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Hybrid approach model for prevention of tax evasion and fraud

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Abstract

Tax evasion is an important social-economic problem in all societies of the world, regardless of the type of tax system or the country's economic development level, therefore deception using tax incentives or tax evasion should be analyzed in a wider context, as the key aspect of shadow economy. Modern economic studies, analyzing the interaction between taxpayers, tax burden, social environment and country's economic development, seek to make an integrated evaluation, not just explain individual tax avoidance motivations. The theoretical research analyzes the interaction between the taxpayer behavior and their social status, and not only individual motivations reasons to explain the level of tax evasion and as results of research - model's framework is unique incorporation of detection models and big data processing ability, combined with a psychological-social portrait of the tax evaders will allow their quick identification, even though this does not mean that they will have committed an illegal act.

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Keywords: Tax; Tax evasion, Shadow economy; Determinants of tax evasion.

Introduction

Shadow economy is defined and measured as unofficial sector of economy, when certain activities are performed and income from these activities generated avoiding government regulation or tax payment obligations (Schneider, 2007), and large scale of shadow economy in developing countries shows inefficiency of tax systems in these countries (Torgler & Alm, 2009). In most studies shadow economy is assessed on the basis of calculation of the tax gap, evaluating tax discrepancy because of tax avoidance or hiding (Krumplytė, 2010). Another relevant factor affecting the level of declared income is taxpayer's satisfaction with government policy. Barth et al., (2005) explains tax evasion as social phenomenon, which is based on different perception of income tax between different tax payers

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and income groups. Cowell (1990) emphasizes that tax evasion requires interaction with social theory, because provision of public goods is relevant to social environment level. The purpose of this study is theoretical research to conduct model's framework of the relationship between determinants of tax evasion by reviewed author's dimensions and tax evasion across countries, using several measures of tax evasion. Moreover, this study extends the preliminary tax evasion model of Allingham & Sandmo (1972) to examine in conjunction with culture, the impact of legal, political, and social variables on tax evasion in big data processing ability. Behavior of tax-evaders can be partially explained by analyzing factors related to social interaction and social characteristics of the individual. According to Andreoni et al. (1998), there are moral and social factors that influence the decision to avoid taxes. Among these factors is the feeling of guilt and shame, experienced by the participants who do not declare all their income. The neo-classical approach literature on tax compliance argues that there is a direct important link with possible penalties, when trying to understand why citizens pay or evade taxes (Schneider & Enste, 2002).

1. Literature review

Shadow economy causes are classified according to the motives into three main groups: economic, legal-administrative, social-psychological. These groups do not function independently, but rather as different intensity components of the whole. Allingham & Sandmo (1972) proposed a microeconomic model to assess the level of tax evasion. The idea of this model is that the taxpayer, before declaring income, must decide and choose how much revenue he will reveal, knowing that there is some certain probability of a tax audit. A-S model assumes that the taxpayer's utility function is associated with the audit risk and his operational argument is undeclared tax revenue. The income level is chosen so as to maximize his expected utility. This choice depends on the probability of detection, on his risk aversion and on the penalty fine. Yitzhaki (1974) pointed out that in this model an increase in the tax share leads to an ambiguous effect on tax evasion. It means that the tax rate has no effect on the terms of the tax evasion gamble and also it should be taken into account the fact that the penalty is usually imposed not on the concealed income, but it is rather related to the unpaid amount of tax. The interaction between the government and the taxpayer leads to a variety of equilibria dependent on parameters such as costs, tax rates and so on. The penalty fine for not reporting the true income is not proportional to the reported income, but to the nonpaid portion of the tax rate. With this, the ambiguity would be prone to disappear (Pantojaa & Rodrigo, 2014). There is a wide gap between the risk aversion that would guarantee such a high compliance and the much lower individual risk aversion observed in reality (Frey & Feld, 2002). The A–S model may be also rewritten considering that the sum of bribe is proportional to the tax evaded (Pruzhansky, 2004). This suggestion is reasonable as a larger amount of evaded taxes may require more financial efforts to persuade the auditor to cooperate. Allingham & Sandmo also considered another factor – the influence of personal character, i.e. when the detected tax evasion can ruin the reputation. The level of deterrence is too low to explain the high degree of tax compliance. To resolve this puzzle of tax compliance, many researchers have argued that tax morale can help explain the high degree of tax compliance (Torgler, 2007). Tax morale - which is not a new notion but has received surprisingly little attention in the tax compliance literature - can be defined as a moral obligation to pay taxes, a belief in contributing to society by paying taxes. The first major tax evasion literature review by Jackson and Milliron (1986) established 14 key determinants of tax evasion. These include:

- *demographic determinants* – age, gender, education, occupation status;
- *economic determinants* – income level, income source, marginal tax rates, sanctions and probability of detection;
- *behavioral determinants* – complexity, fairness, revenue authority initiated contact, compliant peers, ethics or tax morale.

Study of Riahi-Belkaou (2004) analyses relationship between selected determinants of tax morale and tax evasion and systematically investigates many of the key determinants of tax evasion on a cross-country basis – non-economic determinants have the strongest impact on tax evasion: complexity, education, income source, fairness, tax morale. Empirical results show that behavioral and demographic variables have the strongest influence on tax evasion as compared to economic variables. This represents an interesting empirical finding which indicates that