Eva Eberhartinger, Erich Kirchler, Andre Hartmann, and Martin Müller, as well as from participants of the Brown Bag Seminar of the Institute for Accounting and Auditing at WU Vienna and of the Research Seminar of the Business Taxation Group at WU Vienna. I thank the Austrian Ministry of Finance and the Austrian Großbetriebsprüfung for supporting this study. I gratefully acknowledge financial support from the Austrian Science Fund (FWF): W 1235-G16.

Keywords: Tax compliance, trust, power, corporate tax compliance, large businesses, tax auditors, cooperative compliance

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1. Introduction

Taxes are among the largest expenses of businesses and the most important source of income for most states. Naturally, ensuring tax compliance is a highly relevant issue, and governments attempt to find new ways to develop more efficient tax collection methods. While tax compliance can be considered an economic and legal topic at its core, abundant evidence suggests that tax compliance is not only the result of rational economic considerations but also determined by a large number of non-economic factors such as social influence, justice, and trust (e.g., see Kirchler et al., 2010). An important conceptualization of this dichotomy between economic and non-economic reasons is the Slippery Slope Framework (SSF; Kirchler, 2007; Kirchler et al., 2008), which distinguishes between the perceived power of tax authorities, which leads to enforced tax compliance, and trust in tax authorities, which leads to voluntary tax compliance.

Recent approaches to strengthening tax compliance incorporate these findings and many countries increasingly aim to foster cooperation and voluntary tax compliance. Some of these approaches directly target large corporate taxpayers. One of the most prominent examples of this development is cooperative compliance – a framework of audit schemes that attempt to foster cooperation between large businesses and tax authorities. Cooperative compliance aims to establish a trust-based relationship between tax authorities and businesses to improve efficiency, improve compliance, and reduce aggressive tax planning (OECD, 2013).

Only very few studies examine psychological determinants of tax compliance in a large business setting. Most of the evidence regarding psychological determinants of tax compliance has been found investigating individuals’ tax compliance, with research focusing on self-employed and individual taxpayers. With few exceptions, evidence on the effects of trust and power on voluntary and enforced compliance motivations of large businesses is still lacking, particularly with regards to the SSF. Given these gaps in the literature, it is still unclear whether findings on psychological determinants of tax compliance also apply in a large business context. Nevertheless, psychological research, including the
SSF, appears to have promoted a partial paradigm shift from pure enforcement to a more cooperative and trust-based tax collection strategy for business taxation.

However, many potential factors in the context of large business taxation could influence how businesses and their employees react to trust- and power-based approaches by the tax authorities. For example, large businesses may be less sensitive to trust-building measures because employees act as members of a group that perceives tax authorities as adversaries more than individual taxpayers. On the other hand, large business employees – tax experts in particular – may be more likely than individual taxpayers to perceive tax authorities’ employees as peers. As a result, trust-based methods may be more or less effective in a large business context than for individual taxpayers.

Furthermore, the perspective of tax auditors on compliance motivations has rarely been investigated in empirical research. As tax auditors represent tax authorities and ultimately implement taxation policies, their perceptions seem especially relevant in times of policy change. Moreover, taxpayers’ views cover only one side of their interaction with tax authorities. Thus, tax auditors may provide equally relevant perceptions about taxpayer behavior and the effectiveness of trust- and power-related methods. As a result, ignoring tax auditors’ views on tax compliance may not only lead to a suboptimal development and implementation of policies but also to biased research results.

This study attempts to bridge these research gaps. It investigates whether the predictions of the SSF hold true from the perspective of large businesses and their tax auditors. Analyzing survey responses from 208 Austrian large-business tax auditors and 366 representatives of large businesses operating in Austria, I find some support for the applicability of the SSF. Results from structural equation models suggest that, in the group of business representatives, the two main predictions of the SSF hold true: Trust does significantly contribute to explaining voluntary tax compliance, and power to explaining enforced compliance. However, tax auditors only show the expected relationship between power and enforced compliance, while trust is not significantly associated with voluntary compliance when controlling for power. Furthermore, results suggest that auditors attribute less importance to businesses’ voluntary compliance motivations and more to enforced compliance.

Split-sample analyses suggest that these results hold across age, firm size, position in the company, and perceived norm of corporate compliance behavior. However, there are significant and
pronounced differences between the male and female subsample of business representatives, with female participants exhibiting stronger associations between trust and voluntary compliance as well as power and enforced compliance.

Taken together, these results suggest limited applicability of the SSF in the context of large business taxation. While the most central predictions of the SSF hold true in the total sample of large businesses, these results appear to be driven mostly by female participants. Furthermore, associations between trust and voluntary compliance are weak in the group of tax auditors. Results thus have both encouraging and cautionary implications. First, the SSF appears to be partly applicable for large business taxation, suggesting that, under the right circumstances, trust-based policies are a step in the right direction. Second, these results imply a mismatch in beliefs between auditors and large businesses, indicating biased results in one or both groups.

Being one of the first studies that examine psychological determinants of tax compliance from the perspective of both large businesses and their tax auditors, this study provides novel insights into tax compliance, offering the unique opportunity to put the two perspectives of auditors and businesses into relation. Moreover, it provides additional evidence on the applicability of the SSF, both in general and in a large business context. Results may be an important basis for future research as well as for policy development and implementation, informing potential strategies that could alleviate the mismatch in beliefs between auditors and businesses to increase efficiency and cooperation.

2. Background and hypotheses development

Research on tax compliance has long focused primarily on the economic side of tax compliance. Despite very early conceptualizations of “tax morale” in Psychology (Veit, 1927), behavioral models mainly described financial, egoistic motivations for compliant behavior. Based on Becker’s (1968) model of criminal behavior, Allingham and Sandmo (1972), Srinivasan (1973), and Yitzhaki (1974) developed the first analytical models to predict tax compliance. With income, tax rate, detection probability, and height of fines as the only predictors, the models’ main conclusions are straightforward: to improve tax compliance, frequent audits, and high fines are needed.

Indeed, the importance of deterrence for tax compliance cannot be denied (for an overview, see Kirchler et al., 2010). Experiments show that frequent audits in particular increase tax compliance.
Increasing fines, however, may have little benefit after a certain threshold (e.g., Pommerehne & Weck-Hannemann, 1996). In any case, taxpayers have to perceive fines as costly so that frequent auditing is effective (Alm et al., 1995; Muehlbacher et al., 2007). Besides these economic determinants, research has increasingly focused on subjective, social, and moral factors that influence tax compliance. There is now abundant evidence that tax compliance is not only a result of audits and fines but also of non-economic factors such as social norms (e.g., Alm et al., 1999; Bobek et al., 2013; Wenzel, 2004, 2005), justice perceptions (e.g., Alm et al., 1992; Hartner et al., 2008; Moser et al., 1995; Wenzel, 2003), services and uncertainty (e.g., Gangl et al., 2013; Vossler & McKee, 2017), emotions (e.g., Fochmann et al., 2019; Enachescu et al., 2019a), and interactions with the tax authorities (e.g., Braithwaite, 2003, 2007).

Overall, tax compliance can thus be understood as the result of both economic, enforcement-related motivations, as well as social and fairness-related motivations. In the Slippery Slope Framework (SSF), Kirchler et al. (2008) condense these two clusters of motivations and relate them to the (perceived) behavior of tax authorities. The SSF thus distinguishes between enforced compliance and voluntary compliance. Enforced compliance is based on economic, enforcement-related considerations and is influenced by the perceived power of tax authorities, i.e., their capacity to detect and punish tax evasion. Voluntary compliance reflects social and justice-related reasons to comply with tax law. It is influenced by trust in the authorities, i.e., whether the authorities are perceived as fair, supportive, and trustworthy. Voluntary and enforced compliance are similar to the concepts of intrinsic and extrinsic motivations of compliance (e.g., Dwenger et al., 2016; Ryan & Deci, 2000).

Depending on the relative importance of trust and power, Kirchler et al. describe “interaction climates” between taxpayers and authorities. The one extreme – high power and low trust – promotes an “antagonistic climate”, in which taxpayers will primarily be motivated by enforcement. As a result, they may take any opportunity to evade taxes as long as the risk of being caught is low enough. The other extreme lies a climate characterized by high trust and cooperation between taxpayers and authorities. In such a “synergistic climate”, taxpayers are primarily motivated by a sense of duty, i.e., voluntarily compliant (Kirchler et al., 2008). The SSF is also related to the concept of responsive regulation (Braithwaite, 2003). Focusing on inter-individual differences between taxpayers, Braithwaite...
describes motivational postures of tax compliance, ranging from “commitment” to pay taxes honestly to “disengagement” from the tax system. For each motivational posture, the model proposes strategies that are most effective to foster compliance, such as support and services for committed taxpayers and strict audits and fines for disengaged taxpayers. The concept of responsive regulation emphasizes that differently motivated taxpayers should be treated differently by the authorities, while the SSF focuses on universal associations between tax authorities’ behavior and tax compliance.

A number of empirical studies support the predictions of the SSF (e.g., Batrancea et al., 2019; Gangl et al., 2013; Gobena & Van Dijke, 2016; Kirchler et al. 2014; Kogler et al., 2013, 2015; Muehlbacher et al., 2011; Wahl. et al., 2010), which include surveys, computer experiments, and country comparisons. While the main predictions – positive associations between trust and voluntary compliance as well as power and enforced compliance – have consistently been found, mixed results have been reported with regards to other associations and interaction effects. These include the association between power and voluntary compliance, the association between trust and enforced compliance, and interaction effects of trust and power. These studies were either conducted with individual taxpayers in mind or with mixed samples without distinguishing between large businesses and other taxpayers.

However, in large businesses, tax-related responsibilities may be shared among multiple actors, with individuals acting on behalf of a larger organization, which may translate to different reactions to tax authorities’ behavior compared to individual taxpayers (see Siglé et al., 2018). While it could be expected that individual employees of large businesses are still subject to the underlying motivations and decision biases as individual taxpayers, it is unclear whether the SSF, including its categorization of compliance motivations, is applicable in a large business context.

Very few studies that assess psychological factors of tax compliance focus on large businesses. For example, in one study on large corporate taxpayers in Bangladesh, Akhand & Hubbard (2016) match survey data with actual compliance statistics. They find that businesses’ perceptions of both enforcement and perceived service quality are associated with businesses’ actual tax compliance. Siglé et al. (2018) focus on testing predictions of the SSF. Investigating the SSF’s applicability among large corporate taxpayers in the Netherlands in a survey study, they find that trust in the authorities is indeed positively related to businesses’ voluntary compliance. However, they find no significant
association between power and enforced compliance. In addition, Siglé et al. (2018) report a positive association between voluntary compliance and self-reported tax compliance and a negative association with tax aggressiveness. They also find a significant interaction between trust and power: the positive association of trust and voluntary compliance could not be observed when power was perceived to be high. The present study follows Siglé et al. (2018) and aims to provide further, much-needed evidence on the determinants of compliance motivations among corporate taxpayers.

Despite its emphasis on the importance of tax authorities and their behavior, the SSF has only been tested from the perspective of taxpayers and not of tax auditors. There is some evidence, however, that tax auditors are aware of the importance of the interaction climate between taxpayers and tax authorities and of its effects on taxpayers’ motivations: Gangl et al. (2019) find in an interview study that tax auditors perceive their relationship with taxpayers as nuanced and important and that they share a common understanding of the determinants of tax compliance with taxpayers. As tax auditors have frequent contact with taxpayers and should have unique insights into corporate tax compliance, their perceptions are a valuable addition to the empirical research on the determinants of tax compliance. In survey studies, taxpayers typically rate tax authorities and self-report compliance motivations, which are subject to social desirability (see Krumpal, 2011) and may lead to biased results. Including responses from auditors, who rate taxpayers’ compliance motivations and judge the power and trustworthiness of their own organization, may create a better understanding of the prevalent interaction climate described in the SSF. Comparing perceptions by tax auditors and taxpayers may also reveal potential mismatches between the two perspectives.

Although Siglé et al. (2018) find no significant effect of power on enforced compliance, I assume that the major predictions of the SSF hold true for large businesses. I thus hypothesize that trust is positively related to voluntary compliance when controlling for power, and power to enforced compliance when controlling for trust:

\[H1: \text{In the group of large businesses, trust is positively related to voluntary compliance.}\]

\[H2: \text{In the group of large businesses, power is positively related to enforced compliance.}\]

With regards to tax officials, very little is known about their perceptions of the constructs in the SSF. However, the interview study by Gangl et al. (2019) suggests that auditors are generally
aware of the importance of trust and power, have a good understanding of taxpayers’ motivations, and show nuanced interactions with taxpayers despite their training, which seems to focus on strict auditing. Therefore, I hypothesize that the predictions of the SSF hold true in the group of large business tax auditors, with both trust and power showing their primary associations with voluntary and enforced compliance:

**H3:** In the group of tax auditors, trust is positively related to voluntary compliance.

**H4:** In the group of tax auditors, power is positively related to enforced compliance.

Siglè et al. (2018) find a negative association between power and voluntary compliance and trust and enforced compliance as well as an effect of the interaction between trust and power on voluntary compliance. However, studies on individual taxpayers find mixed results regarding these effects. These secondary effects thus appear to be highly sensitive to the operationalization of the constructs. Therefore, I only explore these secondary effects without formulating additional hypotheses. Figure 1 shows the hypothesized relationships between constructs and other potential associations included in the analysis.

Figure 1: Hypothesized relationships and other explored associations between constructs
3. Method

3.1. Participants and procedure

The online survey was conducted and developed in cooperation with the large business auditing unit (Großbetriebsprüfung) of the Austrian Ministry of Finance. Because the questionnaire was implemented as a long-term, ongoing evaluation project, it underwent a comprehensive pre-testing phase. A first selection of items was printed on index cards, which were discussed and sorted into the proposed constructs by three independent experts. Ambiguous items were subsequently replaced or rephrased so that they reflect their constructs more accurately. This was followed by a first pre-test survey wave with actual participants from both businesses and tax auditors. A distributional analysis led to several items being removed or replaced due to violations of normality, extreme ceiling or floor effects, or poor factor loadings. Furthermore, participants could provide feedback at the end of the survey. After the second wave, further minor adjustments were made. Adjustments made in this second phase did not affect any items used in this study. Thus, data from the second wave is included, while data from the first wave was not used in the present study.

Participants in this study represent the largest businesses operating in Austria and tax auditors who primarily audit such businesses. The survey was addressed to both representatives of recently audited companies as well as their respective tax auditors. The large business auditing unit was generally responsible for auditing businesses with over ten million euro in annual turnover, irrespective of businesses’ legal structure. Of these businesses, only those with over 40 million euro in annual turnover were invited to the survey. The Austrian tax administration aims to continuously audit these largest companies so that every business year is subject to a tax audit. This distinguishes the audit preselection from smaller ones, where targeted and random audit selection is common. Nevertheless, tax audits of these largest companies often cover multiple business years and are generally not conducted on an annual basis.

This study uses data from 17 survey waves conducted until February 2020. Data collection started in December 2016 and was still ongoing at the time of writing. Invitations were sent by email to tax auditors and by letter to business representatives in waves approximately every two months, including at least a two-month “cooling-off” period between audits and invitations. Invitations to
businesses were addressed to the general management or, if available, to a contact person in the company. Business addressees were also asked to forward the invitation to up to five employees working on tax-related topics within the same business. Due to the complete anonymity of the survey, the data does not contain information on company affiliation or auditors’ assignment to companies. Importantly, matching business-auditor pairs is thus not possible.

Because of the large intervals between tax audits, all business representatives were only invited once during the survey period. Tax auditors, on the other hand, generally concluded multiple audits during data collection and were invited multiple times to participate. However, all items used in this study were only presented once during auditors’ first participations. From January 2017 to February 2020, ca. 1,600 invitations were sent to businesses and 1,600 to the ca. 340 tax auditors employed in the Austrian large business auditing unit. Overall, 574 unique participants provided answers to all items used in this study, of which 366 were business representatives and 208 were tax auditors.

Regarding sociodemographic data, participants could indicate their gender and age. Participants of businesses also indicated their position in the firm and basic information about their business, such as the number of employees. Table 1 displays this information for both groups.
<table>
<thead>
<tr>
<th>Gender</th>
<th>Tax auditors (N = 208)</th>
<th>Businesses (N = 366)</th>
<th>Total sample (N = 574)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Female</td>
<td>44</td>
<td>21.15</td>
<td>117</td>
</tr>
<tr>
<td>Male</td>
<td>130</td>
<td>62.50</td>
<td>217</td>
</tr>
<tr>
<td>No answer</td>
<td>34</td>
<td>16.35</td>
<td>32</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 30</td>
<td>12</td>
<td>5.77</td>
<td>11</td>
</tr>
<tr>
<td>30 - 40</td>
<td>27</td>
<td>12.98</td>
<td>78</td>
</tr>
<tr>
<td>41 - 50</td>
<td>65</td>
<td>31.25</td>
<td>119</td>
</tr>
<tr>
<td>51 - 60</td>
<td>73</td>
<td>35.10</td>
<td>115</td>
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<tr>
<td>&gt; 60</td>
<td>11</td>
<td>5.29</td>
<td>25</td>
</tr>
<tr>
<td>No answer</td>
<td>20</td>
<td>9.62</td>
<td>18</td>
</tr>
<tr>
<td>Position</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive</td>
<td>-</td>
<td>-</td>
<td>62</td>
</tr>
<tr>
<td>Manager</td>
<td>-</td>
<td>-</td>
<td>227</td>
</tr>
<tr>
<td>Employee</td>
<td>-</td>
<td>-</td>
<td>62</td>
</tr>
<tr>
<td>No answer</td>
<td>-</td>
<td>-</td>
<td>15</td>
</tr>
<tr>
<td>No. of employees in Austria</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 50</td>
<td>-</td>
<td>-</td>
<td>30</td>
</tr>
<tr>
<td>50 - 100</td>
<td>-</td>
<td>-</td>
<td>32</td>
</tr>
<tr>
<td>101 - 500</td>
<td>-</td>
<td>-</td>
<td>159</td>
</tr>
<tr>
<td>501 - 1,000</td>
<td>-</td>
<td>-</td>
<td>66</td>
</tr>
<tr>
<td>1,001 – 5,000</td>
<td>-</td>
<td>-</td>
<td>52</td>
</tr>
<tr>
<td>5,001 – 10,000</td>
<td>-</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>&gt; 10,000</td>
<td>-</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>No answer</td>
<td>-</td>
<td>-</td>
<td>15</td>
</tr>
</tbody>
</table>

Table 1: Sociodemographic data

3.2. Material

The online questionnaire consisted of four parts. The first part was an association task, asking participants to enter and rate thoughts on the concept “tax audit”. Data from this task was not used in the present study. The second part pertained to general perceptions about the tax system and included all items used in this study. The third part consisted of items on the subjective audit experience, which are also not used in this analysis. The fourth part included sociodemographic variables and business characteristics.

Constructs used in the main analysis were measured using multiple items to which participants indicated agreement on a 7-point scale. Due to concerns about negative reactions to a forced answer format, participants could also choose “no answer” as an option. Items were generally phrased identically for groups of tax auditors and business representatives. Exceptions to this are items capturing tax compliance motivations of businesses, for which business representatives rated their own
companies’ compliance motivations, while tax auditors rated businesses’ general compliance motivations. Items for the following constructs are used in this study: Perceived Trust in the tax authorities was measured using four items (e.g., “The Austrian tax authorities are trustworthy.”), perceived Power of the tax authorities was measured using two items on the efficiency of enforcing compliance and the severity of fines (e.g., “The Austrian tax authorities have ample means to enforce tax compliance.”). Voluntary Compliance of businesses was measured using three items (e.g., “When my company pays [companies pay] taxes honestly, it does [they do] so to support the state and its citizens.”). Two items measured Enforced Compliance of businesses (e.g., “When my company pays [companies pay] taxes honestly, it does so [they do so] because the Austrian tax authorities conduct thorough audits.”). Table 2 shows item wordings as well as item means and standard deviations.

4. Analysis and results

To analyze whether the assumed constructs and predictions of the SSF can be found in the groups of large business representatives and tax auditors, I use structural equation models in a two-step modeling strategy as described by Anderson and Gerbing (1988; also see Kline, 2016), first conducting a confirmatory factor analysis, and then specifying structural regression models. In addition, I conduct robustness checks splitting the two groups by sociodemographic variables and the perceived social norm of compliance. Analyses were conducted in the R package lavaan (v0.6-7; Rosseel, 2012) using maximum likelihood estimation.

4.1. Confirmatory factor analysis

In separate analyses for the two groups, a four-factor model with the latent variables Trust, Power, Voluntary Compliance, and Enforced Compliance shows acceptable fit in both groups of businesses and tax auditors (see Table 4 for fit statistics). In this initial model, residual correlations between indicators show that two values exceed ± 0.10 by a small margin in the group of businesses and one in the group of auditors. All these residual correlations appear to be caused by item T4 (“The Austrian tax authorities behave transparently.”), which has residual correlations r > .10 with items T1 (both groups) and P2 (auditors only). Modification indices in both groups confirm these issues. As T4 has the weakest loading on the factor Trust in both groups and because there is no theoretical basis for including it as an indicator for other factors or for specifying covariances with other items, item T4 is
removed from the model. The new specification no longer shows obvious discrepancies in the residual correlations and again has acceptable and higher fit in the group of businesses and only a small difference in global fit in the group of auditors (see Table 4).

One-factor and two-factor models (with indicators for Trust and Voluntary Compliance and for Power and Enforced Compliance combined into one factor, as well as with indicators for Power and Trust and for Voluntary Compliance and Enforced Compliance combined into one factor) show poor and significantly worse fit (all \( p < .001 \), fit statistics not tabulated) than the four-factor model in both groups. Similarly, all six possible combinations of three-factor models (e.g., with indicators of Trust and Power combined into one factor) show significantly worse fit than the four-factor model (all \( p < .001 \)).

Thus, the four-factor measurement model appears to adequately capture the four constructs in both groups and is used as the basis for all subsequent analyses. Loadings of items in the four-factor model (without Item T4) are displayed in Table 2. Almost all factors are positively and significantly correlated in both groups (see Table 3).

While the factor structure appears to be valid in both groups as established by the confirmatory factor analyses, measurement invariance across the two groups of tax auditors and business representatives cannot be expected because constructs relate to different points of view in the two groups: Business representatives rated compliance motivations of their own organization as well as trustworthiness and power of tax authorities. Auditors, on the other hand, rated their own organization’s trustworthiness and power, and businesses’ general compliance motivations. Testing measurement invariance (following recommendations by Milfont & Fischer, 2010) confirms these limitations: Using two-group models and constraining factor loadings (metric invariance) and intercepts (scalar invariance) to be equal across groups results in significantly worse fit in both instances (see Table 4). Because of the lack of measurement invariance, I do not conduct statistical comparisons of model parameters between the two groups.
### Latent Variables

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Trust</th>
<th>Power</th>
<th>Voluntary Compliance</th>
<th>Enforced Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td></td>
<td>.316***</td>
<td>.204**</td>
<td>.424***</td>
</tr>
<tr>
<td>Power</td>
<td>.419***</td>
<td></td>
<td>.504***</td>
<td>.526***</td>
</tr>
<tr>
<td>Voluntary Compliance</td>
<td>.419***</td>
<td>.375***</td>
<td></td>
<td>.173*</td>
</tr>
<tr>
<td>Enforced Compliance</td>
<td>.120*</td>
<td>.290***</td>
<td>.005</td>
<td>-</td>
</tr>
</tbody>
</table>

Table 3: Standardized covariances between latent variables. Cells below the diagonal show values for the group of businesses, above the diagonal for tax auditors. ***... p < .001, **... p < .01, *... p < .05.
Table 4: Fit statistics of confirmatory factor analyses, multigroup analyses, and structural regression models

<table>
<thead>
<tr>
<th></th>
<th>Fit statistics</th>
<th>Model comparisons</th>
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<tbody>
<tr>
<td></td>
<td>$\chi^2$</td>
<td>$df$</td>
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<tr>
<td><strong>Confirmatory factor analyses</strong></td>
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<td></td>
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<td><strong>Tax auditors</strong></td>
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<td></td>
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<tr>
<td>Four-factor model</td>
<td>57.209</td>
<td>38</td>
</tr>
<tr>
<td>Four-factor model (T4 removed)</td>
<td>47.042</td>
<td>29</td>
</tr>
<tr>
<td><strong>Businesses</strong></td>
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<td></td>
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<tr>
<td>Four-factor model</td>
<td>92.186</td>
<td>38</td>
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<tr>
<td>Four-factor model (T4 removed)</td>
<td>49.119</td>
<td>29</td>
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<tr>
<td><strong>Measurement invariance (two-group models)</strong></td>
<td></td>
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<tr>
<td>Baseline model (unconstrained)</td>
<td>96.160</td>
<td>58</td>
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<tr>
<td>Equal loadings across groups</td>
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<td>Equal loadings and intercepts across groups</td>
<td>159.484</td>
<td>70</td>
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<td><strong>Structural regression models</strong></td>
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<tr>
<td><strong>Tax auditors</strong></td>
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<tr>
<td>Model 1</td>
<td>47.042</td>
<td>29</td>
</tr>
<tr>
<td>Model 2A</td>
<td>47.471</td>
<td>30</td>
</tr>
<tr>
<td>Model 3A</td>
<td>61.285</td>
<td>32</td>
</tr>
<tr>
<td><strong>Businesses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Model 1</td>
<td>49.119</td>
<td>29</td>
</tr>
<tr>
<td>Model 2B</td>
<td>49.120</td>
<td>30</td>
</tr>
<tr>
<td>Model 3B</td>
<td>53.756</td>
<td>32</td>
</tr>
</tbody>
</table>

Table 4: Fit statistics of confirmatory factor analyses, multigroup analyses, and structural regression models

4.2. Structural models

The structural part of the model with freely estimated direct effects from Trust to both Voluntary Compliance and Enforced Compliance, and from Power to both Voluntary Compliance and Enforced Compliance, and freely estimated covariances between Trust and Power and between Voluntary and Enforced Compliance (Model 1) is just-identified. This model has identical fit by design compared to the measurement model in both groups (see Table 4). To facilitate a qualitative comparison between the two groups, Figure 2 shows standardized regression coefficients of Model 1 for tax auditors and businesses.

In the group of tax auditors, the regression coefficient between Trust and Voluntary Compliance is small and non-significant in Model 1. Removing this path in Model 2A results in no
significant reduction of model fit (see Table 4 for model comparisons). Furthermore, based on the predictions of the SSF, *Voluntary Compliance* and *Enforced Compliance* may be regarded as independent. However, constraining the (non-significant) covariance between *Voluntary Compliance* and *Enforced Compliance* to zero leads to a significantly worse fit than Model 2A. However, the remaining regression coefficients compared to Model 1 (as shown in Figure 2) are nearly identical.

In the group of business representatives, the regression coefficient between *Trust* and *Enforced Compliance* is small and non-significant in Model 1. Removing this path does not significantly reduce model fit (Model 2B, see Table 4 for model comparisons). The estimated covariance in Model 1 and 2B is small but significant. As in the group of tax auditors, constraining this covariance to zero in Model 3B results in a significantly worse fit compared to Model 2B. As in the group of tax auditors, the remaining regression coefficients compared to Model 1 (as shown in Figure 2) are nearly identical.

Results support H1, H2, and H4, but not H3. In the group of businesses, the main predictions of the SSF hold true. In contrast, in the group of tax auditors, I only find an effect of *Power* on *Enforced Compliance*, but no effect of *Trust* on *Voluntary Compliance*. Furthermore, results suggest a strong association between *Power* and *Voluntary Compliance*, particularly in the group of tax auditors. While in the group of tax auditors, *Trust* is not associated significantly with *Voluntary Compliance*, it has an unexpected and significant association with enforced compliance.
To explore potential interaction effects of Trust and Power on the two dependent variables, I use the double-mean-centering method (Lin et al., 2010). In this approach, a latent variable is included in the model that uses as indicators all possible mean-centered products of the mean-centered indicators of the two original variables – in this case, Trust and Power (i.e., T1*P1, T1*P2, T2*P1, etc.). To account for common variance between indicator products sharing a common indicator (e.g., T1*P1 and T1*P2 sharing the indicator T1), covariances are specified to be freely estimated between them. In both groups, adding the resulting latent interaction variable to Model 1 showed no significant effects on Enforced or Voluntary Compliance with $p < .05$.

4.3. Sample splits

To test whether results hold across age (high/low), gender (female/male), position in the company (executives vs. others), perceived social norm of tax compliance (high/low, Item: “Most Austrian businesses pay their taxes honestly.”), and firm size (high/low number of employees), I use two-group models based on Model 1 for auditors and business separately, constraining factor loadings, indicator intercepts, regression coefficients, or factor means to be equal across the two subsamples constructed from the original variables. I use median splits when applicable, ensuring that the two subsamples are as similar in size as possible.
Constraining parameters across subsamples with high and low perceived norms of compliance reveals no significant reduction in fit, except for factor means, which are significantly different in both the groups of tax auditors and businesses (both \( p < .001 \)). In both groups, subsamples with a high perceived norm of compliance exhibit higher values in \textit{Power} and \textit{Trust}. This suggests that the perceived social norm of compliance is positively correlated with \textit{Trust} and \textit{Power} in both groups. Still, it is not associated with any other results, particularly not regression coefficients (i.e., there are no moderation/interaction effects).

Within businesses, comparing executives with all other employees reveals no significant differences in parameters, except for means, where executives have significantly higher values in enforced compliance \( (p = .001) \). Regarding firm size and age, I find no appreciable differences: Splitting the sample by age reveals no significant differences in results in either the group of tax auditors or businesses. Furthermore, in the group of businesses, the subsamples constructed from the number of employees indicated in the questionnaire also show no significant differences in parameters.

In the group of auditors, comparing the female and male subsample reveals significantly lower fit when constraining factor loadings to be equal \( (p = .003) \). This discrepancy appears to stem mainly from item EC2, which has a higher loading in the male subsample (standardized loadings .839 vs. .497). The same analysis in the group of businesses confirms measurement invariance but shows significant differences in factor means \( (p = .001) \) and regression coefficients \( (p < .001) \). Notably, the coefficient between \textit{Power} and \textit{Enforced Compliance} is non-significant and markedly lower in the male subsample (standardized coefficients: .104 vs. .575). Similar differences can be found in the coefficient between \textit{Trust} and \textit{Voluntary Compliance} (standardized coefficients: .189 vs. .488). Overall, despite the smaller size of the female subsample (117 vs. 217, see Table 1), positive results with regards to the SSF appear to be mainly driven by female participants. Standardized regression coefficients in the female and male subsample of businesses (based on the measurement-invariance model with constrained factor loadings and indicator intercepts) are displayed in Figure 3. With regards to means, the difference appears to be caused mainly by higher values in \textit{Enforced Compliance} in the female subsample, which have also been found by Kogler et al. (2015) in an experiment among self-employed taxpayers.
Figure 3: Standardized regression coefficients and covariances of the structural regression model of the female and male subsamples in the group of businesses. *** … \( p < .001 \), ** … \( p < .01 \), * … \( p < .05 \).

5. Discussion

In this study, I analyze if the Slippery Slope Framework (SSF; Kirchler et al. 2008) is applicable in a large business context by using survey data from both representatives of large businesses \((N = 366)\) as well as large business tax auditors \((N = 208)\). The SSF describes two main types of tax compliance, namely enforced and voluntary compliance. It assumes that enforced compliance is determined predominantly by the perceived power of tax authorities, while voluntary compliance is determined by trust in the tax authorities. Analyzing the survey responses with structural equation models, I find that, overall, predictions by the SSF generally hold true in the group of large businesses. However, split-sample analyses suggest that the positive associations between trust and voluntary compliance and between power and enforced compliance are mainly driven by female business representatives, with only a much weaker association between trust and voluntary compliance remaining in the male subsample.

The group of tax auditors does not show the predicted effect of trust on voluntary compliance. These results suggest a perception mismatch between auditors and businesses. In the group of large businesses, participants with high trust in the authorities report more voluntary compliance motivations. In the group of auditors, however, this correlation is absent when controlling for power:
Participants who believe that tax authorities are trustworthy do not tend to judge businesses to have stronger voluntary compliance motivations. Instead, voluntary compliance is only significantly associated with the perceived power of tax authorities and trust only with enforced compliance. Moreover, mean values of the four constructs suggest that tax auditors perceive higher trustworthiness relative to the power of tax authorities than businesses. At the same time, they attribute more enforced compliance motivations to businesses relative to voluntary compliance motivations than businesses to themselves.

Taken together, results are ambiguous with regards to the applicability of the SSF in a large business context. There appears to be a distinct mismatch between the perceived determinants of and motivations for tax compliance between large businesses and their tax auditors. In light of the recent development of cooperative approaches to tax auditing, such as cooperative compliance (OECD, 2013), these differences appear particularly noteworthy. As suggested by Enachescu et al. (2019b), cooperative compliance and similar trust-based measures may be regarded as a paradigm shift within tax authorities that is still in progress. Results of this study could thus reflect a still dominant antagonistic (“cops and robbers”) attitude of tax auditors that stand in contrast to a majority of voluntarily compliant, trust-focused businesses. In that case, tax authorities should communicate this discrepancy and include trust-related approaches into training programs for tax auditors. However, results could also point to businesses overstating their voluntary motivations and providing responses that are socially desirable and thus biased, while auditors’ results better reflect the real situation. Both reasons may be true and partly explain the discrepancies.

In addition, regression coefficients in the group of businesses appear to depend heavily on gender. Research has shown that women are less risk-seeking, more tax-compliant, and may perceive deterrence measures as more threatening than men (D’Attoma, 2017; Hofmann et al., 2017). However, some of the gender differences may be explained by gender-role orientation instead of biological gender (Kastlunger et al., 2010). Moreover, women are often reported to exhibit stronger tendencies to reciprocate trust than men (e.g., Croson & Buchan, 1999; Garbarino & Slonim, 2009). These differences may explain both the stronger associations between trust and voluntary compliance, which could reflect
stronger reciprocity motivations in women, as well as between power and enforced compliance, which could reflect risk aversion and stronger reactions to deterrence.

Some studies that investigate predictions of the SSF include gender as a control variable. For example, similar to this study, Kogler et al. (2015) find that women exhibit higher values in enforced compliance. However, none of the studies cited report investigating heterogeneous effects of trust and power depending on gender. Gender may thus be an important moderator that influences the effects of trust and power on voluntary and enforced compliance. However, due to the unique sample and context of the present study, no clear conclusions can be drawn. Nevertheless, discrepancies appear not to be caused by other potentially gender-related variables, such as age, position in the firm, or the perceived social norm of tax compliance. To assess potential interaction effects, future research on psychological determinants of tax compliance, particularly the SSF, should thus include gender not only as a control variable but also as a moderating factor.

Despite the heterogeneous effects found in this study, trust-based measures such as cooperative compliance appear to be an important and valuable addition to the toolkit of tax authorities. In practice, tax authorities and policymakers appear to be aware that not all taxpayers have the same motivations, as described in the model of responsive regulation (Braithwaite, 2003). Hence, trust-based compliance programs may only be made available for selected taxpayers. For example, participation in cooperative compliance programs, such as the Austrian “Horizontal Monitoring” initiative, often requires companies to have proven compliant in the past and to establish advanced tax risk management systems to minimize compliance risk (see OECD, 2016).

Contrary to the results by Siglé et al. (2018), I find positive associations between power and enforced compliance, power and trust, and power and voluntary compliance, which may suggest that power is also understood as competence and protection against non-compliant taxpayers who exploit the system, as suggested by Kirchler et al. (2008). However, the lack of association between trust and voluntary compliance in the group of tax auditors might indicate a lack of awareness of the effectiveness of trust-based methods of tax collection, in addition to the use of power. Tax authorities should thus continue efforts to promote trust-based approaches in order to foster corporate compliance
while at the same time retaining power-oriented tools to enforce compliance of taxpayers who are not willing to comply voluntarily. This may, in turn, also lead to increased trust and voluntary compliance.

The results of this study are subject to several limitations. First, data was collected only once per participant, participation was entirely voluntary, and answers were completely anonymous. While this means that results are prone to (non-)responder bias, complete anonymity can be expected to reduce socially desirable responses (Joinson, 1999). Results are also based on correlations of perceptions and cannot support claims about causality. Second, qualitative comparisons between the two distinct groups of large businesses and auditors are based on the assumption that constructs such as trust or power have similar meanings in both groups. This issue is exacerbated by the necessarily different wording of items measuring voluntary and enforced compliance. However, while measurement invariance cannot be assumed, the constructs and questionnaire items used in this study appear to be well-suited to assess trust and power as well as voluntary and enforced compliance in both groups of large businesses and their auditors. Sample splits also confirm that results are fairly robust across various subsamples, with the exception of gender as outlined above.

This study provides contributions to the literature in several areas: First, it provides additional insights into the validity of the SSF, complementing the evidence established by studies on individual taxpayers and the study by Siglé et al. (2018) on corporate taxpayers. Second, it represents one of the first empirical studies investigating psychological determinants of tax compliance with tax auditors. Third, it offers a unique opportunity to put the two perspectives of large businesses and their tax auditors into relation. Results should be of particular interest to policymakers and tax authorities and provide insights to develop better policies to foster corporate tax compliance.
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