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Addressing Evasion and Tax Morale by Educating Young Taxpayers

Omejevanje davčnih utaj in krepitev davčne morale z izobraževanjem mladih davkoplačevalcev

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Povzetek

Hitre gospodarske in družbene spremembe, globalizacija, digitalizacija, novi poslovni modeli in mobilnost davkoplačevalcev so le nekateri razlogi, zaradi katerih se morajo davčni organi po vsem svetu še bolj osredotočiti na učinkovitost svojih davčnih sistemov, na krepitev davčne discipline in učinkovito uporabo fiskalnih virov. Utaje davkov in goljufije, izogibanje plačevanja javnofinančnih obveznosti in šibka davčna disciplina ter zahteve po večji pravičnosti in preglednosti obdavčitve, postavljajo vlade in njihove davčne organe pred nove izzive. To zahteva učinkovite in inovativne načine pobiranja davkov. Ker je pripravljenost plačevanja davkov povezana z nizom zapletenih mehanizmov in prepletenimi dejavniki, mnoge države okrepijo svoje nadzorne mehanizme ter proučujejo alternativne načine za izboljšanje davčne skladnosti in povečanje davčne morale, ki temeljijo na izobraževanju, usposabljanju in informiranju davkoplačevalcev, predvsem mladih. V prispevku raziskujemo vpliv kratkih izobraževalnih programov na obdavčitev in ugodnosti socialne blaginje, ki se financira z davki, na kazalnike davčne morale in davčne skladnosti učencev v osnovnih in srednjih šolah. Rezultati naših hierarhičnih modelov oblikovanih na nizu individualnih in kontekstualnih spremenljivk, temelječih na vzorcu 4926 anketirancev kažejo, da se davčna morala slovenskih osnovnošolcev in srednješolcev s starostjo nekoliko znižuje, da je raven izobrazbe staršev močno povezana z davčno moralo učencev, da premoženje gospodinjstev negativno vpliva na davčno skladnost učencev in da je udeležba mladih v kratkih programih usposabljanj na temo pomena plačevanja davkov znatno povečala davčno moralo in skladnost z davki. Naše ugotovitve so lahko v pomoč vladam, davčnim organom in oblikovalcem izobraževalnih programov pri obveščanju in izobraževanju sedanjih in prihodnjih davkoplačevalcev ter tako okrepijo davčno kulturo v svojih državah.

Ključne besede: davčna morala, davčna skladnost, davčna uprava, izobraževanje, osnovna šola, srednja šola.

Abstract

Rapid economic and social changes, globalization, digitalization, new business models and taxpayers' mobility are just few reasons that forces fiscal authorities worldwide to give even more focus on the efficiency of their tax systems, on strengthening the tax discipline and efficient use of fiscal resources.

Tax evasions and frauds, tax avoidance and weak tax discipline along with the requirements for higher fairness and transparency of taxation pose new challenges to the governments and their tax authorities and demand efficient and innovative ways of collecting the taxes. As willingness to pay taxes is linked to a set of complex mechanism and interwoven factors, several countries strengthen their control mechanisms as well as study alternative ways to improve tax compliance and increase tax morale that are based on education, training and information for taxpayers, especially young people. In our paper we explore the impact of short educational programmes on taxation and benefits of tax-financed welfare state on indicators of stated tax morale and tax compliance of pupils in primary and secondary schools. The results of our hierarchical models on a set of individual and contextual level variables, based on 4926 respondents, show that tax morale of Slovenian primary and secondary school pupils slightly declines with age, educational background in the household are strongly linked to a tax morale of pupils, household affluence have negative impact on tax compliance of pupils and attendance of programs significantly increased the tax morale and the tax compliance. Our findings can help the governments, tax authorities and designers of educational programs to inform and educate current and future taxpayers and hence strengthen the tax culture in their respective countries.

Keywords: education, primary school, secondary school, tax administration, tax compliance, tax morale.

1. Introduction

Rapid economic and social changes, globalisation, digitalisation, new business models and taxpayers' mobility are just few reasons that forces fiscal authorities worldwide to give even more focus on the efficiency of their tax systems, on strengthening the tax discipline and efficient use of fiscal resources. Evaded taxes on economic activities that are legal but illegally hidden from the taxing authority are an untapped fiscal potential. According to estimations by Buehn and Schneider (2016) the average size of tax evasion across 38 OECD countries over the period 1999 to 2010 amounts to 3.2 percent of official GDP. It ranges from 6.8 percent in Mexico and 6.7 percent in Turkey to 1.3 percent in Luxembourg and only 0.5 percent in the United States. Tax evasion is also one of major concerns in the European Union where European Commission adopted an Action Plan in 2012 to address the issue (European Commission, 2018a).

People have an incentive to hide information on their evasion behaviour, and this concealment makes empirical work quite difficult (Alm, Jackson, & McKee, 1992). Tax evasions and frauds, tax avoidance and weak tax discipline along with the requirements for higher fairness and transparency of taxation pose new challenges to the governments and their tax authorities and demand efficient and innovative ways of collecting the taxes (European Commission, 2018b). The literature reveals the tax evasion and tax compliance are complex phenomenon. According to the classical deterrence model by Allingham and Sandmo (1972) an individual pays taxes because of the fear of detection and punishment. However, empirical research revealed that high levels of observed tax compliance cannot be explained by purely financial considerations or high risk aversion. To resolve the puzzle of tax compliance that "...may well be why people pay taxes, not why they evade them" (Alm, 2012) behavioural aspects were added to explanations of observed tax payers' behaviour. Namely, individuals are not always acting as rational economic actors with perfect information, but have limited capacity to assess actual costs and benefits and are influenced by their social context (Alm, 2011). Multi-discipline literature has therefore focused on tax morale as a moral attitude towards taxation or intrinsic motivation to pay taxes (Lubian & Zarri, 2011; Rodriguez-Justicia & Thielen, 2018) or as capturing nonpecuniary motivations for tax compliance as well as factors that fall outside the standard, expected utility framework" (Luttmer & Singhal, 2014). With other things equal positive moral attitude toward taxation will result in higher level of tax

compliance (Torgler, 2003; Richardson, 2006; Halla, 2012). Orviska and Hudson (2002) link tax morale to the concept of civic duty, proposing that people are motivated by a sense of concern for the wider state of the country as well responsibility and loyalty to society.

Education is important factor in shaping individual attitudes and behaviour. Poor knowledge on the tax system breeds distrust and may result in reluctance to pay taxes (Niemiowski, Wearing, Baldwin, Leonard, & Mobbs, 2002). Moreover, Rodriguez-Justicia and Thielen (2018) argue that it is important to increase awareness about direct and indirect benefits of tax-financed welfare state, as it contributes to voluntary tax compliance. To foster tax compliance culture Organisation for Economic Co-operation and Development (OECD) and The International and Ibero-American Foundation for Administration and Public Policies (FIIAPP) in their joint publication advocate development of innovative taxpayer education programmes that can be introduced already at primary and secondary level (OECD/FIIAPP, 2015). Paying taxes is a civic duty and taxpayer education is a means to empower taxpayers and to improve tax morale. Numerous taxpayer education programmes showed that an improved tax morale increases tax compliance in a given country (Clifford & Jairus, 2013).

The central research question is which determinants influence the tax morale and tax compliance of pupils in primary and secondary schools in Slovenia. We set out the following hypotheses: H1: tax morale of primary and secondary school pupils declines with age, H2: educational background in the household positive influence on a tax morale of pupils, H3: household affluence have negative impact on tax compliance of pupils, and H4: attendance of tax education programs increase the tax morale and the tax compliance by pupils.

In our paper we present the importance of the tax administration in the process of educating young people regarding the importance of paying taxes and explore the impact of short educational programmes on taxation and benefits of tax-financed welfare state on indicators of stated tax morale and tax compliance of 4926 pupils in primary and secondary schools. We show that attendance of such programs significantly increased the tax morale and the stated tax compliance of participants. The paper is organised as follows. After short literature review on determinants of tax compliance and tax morale we develop and test the model of tax compliance and tax morale on a sample of pupils who attended the educational program and their schoolmates who didn't participate. We wrap our paper with a short discussion.

2. Literature review

Determinants of tax morale and tax compliance have been subject to a great deal of academic research. Researchers established that with other things equal, positive moral attitude toward taxation (higher tax morale) will result in higher level of tax compliance (Torgler, 2003; Richardson, 2006; Dell'Anno, 2009; Halla, 2012). I. Lago-Peñas and Lago-Peñas (2010) state that tax morale is a function of individual level variables and of contextual-level variables, and Hashimzade, Myles, and Tran-Nam (2012) added that compliance decision is not taken in isolation but it is made context of the taxpayer's social environment.

Numerous studies sought to identify individual level socio-demographic and socio-economic determinants of tax compliance and tax morale (Jackson & Milliron, 1986; Richardson & Sawyer, 2001; Richardson, 2006; Hofmann, Voracek, Bock, & Kirchler, 2017; Williams & Krasniqi, 2017; Rodriguez-Justicia & Thielen, 2018). I. Lago-Peñas and Lago-Peñas (2010) group them as socio-demographic characteristics (e.g. gender, age, education), personal financial experiences (employment status, income) and political attitudes. Research demonstrates that female taxpayers are more compliant (e.g. meta-analyses by Hofmann et al.,

2017) and display higher morale than males (e.g. Alm & Torgler, 2006; Williams & Krasniqi, 2017). There is also a positive relation between age and tax compliance (Hofmann et al., 2017) as well as tax morale (e.g. Alm & Torgler, 2006; I. Lago-Peñas & Lago-Peñas, 2010) although Williams and Krasniqi (2017) reveal an inverted U-shape relationship among the variables. Research delivers mixed results about the impact of formal education level. Higher education is related to better knowledge of tax law and benefits of taxation; however, higher education is also associated with better access to information on how to avoid taxes. Meta-analyses by Hofmann et al. (2017) identify small but significant negative relation between education of taxpayers and their tax compliance. Rodriguez-Justicia and Thielen (2018) on the other hand demonstrate that education has positive impact on tax morale for net beneficiaries of the welfare state and net impact on contributors.

Luttmer and Singhal (2014) identify five categories of mechanisms that contribute to improving tax morale. The first is "intrinsic motivation," which may be associated with pride or a good self-image linked to honesty or participation in the public good. The second is "reciprocity", which includes "public goods provided by the state or perceptions of the fairness of the tax system". The third is "peer effect and social influences", which depends on how tax payment is valued in society and how others act towards it. "Long-run cultural factors" is the fourth category of mechanisms they identified and "information imperfections and deviations from utility maximisation" is the fifth. The latter mechanism is related to the fact that taxpayers with inaccurate or too little information about the tax system may not comply with obligations they do not understand or may make irrational decisions.

Characteristics of personal financial experiences relate to particular economic circumstances of taxpayers. The results on the impact of income on tax compliance and tax morale are mixed, however meta-analyses on tax compliance reveals higher-income earners tend to be less tax compliant than people with lower income (Hofmann et al., 2017). Consistent with the observation that tax planning equires a high level of financial sophistication, Kubick, Lockart, and Robinson (2020) find that the association between tax avoidance and inside debt is more significant for the CFO than for the CEO. Source of income also plays an important role. Self-employed exhibit lower tax morale as self-employment requires reporting of income and may open opportunities to evade taxation (e.g. Alm & Torgler, 2006; I. Lago-Peñas and Lago-Peñas, 2010; Hashimzade, Myles, & Tran-Nam, 2012; Williams & Krasniqi, 2017). It also turns out that some income sources, such as from agriculture or services are more prone to tax evasion (Richardson, 2006).

Political attitudes relate to perceptions of political processes. In climate of mutual trust, citizens have positive representation of the tax systems and will spontaneously cooperate (Braithwaite & Ahmed, 2005). Research shows tax evasion is lower in countries with higher perceptions of fairness of the taxation (Richardson, 2006). Torgler (2012) additionally demonstrated for Eastern European countries that trust in government and justice system, as well as governance quality significantly influence the tax morale of their citizens. Reduction of social distance between taxpayers and tax authorities boosts taxpayers' acceptance of their tax load and tax compliance. Slemrod (1998) emphasizes the importance of ensuring fair and responsive service to taxpayers for voluntary compliance. Research shows that having voice on tax contributions and on tax distribution leads to higher compliance. Moreover, compliance was higher in the context avoiding tax framing (Casal, Kogler, Mittone, & Kirchler, 2016). Enachescu et al. (2019) show that positive experiences with the tax authorities have positive influence on higher compliance intentions. Enachescu et al. (2019) conclude that emotional experiences play an important role in tax compliance decisions. Therefore, it is crucial to take the taxpayers' subjective perceptions into consideration when designing policies to promote compliance.

Contrary to individual-level variables contextual variables focus on institutional, social and economic differences among countries or regions within countries. One of the most important changes in the recent past is the way tax administrations view their relationship with taxpayers: from coercion to partnership. Increasingly taxpayers are seen as allies. Threats of penalties when they do not fulfil their duties are increasingly being supplemented by a demonstration that by changing their behaviour, they can improve the society in which they live, contribute to its development and free it from external funding (OECD, 2021). Individuals in more affluent regions, less urbanized countries and in economies with less income disparities are less prone to tax compliance (I. Lago-Peñas & Lago-Peñas, 2010; García-Alarcó, Buendía Azorín, & Sánchez de la Vega, 2018). Canale and Liotti (2018) emphasize that trust in institutions is a basic feature of modern democracies and plays a key role in guaranteeing social, economic, and political stability. They expose that discretionary policy measures have an opposite sign impact on trust in institutions. Batrancea et al. (2019) show that trust in authorities and power of authorities, as defined in the slippery slope framework, increase tax compliance intentions and mitigate intended tax evasion across societies that differ in economic, sociodemographic, political, and cultural backgrounds. Halla (2012) show that a higher tax morale reduces the size of the underground production and confirm the supposition that both economic incentives and social norms (or moral consideration) drive individual behaviour.

Education is an important channel for shaping individual behaviour, values and attitudes. Hofmann, Hoelzl, and Kirchler (2008) argue that improving taxpayer's knowledge of tax can form more positive attitudes toward tax issues and enhance fairness perceptions. Furthermore, OECD and FIIAPP (2015) establish that taxpayer education campaigns can be an efficient and effective way of building trust and increasing public engagement by fostering attitudes of commitment to the common good, emphasizing the social value of tax and its link to public expenditures. The experiment by Park and Kwon Hyun (2003) confirmed that even and even short briefing on negative effects of tax evasion and accompanying spread of the underground economy improved tax compliance. Jacquemet, Luchini, Malézieux, & Shogren (2019) found statistically significant correlations of tax compliance behaviour with empathy and shame. They suggest that tax authorities should tackle tax evasion by focusing primarily on the institutional context and less, on individual characteristics of taxpayers. Smith (1986) highlights the importance of proper organization of the tax administration and employees by tackling tax evasion. He emphasizes the importance of taxpayer education by the tax administration and its impact on reducing tax administration costs. Hansford and Hasseldine (2002) stress that tax officers are key players in securing overall tax compliance. Reilly and Krstić (2019) suggests that one of the priorities in reducing the shadow economy is to focus on increasing the extent of tax morality and institutional quality. They suggest that this could be addressed by outreach campaigns with the objective of increasing the awareness of the public on the negative effects of the shadow economy, to inform the public of the value of public services, and also by improving the quality of these services. If the government is consistent and unselective in tackling tax evasion, Reilly and Krstić (2019) emphasize that taxpayers will be more certain that other taxpayers will pay and, therefore, they themselves will be more willing to pay. Iyer, Reckers, and Sanders (2010) found that an economical mail-based program aimed at increasing awareness of sanctions and detection enhancement produced a same-period improvement in tax compliance. The OECD (2021) in its research establish that the countries surveyed were asked to provide an estimate of the impact of each initiative on tax morale, and 83% of initiatives were considered to generate a very large or a great increase in tax morale. However, the effects of taxpayer education on tax compliance seem to be more indirect than direct. It increases tax morale, which in turns increases tax compliance.

Education at an early age can act as leverage to the national tax culture and positively impact

the level of tax morale and tax compliance in the country (OECD/FIIAPP, 2015). All 59 developing and developed countries included in the OECD (2021) survey tend to focus their efforts on educating taxpayers at a young age. Non-OECD countries appear to rely more on information campaigns to communicate taxes. Creating a positive relationship with taxpayers also seems to be more of a concern for non-OECD countries.

While there is no single definition of taxpayer education, it is a mean of empowering taxpayers, to give them knowledge and tools to be able to better understand the tax system, increase their tax morale and finally, increase tax compliance. Nevertheless, it is not a magical tool and initiatives need to be carefully designed to achieve these goals (OECD, 2021).

The focus of our paper is therefore to establish the effect of short educational programs delivered by Slovenian tax authority among primary and secondary school pupils on tax morale indicators and stated tax compliance and its potential to increase the tax morale of young generations and through this fight the tax evasion.

3. Data, methods and results

In 2014 Financial Administration of the Republic of Slovenian (FARS) started a pilot project of delivering short educational programs among pupils in primary and secondary schools throughout the country. In primary schools the target population consisted of schoolchildren aged 12 to 14 years and in secondary schools pupils from 16 to 19 years of age. From October 2014 till the 30. 6. 2021 FARS visited 471 primary and secondary schools throughout the country and 30.585 participants took part in this project. The educational program lasted for 90 minutes and included short overview of taxes in historical perspective and in contemporary society, taxes they meet in their everyday life, the importance of paying taxes and how revenues from taxation are spent on. After the program participants were requested to fill out a survey and additional group of non-attendants was requested to fill out the survey as a control group.

Database used in this paper consists of 4926 respondents who completed the survey in school years 2014/15 to 2016/2017. Respondents from primary school represent 39.4 percent of the sample and 60.6 percent of participants attended secondary school. In our database 72.8 percent of respondents participated in the short educational program. Average age in our sample is 15.9 years, 44.6 percent were male.

The survey consists of two parts. First part contains set of questions on responded demographics (gender, age, family composition), parents' education and employment status, sources of pupil's income and indicators of households' affluence (number of mobile phones, computers, TVs and cars in the household) and literacy (number of books in the household). Second part addresses the issues related to respondent's perceptions about taxation and tax compliance. As the target population is relatively young and with limited experience on taxes in practice, the questions on tax morale and tax compliance were predominantly in the context of the value added tax the pupils most often get in touch with.

We explore the impact of short educational programs on tax morale and tax compliance with who sets of empirical models. For the dependant variable of our first set of models we make a composite variable from two statements in the survey that serve us as indicators of tax morale. The first statement is agreement with the statement "it is important for me to take the invoice when making a purchase as I know I can contribute to proper paying of the taxes" and the second is "it is important for me to take the invoice when making a purchase as the vendor could erase the bill from its records". Both variables are dichotomous and take the value 0 in case of

disagreement with the statement and 1 in case of agreement. The composite variable the average of the two responses, which gives us a three level ordinal variable measuring the level of tax morality (TAX MORALE).

For individual level independent variables we use respondent's age in years (variable AGE), age squared (AGE SQUARE), and gender (GENDER) taking value 0 for male respondents and 1 for female respondents. We also add two variables controlling for individual and information on individual financial experiences indicated by receiving the pocket money (POCKET MONEY) or scholarship (SCHOLARSHIP). Both variables are dichotomous (0- no; 1- yes).

On contextual level we incorporate variables on average educational level of parents (PARENTS EDUCATION), presence of parent that is an entrepreneur or self-employed (SELF-EMPLOYED), as well as indicators of affluence and literacy of the respondent's household. We constructed a composite indicator of household's affluence (HOUSEHOLD AFFLUENCE), composed out of four separate indicators – number of mobile phones, number of TVs, number of computers and number of cars per household, applying weights relative to approximate value of the gadgets (0.5 for mobile phones, 1 for TV and computer and 5 for the car) and divide it by the number of household members. For the impact of regional affluence we take regional BDP per capita in 2016 (REGIONAL GDP). Number of books in the household serves us as an indicator of overall household literacy level (LITERACY).

Central to our research is the variable on attendance of the short educational program on taxation (ATTENDED) which is a dichotomous variable (0- did not attend; 1- did attend). To control for other possible motives why respondents might find taking the invoice important we also include three dichotomous control variables: “it is important for me to take the invoice as a proof of warranty” (WARRANTY), “it is important for me to take the invoice as we need invoices to keep record on family's expenditure” (RECORD OF SPENDING), “it is important for me to take the invoice to prove my parents I have spent the money as we agreed on” (PROOF OF PURCHASE).

Dependant variable in our second model is an indicator of respondent's tax compliance. We use survey question asking the young respondent if she/he is taking the invoices when making a purchase in six situations: in the store, in the farmers' market, in bakery, in the bar/restaurant, at hairdresser with and with instructor on private lessons. Possible responses to the questions were “always”, “sometimes” and “never” and were transformed to a three-point Likert scale (2- always, 1- sometimes and 0- never). The variable TAX COMPLIANCE was the response to the frequency of demanding the invoice in the six specific situations (sum of scores), measured on 11 ordinal levels from never to always.

In the model of tax compliance we include all independent variables from our model on tax morale. However, due to the established link among tax morale and tax compliance in the literature (Torgler, 2003; Richardson, 2006; Dell'Anno, 2009; Halla, 2012) we also add the variable MORALE as independent variable to the model on tax compliance. Again, attendance of the short educational program on taxation is of central importance for this research. List of variables and their univariate statistics are given in Table 1.

Table 1: *Variables and their univariate statistics*

| Variable | Type of variable | Scale | Mean | Std. variation |
|------------------------------------|------------------|----------|------|----------------|
| Gender | Independent | Binary | 0.55 | 0.497 |
| Age | Independent | Interval | 15.9 | 2.082 |
| Pocket money | Independent | Binary | 0.34 | 0.475 |
| Scholarship | Independent | Binary | 0.27 | 0.443 |
| Parents' education | Independent | Interval | 4.42 | 1.391 |
| Household Affluence | Independent | Ordinal | 4.89 | 2.413 |
| Household literacy | Independent | Interval | 3.11 | 1.399 |
| Attended the "tax literacy" course | Independent | Binary | 0.73 | 0.445 |
| Waranty | Independent | Binary | 0.76 | 0.424 |
| Record of expenditure | Independent | Binary | 0.1 | 0.297 |
| Proof of purchase | Independent | Binary | 0.24 | 0.424 |
| Tax Morale | Dependent | Ordinal | 0.54 | 0.699 |
| Tax Compliance | Dependent | Ordinal | 6.04 | 3.409 |

To test the effects of respondents socio-demographic characteristics and other factors on tax morale and tax compliance we tested two series of hierarchical models using ordinal logistic regression. In Table 2 we present results of our first set of models addressing the tax morale.

Table 2: *Results of logistic regression models for tax morale variable*

| | Variable | Model 1 | Model 2 | Model 3 | Model 4 |
|------------------------------------|-----------------------|----------------------|----------------------|----------------------|-----------------------|
| Individual level variables | Gender | 0.279 (0.057) *** | 0.303 (0.058) *** | 0.346 (0.062) *** | 0.349 (0.062) *** |
| | Age | -0.678 (0.199) ** | -0.621 (0.201) ** | -0.603 (0.218) ** | -0.587 (0.218) ** |
| | Age square | 0.020 (0.006) ** | 0.018 (0.006) ** | 0.018 (0.007) ** | 0.018 (0.007) ** |
| | Pocket money | -0.071 (0.062) | -0.037 (0.062) | -0.055 (0.066) | -0.056 (0.067) |
| | Scholarship | -0.104 (0.074) | -0.146 (0.075) | -0.157 (0.078) * | -0.143 (0.078) |
| Contextual level variables | Parents' education | | | 0.073 (0.024) ** | 0.074 (0.024) ** |
| | Household Affluence | | | -0.006 (0.013) | -0.005 (0.013) |
| | Household literacy | | | 0.200 (0.1) ** | 0.200 (0.1) ** |
| | Self-employed | | | -0.108 (0.077) | -0.112 (0.077) |
| | Regional GDP | | | 0.637 (0.548) | 0.637 (0.548) |
| Attended the "tax literacy" course | | | 0.712 (0.068) *** | 0.745 (0.074) *** | 0.747 (0.074) *** |
| Other reasons | Waranty | | | | -0.143 (0.072) *** |
| | Record of expenditure | | | | 0.072 (0.099) |
| | Proof of purchase | | | | 0.134 (0.072) |

| | | | | | |
|--|----------------------|-------|-------|-------|-------|
| | Cox & Snell R Square | 0.012 | 0.035 | 0.043 | 0.045 |
| | Nagelkerke R Square | 0.015 | 0.041 | 0.051 | 0.053 |

Significance levels: *10%, **5%, ***1%.

In the models addressing the tax morale the levels are omitted from the table, although they were included in the model. Our results show strong and stable effect of gender with females having consistently higher level of tax morale which is also in line with previously mentioned studies (e.g. Alm & Torgler, 2006; Williams & Krasniqi, 2017). Tax morale of primary and secondary school pupils slightly declines with age. The effect of age is to some extent non-linear, therefore our results indicate that tax morale is starting to decrease at a lower rate with age. Having the scholarship has a slight negative effect on tax morale after controlling for contextual variables. Also, financial experiences gained through managing own pocket money do not seem to have a significant impact on the tax morale.

Higher educational background and higher level of literacy in the household are both strongly linked to a higher tax morale of pupil. On the other hand the indicator of household affluence and presence of self-employed parents do not show any significant effect. Tax morale is not significantly linked to demanding the invoice as record or proof of purchase, there is however a negative link with getting the invoice for warranty purposes. However, our results demonstrate that attending a tax literacy course boosts tax morale quite significantly and the effect remains stable irrespective of added controls. The model fits of these models were rather low with pseudo R squares up to 0.05.

The second set of models tested tax compliance through the response to the frequency of demanding the invoice in six different situations and is therefore measured on 11 ordinal levels from never to always. The results are presented in Table 3. The levels are avoided in the table of results since they mainly share the differences in initial frequencies.

Table 3: Results of logistic regression models for tax compliance variable

| | Variable | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|----------------------------|---------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Individual level variables | Gender | 0.335 (0.051) *** | 0.363 (0.051) *** | 0.385 (0.054) *** | 0.326 (0.054) *** | 0.3 (0.054) *** |
| | Age | -1.003 (0.179) *** | -0.938 (0.179) *** | -1.055 (0.194) *** | -0.924 (0.194) *** | -0.971 (0.194) *** |
| | Age square | 0.029 (0.006) *** | 0.028 (0.006) *** | 0.032 (0.006) *** | 0.028 (0.006) *** | 0.029 (0.006) *** |
| | Pocket money | -0.164 (0.054) ** | -0.134 (0.054) * | -0.12 (0.058) * | -0.109 (0.058) | -0.134 (0.058) * |
| | Scholarship | 0.017 (0.064) | -0.017 (0.064) | 0.008 (0.067) | 0.051 (0.067) | 0.009 (0.067) |
| Contextual level variables | Parents' education | | | 0.028 (0.021) | 0.011 (0.021) | 0.002 (0.021) |
| | Household Affluence | | | -0.049 (0.011) *** | -0.049 (0.011) *** | -0.053 (0.011) *** |

| | | | | | | |
|------------------------------------|-----------------------|-------|-------------------------|--------------------------|--------------------------|-------------------------|
| | Household literacy | | | 0.001 (0.000) *** | 0.001 (0.000) *** | 0.001 (0.000) *** |
| | Self-employed | | | -0.246 (0.067) *** | -0.242 (0.067) *** | -0.227 (0.067) ** |
| | Regional GDP | | | -0.295 (0.478) | -0.295 (0.478) | -0.295 (0.478) |
| Attended the "tax literacy" course | | | 0.621 (0.057) *** | 0.625 (0.061) *** | 0.49 (0.061) *** | 0.488 (0.062) *** |
| Tax morale | | | | | 1.256 (0.078) *** | 1.31 (0.078) *** |
| Other reasons | Waranty | | | | | 0.785 (0.064) *** |
| | Record of expenditure | | | | | 0.521 (0.089) *** |
| | Proof of purchase | | | | | 0.122 (0.064) |
| | Cox & Snell R Square | 0.024 | 0.047 | 0.065 | 0.119 | 0.153 |
| | Nagelkerke R Square | 0.024 | 0.048 | 0.065 | 0.120 | 0.154 |

Tax compliance model exhibits similar demographic effects as tax morale with females being more tax compliant than males. Tax compliance slightly declines with age and the effect of age is again slightly non-linear with compliance starting to decrease at a lower rate with age. Pupils receiving and managing their pocket money exhibit lower tax compliance as their peers who receive no pocket money. Contrary to the tax morale, households' educational background has no significant effect on tax compliance. However, household affluence and presence of self-employed parent both demonstrate significant and negative impact on tax compliance in pupils.

Attending a tax literacy course boosts tax compliance significantly and the effect remains stable irrespective of added controls. Another important and significant determinant of tax compliance is the tax morale. In line with existing literature, our results likewise demonstrate that higher tax morale results in higher level of tax compliance.

The habit of demanding the invoice from the vendor might also be linked to other motives, not only to the tax compliance. However, even taking the invoice for other reasons, such as the proof of warranty or record of expenditure contributes to higher tax compliance and our results confirm the significant positive effect. The overall model fits are much better than in the case of tax morality, exceeding 0.15 with full controls.

4. Discussion

Modern countries throughout the world collect taxes to finance the provision of public goods and services. Tax-noncompliance not only decreases amount of resources to fund public goods and services, but also decreases economic efficiency through unfair competition on the market

stemming from the tax-evaders. Moreover, it may bring negative economic effects due additional taxation needed to overcome the missing fiscal revenue.

Empirical research has continuously shown that tax-evasion cannot be fully explained by standard deterrence model based on rational economic actor who will pay taxes only if the payoff of concealing the taxes is lower than the expected cost of being caught and punished. Important body of research demonstrated that there is also the intrinsic motivation for individuals to pay taxes. Taxpayers' tax morale has been therefore identified as one of main determinants of tax compliance.

Because of the inability of the rational taxpayer model to explanation the taxpayers' behaviour, tax administrations and governments must also change their relationship with taxpayers. They should not only administratively collect the taxes and punish the evaders when discovered, but also proactively address the tax morale. Instead of being perceived as competing party to the taxpayers, tax authorities should strive to be recognised as partners in pursuing similar goals. To accomplish that tax authorities have to build the awareness on why the taxes are needed and emphasize its link to public expenditure. They have to foster attitudes to commitment to common good, help the taxpayers to meet their obligations and build the trust toward institutions. As Hofmann, Hoelzl, and Kirchler (2008) highlight that "in a climate of mutual trust, citizens have positive representations of the tax system and tax authorities and cooperate spontaneously."

A large number of countries have implemented taxpayer education initiatives in the past few years. Taxpayer educational programs and campaigns can be an efficient and effective way to build tax awareness and positive attitudes toward tax issues. Taxpayer education is intimately linked to local economic, social and cultural realities.

Taxpayer education benefits taxpayers themselves at the scale of the society. The more taxpayers pay their fair share of taxes, the more resources are available to develop the country, build infrastructures and offer services to them. Moreover, taxpayer education also benefits taxpayers more directly. Tax literacy can help them save money. They may learn, for example, about tax provisions that will legitimately lower their tax bills, or how to avoid filing late or other pitfalls that might cause them to incur fines or penalties. Knowing these benefits exist provides people with an incentive to engage in taxpayer education. It can also increase tax compliance in the long term by increasing tax morale because tax literacy decreases the time they spend preparing taxes and makes them less threatening. The more taxpayers know about the tax system and the crucial role taxes play in their daily life, the more they can support it (OECD, 2021).

Our empirical research clearly reveals strong positive effects of short educational programs delivered by tax authorities on the tax morale of primary and secondary school children. It demonstrates that as with many other aspects, investment in education may bring solid interest in mobilising greater tax revenues and should start with school children. Moreover, such programs can also contribute to improved financial literacy, decision-making, security and ethical behaviour in general (Starček & Trunk, 2018).

Integrating tax education into the education process is one of the most popular taxpayer education initiatives, though there is a range of approaches taken globally. Integrating tax to school curricula enables has the potential for (nearly) all future taxpayers to be reached. While placing tax on the curriculum is the most comprehensive approach to teaching tax in schools, this is not always (immediately) possible. It can take time and resources to bring tax into the curriculum, both in the tax administration and in schools. As such alternative, smaller scale programmes may need to be considered, or undertaken as a pilot to prove the value of bringing

tax into the school.

The benefits of taxpayer education on taxpayers leads to increased tax compliance. Ideally, taxpayer education should begin at an early age and continue into adulthood. Getting young people to work with tax authorities is an innovative way of using existing civil service programmes to help build a tax compliant society. In the 2019 report Tax Morale (OECD, 2019) age was found to be one of the prime determinants of tax morale globally, with older people less likely to justify cheating on taxes. This suggests there are significant gains to be made through targeted efforts on the need to pay taxes with younger generations. Establishing a taxpaying habit early in a citizen's life can return a significant dividend over the years. Teaching tax to children can also be part of broader citizenship education (OECD, 2021). Educating children and teenagers on tax matters is an opportunity to build the social contract, through helping children see the social utility of taxes, from their use to finance public services and institutions like schools, hospitals and the police to their redistributive function. At its most ambitious it can be part of helping children identify not just their rights and responsibilities, but also those of the state to transparency and accountability over how taxes are spent.

One aspect is the need to provide resources not just for the students, but also for the teachers, to explain the aims of initiatives and how to use the resources. This is especially important where awareness and understanding of the tax system are low generally, as it may not be possible to assume the teachers are sufficiently tax literate.

By addressing young generations tax administrations can bring about a long-term cultural shift (OECD/FIIAPP, 2015). This is important as taxation can also be considered to be a social act where individual taxpayers are influenced strongly by their perceptions of the behaviour of other taxpayers (Frey & Torgler, 2007). Last but not least, boosting the tax morale in young people will make not only the government happy. Lubian and Zarri (2011) namely establish that individuals with higher level of tax morale are also significantly happier.

5. Disclosures

The authors have no financial arrangements that might give rise to conflicts of interest with respect to the research reported in this paper.

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