Shadow Economy and Tax Morality: Is There a Difference between Genders?

Birgit Burböck

Abstract: One of the driving forces of a shadow economy are tax rates and tax morale. The slippery slope framework as a conceptual tool integrates economic and psychological determinants and shows that tax compliance is influenced by (i) trust in authorities and (ii) power of authorities, (iii) voluntary tax compliance, and (iv) enforced tax compliance. Based on the taxpayer's honesty, the quality of compliance is different. A difference of compliance may occur between gender. We propose insights into possible gender differences with the assumptions of the Slippery Slope Framework with a sample of 656 respondents; 315 male and 341 female respondents. No significant difference between male and female was identified for voluntary tax compliance, while a significant difference was found for the enforced tax compliance.

Keywords: shadow economy; slippery slope model; gender differences

JEL classification: O17, H23

Siva ekonomija in davčna moralnost: ali obstaja razlika med spoloma?

Povzetek: Davčne stopnje in davčna morala so, poleg ostalih, gonilne sile sive ekonomije. Okvir spolzkega nagiba kot konceptualno orodje združuje ekonomske in psihološke dejavnike, ki kažejo, da na davčno skladnost vplivajo (i) zaupanje v organe, (ii) pristojnost organov, (iii) prostovoljno izpolnjevanje davčnih obveznosti in (iv) izvrševanje skladnosti z davki. Avtorica v prispevku preverja morebitne razlike glede na spol s predpostavkami okvira spolzkega nagiba na vzorcu 656 anketerancev; 315 moških in 341 žensk. Pri prostovoljnem izpolnjevanju davčnih obveznosti ni bilo ugotovljenih bistvenih razlik med moškimi in ženskami, medtem ko je bila ugotovljena pomembna razlika pri uveljavljanju davčne skladnosti.

Ključne besede: siva ekonomija; okvir spolzkega nagiba; razlike med spoloma

JEL klasifikacija: O17, H23
1 Introduction

Research on the complex phenomenon ‘shadow economy’ is not new. The main problem of the shadow economy is the difficulty of estimating the size of it, because all the participants have an incentive to hide in most cases their activity (Frey & Pommerehne, 1984). Shadow economy is strongly associated with the terms like underground economy, informal economy or illegal economy (Orsi, et al. 2012; Feige (1990). Orsi et al. (2014) describes the underground economy as an unofficial and unrecorded production to evade compliance with taxation, social security, labor and administrative legislation. Furthermore, they consider all activities which are carried out by individuals, small or home enterprises for example part-time secondary work, moonlighting, baby sitting and so on as an informal economy. Illegal economy involves the income produced by such activities pursued in violation of legal status defining the scope of legitimate forms of commerce. One characteristic of this type of economy is that participants are engaged with the production and distribution of prohibited goods and services like drugs and prostitution (Feige, 1990).

The phenomenon of shadow economy exists around the globe and is still growing. Governments of various countries must deal with budget constraints and are in search for effective instruments to control the shadow economy and in turn increase the tax income to reduce the budgetary pressure. The reduction of the overall tax burden as well as reforming the tax system and social security system are common instruments to improve the dynamics of the official economy (Buehn & Schneider, 2012). Schneider & Enste (2000) argue, the main reasons for increasing the shadow economy are the burden of tax and social security, the regulation in the official economy and the tax morality. A reduction of the level of tax morality tend to lead to an increased willingness to participate more often in the shadow-economy. This is caused by factors such as subjectively perceived tax burdens and reduced trust in the law implementation and government (Frey & Pommerehne, 1984). If taxpayers don’t feel treated fairly concerning decisions of politicians or perceive an unfair treatment on the tax authorities, tax morality decreases (Schneider & Buehn, 2013; Schneider, 2015).

1.1 Tax Morale and Tax Compliance

The issue of tax morale received increasingly attention since the 1990. Since then, a central question in the tax compliance literature is why so many people pay their taxes despite low fine and audit probabilities (Torgler, 2011). The understanding of the term tax morale various among the researchers. Luttmer and Singhal (2014) define tax morale rather broadly by “capturing nonpecuniary motivations for tax compliance as well as factors that fall outside the standard”. Alm & Torgler (2006) as well as Feld & Frey (2002) describe tax morale as “the intrinsic motivation to pay taxes”. Braithwaite & Ahmed (2005) link it to “internalized obligation to pay tax”, while Orviska & Hudson (2002) link the term to a “civic duty” and Torgler & Murphy (2004) to “tax ethics”.

The level of tax compliance measures the individual citizen’s willingness to pay taxes. The literature on tax compliance is quite broad. For example, Muehlbacher, Hartl & Kirchler (2017) are using the characteristics of the prospect theory by Kahnemann & Tversky (1979) and argue that a higher tax compliance depends on a taxpayer’s reference point. Gangl, Torgler & Kirchler (2016) show in an experimental setting how reported and manipulated patriotism indirectly increase tax compliance. Several other studies support the idea in which trust in authorities positively influences tax compliance (eg. Gobena & Van Dijke, 2016; Lin & Liu, 2016; Torgler, 2003).

1.2 Differences between men and women

A large body of literature demonstrated differences between men and women in the context of tax compliance. But the findings regarding sex are not consistent. Significant gender differences have been found where women are more tax compliant than men (eg. Alm, Jackson & McKee, 2006; Bazart & Pickhardt, 2009; Gerxhani et al., 2007; Kastlunger et al., 2010; Torgler & Schaltegger, 2005; Torgler & Valev, 2010). Several other studies failed to observe that women were generally more compliant then men. For example, Stensöta, Wängnerud & Svensson (2015) found that the stronger the bureaucratic principles are in the administration the less gender matters. Chung & Trivedi (2003) found women more compliant only after they have been provided with persuasive reasons to pay taxes. Torgler & Schneider (2004) reported minor differences in Spain but a higher tax morale among women than men in Switzerland and Belgium.
Wenzel (2002) couldn't find gender differences regarding reports of extra income but higher tax compliance among women with the reported income and deduction claims. Kirchler and Mciejovsky (2001) reported that men's self-reported tax compliance was higher than their female counterpart.

Although the empirical evidence is mixed, women were more compliant than men when there were significant differences. Chung & Trivedi (2003) as well as Torgler & Valev (2006) argue, that the differences in tax compliance might results due to the different ethical standards or to their risk propensity (for a general review, see Byrnes, Miller, & Schafer, 1999).

1.3 Slippery Slope Framework

Kirchler, Hoelzl, & Wahl (2008) proposed the Slippery Slope Framework which integrates the economic assumptions of tax compliance as well as the sociological and psychological determinants. The Slippery Slope Framework suggests that two types of motives exist for paying taxes: i.) citizens pay taxes because of the costs calculated for non-compliance and ii.) because the citizens feel that paying taxes is their obligation as a member of the community. Therefore, the framework introduces two main dimensions which both are said to have an effect on tax compliance: first the trust of the citizens in the authorities and second, the power of the authorities. However, depending on the honesty of the taxpayer, the quality of tax compliance differs. With other words, voluntary compliance is influenced by an increasing level of tax honesty via enhancing trust in the authorities, enforced compliance is resulting with and increasing level of power of authorities.

1.3.1 Dimensions of trust and power

The model is suggesting that economic factors like audits or fines illustrate only inconsistent effects on tax payment. Furthermore, it is said that the majority of citizens is willing to pay taxes without considering possibilities to evade taxes (Kogler et al., 2013). Mostly, there are two different ways how authorities can achieve cooperation in tax payment form the public. First, the authorities can force the citizens to pay taxes by frightening them with punishment. Secondly, they can encourage compliance by offering incentives for a payment to the public (Kirchler et al., 2008).

1.3.2 Dimensions voluntary versus enforced compliance

While the voluntary compliance refers to the taxpayer's morale in how far they feel obliged to pay taxes and to act in the interest of their peers, enforced compliance is connected to the motivational posture of "resistance" (Braithwaite, 2003). As the Slippers Slope Framework suggests, Muehlbacher, Kirchler, & Schwarzenberger (2011) and, Kogler et al. (2012) found among self-employed taxpayers that perceived trust is a significant predictor of the disposition to cooperate voluntarily. When taxpayers feel forced, they may refuse and resist to comply as soon as they have the opportunity and not getting caught (Kramer, 1999). Therefore, in the Slippery Slope Framework (Kirchler et al., 2008) power is assumed as a predictor of enforced compliance.

The aim of this study is to identify gender differences based on the dimensions of the slippery slope framework. Therefore, four hypotheses can be derived from the slippery slope framework: i.) First, the level of trust in authorities is significantly higher among female respondents compared to male respondents. ii.) Second, the level of power of the authorities is significantly higher among females to males. iii.) Female respondents have a significant higher level of voluntary tax compliance than male respondents. iv.) Fourth, the enforced tax compliance is significantly higher among female than male participants.

2 Method

The data were collected May 2015 in Graz, Austria by a non-stratified sample with a mall intercept method. Based on concept of Cohen (1988) with a $d = 0.2$, power of $0.8$ and $\alpha = 0.05$ a total sample size of $n = 620$ is necessary, $n = 310$ female and $n = 310$ male respondents. In this study, the participants didn't receive any monetary incentives for participating. Russel, Moraljo & Burges (2000) found three problems which might occur when paying people for participating in a study. Firstly, study results might get biased, as people might give any answers or false answers due to receiving incentives. Secondly, offering compensation may lead to the induction of unethical behavior. Finally, the
increase of costs of the research, which accompany with the compensation of subjects represent a further problem. Due to these factors, participants in this study didn’t receive any incentives or completing the questionnaire.

Table 1 shows that we ended up with a total of \( n = 656 \), with 315 questionnaires from male and 341 from female participants. For both males and females, the youngest group represent the largest population. While the people with 66 years and older denote the smallest group.

<table>
<thead>
<tr>
<th>Age Distribution</th>
<th>Total</th>
<th>%</th>
<th>Female</th>
<th>%</th>
<th>Male</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 to 25</td>
<td>296</td>
<td>45.1</td>
<td>181</td>
<td>53.1</td>
<td>115</td>
<td>36.5</td>
</tr>
<tr>
<td>26 to 35</td>
<td>106</td>
<td>16.2</td>
<td>47</td>
<td>13.8</td>
<td>59</td>
<td>18.7</td>
</tr>
<tr>
<td>36 to 45</td>
<td>73</td>
<td>11.1</td>
<td>26</td>
<td>7.6</td>
<td>47</td>
<td>14.9</td>
</tr>
<tr>
<td>46 to 55</td>
<td>116</td>
<td>17.7</td>
<td>64</td>
<td>18.8</td>
<td>52</td>
<td>16.5</td>
</tr>
<tr>
<td>56 to 65</td>
<td>39</td>
<td>5.9</td>
<td>16</td>
<td>4.7</td>
<td>23</td>
<td>7.3</td>
</tr>
<tr>
<td>66 and older</td>
<td>26</td>
<td>4.0</td>
<td>7</td>
<td>2.1</td>
<td>19</td>
<td>6.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>656</td>
<td>100</td>
<td>341</td>
<td>100</td>
<td>315</td>
<td>100</td>
</tr>
</tbody>
</table>

As illustrated in Table 2, (303 or 46.2 %) questionnaires were completed by people with A-levels. University graduates (168 or 25.6 %) represent a relatively high amount of the sample size. 83 participants or 12.7 % have completed an apprenticeship or vocational school while 66 participants or 10.1 % have finished a vocational school. The two categories like compulsory school (22 or 3.4 percent) and the Austrian “College” (14 or 2.1 percent) represent the two smallest groups.

<table>
<thead>
<tr>
<th>Educational level of respondent</th>
<th>Total</th>
<th>%</th>
<th>Female</th>
<th>%</th>
<th>Male</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compulsory School</td>
<td>22</td>
<td>3.4</td>
<td>12</td>
<td>3.5</td>
<td>10</td>
<td>3.2</td>
</tr>
<tr>
<td>Apprenticeship</td>
<td>86</td>
<td>12.7</td>
<td>34</td>
<td>10.0</td>
<td>49</td>
<td>15.6</td>
</tr>
<tr>
<td>Vocational School</td>
<td>66</td>
<td>10.1</td>
<td>31</td>
<td>9.1</td>
<td>35</td>
<td>11.1</td>
</tr>
<tr>
<td>A-Levels</td>
<td>303</td>
<td>46.2</td>
<td>160</td>
<td>46.9</td>
<td>143</td>
<td>45.4</td>
</tr>
<tr>
<td>College</td>
<td>14</td>
<td>2.1</td>
<td>10</td>
<td>2.9</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>University</td>
<td>168</td>
<td>25.6</td>
<td>94</td>
<td>27.6</td>
<td>74</td>
<td>23.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>656</td>
<td>100</td>
<td>341</td>
<td>100</td>
<td>315</td>
<td>100</td>
</tr>
</tbody>
</table>

The questionnaire is based on the work of as well as Kogler et al. (2013). Instead of using a hypothetical country, we have asked the participants to imagine a hypothetical situation in Austria. The items of the questionnaire were carefully translated from English into German and retranslated into German to check the validity of the translations. The four variables of interest – voluntary compliance, enforced compliance, perceived trust in authorities, and perceived power of authorities – were measured by a seven-point Likert Scale with 1 = strongly disagree and 7 = strongly agree.

The questionnaire consists of 19 questions, divided into two parts and five sections. The first part includes questions about the demographic characteristics of the respondents. The second part starts with section two and three, which includes questions about the perceived trust and the perceived power of the authorities in Austria. Section four and five are focusing on the voluntary and enforced tax compliance of the respondents.

To answer the second part of the questionnaire, which included section two to six, the respondents were asked to think of a hypothetical situation, where they are self-employed with about 30-50 employees. The respondent is asked to imagine that the business in doing well and he or she must pay taxes according to the Austrian tax law. Furthermore, the respondent is also asked to consider the current political situation as well as the tax burden in Austria when
answering the questionnaire. The hypothetical approach has been used due to the sensitivity of the topic of tax morality.

In the pre-test 21 respondents were asked to fill in the questionnaire with a nine-point Likert scale, 1 = Strongly disagree to 9 = Strongly agree, and provide constructive feedback. The respondents argued that the instructions were clearly stated, the questions were mostly easy to understand, the form and layout of the questionnaire were adequate, and the wording and sequence were comprehensive. Although, the questionnaire was derived from previous research some changes were carried to the final questionnaire. First, some of the respondents noted that a nine-point Likert scale is somehow confusing because they didn't know how to answer because of the numerous nuances of answer options. Therefore, the scaling has been changed from a nine-point Likert scale to a seven-point Likert scale. As some respondents remarked that some questions were misleading, slight changes have been made in the final questionnaire.

The voluntary and the enforced compliance were each measured with five items. The trust in and the power of authorities were measured each with three items. The reliability analysis for the voluntary compliance suggest $\alpha = 0.733$, for enforced compliance $\alpha = 0.849$, the trust in authorities $\alpha = 0.551$ and power of authorities $0.453$.

3 Results

This sections tests whether the effect of gender is statistically significant in the context of the four different dimensions of the slippery slope model. Based on our sample size we can assume normal distribution (Field, 2013; Cohen, 1988). for the independent t-test. To identify a significant difference between male and female participants an independent t-test was conducted. Table 3 shows the results of the four variables of interest, in how far a significant difference exist. The mean of the female participants of the trust in authorities is $m = 3.69$ and slightly higher than the mean for the male participants’ $m = 3.67$, but not significant. The mean of the power in authorities for females is $m = 3.96$ and for the male participants $3.83$, again not significant. Voluntary tax compliance has a $m = 5.28$ for females and $m = 5.07$, and not significant. However, the enforced tax compliance for females is $m = 4.18$ and significantly higher than for male participants’ $m = 3.75$.

Table 3: Overall Gender Differences

<table>
<thead>
<tr>
<th></th>
<th>Female $m$</th>
<th>Male $m$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust in Authorities</td>
<td>3.69</td>
<td>3.67</td>
<td>0.856</td>
</tr>
<tr>
<td>Power of Authorities</td>
<td>3.96</td>
<td>3.83</td>
<td>0.173</td>
</tr>
<tr>
<td>Voluntary tax compliance</td>
<td>5.28</td>
<td>5.07</td>
<td>0.080</td>
</tr>
<tr>
<td>Enforced tax compliance</td>
<td>4.18**</td>
<td>3.75**</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 4 shows a detailed summary of the results of the four variables of interests. A significant difference has been identified only for seven variables. The mean for the statement 'It is easy to evade taxes in Austria' is $m = 3.88$ for females and $m = 4.14$ for male participants. In the dimension 'voluntary compliance the statement on 'paying taxes because it is obvious to do so' has a mean of $m = 5.98$ for female participants and $m = 5.46$ for the male counterparts. The statement 'paying taxes because it is natural for me to do so' has a mean of $m = 5.59$ for females and $m = 5.25$ for males. In the dimension 'enforced tax compliance' the statement 'I pay my taxes due to the high number of tax audits' has a mean of $m = 4.13$ for females and $m = 3.66$ for male participants. The mean for ‘I pay my taxes because the tax authorities examine frequently’ is $m = 4.17$ versus $m = 3.68$ for males. The $m = 4.27$ for females and $m = 3.71$ for males has been found for the statement 'I pay my taxes because I know I will be audited by the tax authorities'. And ‘I pay my taxes due to the severe punishment’ has a $m = 4.34$ for females and $m = 4.03$ for males.
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**Table 4: Means, Standard Deviations and Standard Errors of the Mean**

<table>
<thead>
<tr>
<th></th>
<th>Female M</th>
<th>Female SD</th>
<th>Female SE</th>
<th>Male M</th>
<th>Male SD</th>
<th>Male SE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trust in authorities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>governmental authorities in Austria act fair towards their citizens.</td>
<td>4.03</td>
<td>1.471</td>
<td>0.079</td>
<td>4.09</td>
<td>1.573</td>
<td>0.089</td>
</tr>
<tr>
<td>In Austria the interests of a few are considered stronger than the interests of the community.</td>
<td>4.65</td>
<td>1.568</td>
<td>0.085</td>
<td>4.57</td>
<td>1.635</td>
<td>0.092</td>
</tr>
<tr>
<td>governmental institutions of Austria act upon their citizens’ interest.</td>
<td>3.72</td>
<td>1.386</td>
<td>0.075</td>
<td>3.70</td>
<td>1.504</td>
<td>0.085</td>
</tr>
<tr>
<td><strong>Power of authorities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chances that tax evasion will be detected in Austria are high.</td>
<td>4.01</td>
<td>1.456</td>
<td>0.079</td>
<td>3.85</td>
<td>1.449</td>
<td>0.081</td>
</tr>
<tr>
<td>It is easy to evade taxes in Austria.</td>
<td>3.88*</td>
<td>1.409</td>
<td>0.076</td>
<td>4.14*</td>
<td>1.498</td>
<td>0.084</td>
</tr>
<tr>
<td>governmental institutions in Austria are very effective in the suppression of tax criminality.</td>
<td>4.00</td>
<td>1.364</td>
<td>0.074</td>
<td>3.99</td>
<td>1.449</td>
<td>0.082</td>
</tr>
</tbody>
</table>

**Discussion & Conclusion**

The principal aim of this study was to investigate on gender differences in tax morality. The present study used the slippery slope model and replicated the questionnaire in Austria with a non-stratified sample. Several studies on gender differences found women to be more tax compliant to men. Therefore, we based our assumption on the previous studies and assumed a higher level for women than men on the four dimensions of the slippery slope model. Our findings indicate that women seem to be more compliant to men, but a significant difference was found only for the enforced tax compliance. The results are in line with Chung & Trivedi (2003) found women more compliant only after they have been provided with persuasive reasons to pay taxes. Torgler & Schneider (2004) reported for Spain minor gender differences in for tax morale. And Wenzel (2002) couldn’t find gender differences regarding reports of extra income but higher tax compliance among women with the reported income and deduction claims. Kirchler and Mciejovsky (2001) reported that men’s self-reported tax compliance was higher than their female counterpart. One
reason for the limited gender difference might due to the different ethical standards or to their risk propensity (Torgler & Valev, 2006; Kirchler & Mciejovsky; 2001).

5 Limitations & Research Outlook

This study is confronted with several limitations. The present results might not apply to countries with a different tax culture to Austria (Alm & Torgler 2006). Since some results are not significant a replication study in other countries would help to see if there is a significant gender difference in all dimensions of the slippery slope model. Furthermore, no conclusions could be drawn with regards of the influence of gender on the whole shadow economy. It might be interesting to see, whether the effects of gender on the shadow economy of a country are somewhat the same as they are for tax morale, other single causal variables or the whole set of driving forces influencing the underground economic system. Another limitation is the non-stratified sample and the relatively high percentage of young people. It might be argued that people of this age are often still in education and have therefore only limited experience with the income tax system.

References


