



Enterprise and the Competitive Environment 2014 conference, ECE 2014, 6–7 March 2014, Brno, Czech Republic

Possibilities of measuring tax evasion related to fuel sale

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Abstract

The article deals with the possibilities of estimating the amount of tax evasion concerning value added tax in the fuel market in the Czech Republic. Part of the text is the evaluation of the existing standard methods used for measuring tax evasion. It has been proved that these methods are not suitable for determining the amount of fuel tax evasion under given conditions. The authors propose a specific original method of quantification of tax evasion on the basis of data concerning distributor prices, gathered during the year 2012, and information obtained from the survey of interested entities.

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Selection and/or peer-review under responsibility of the Organizing Committee of ECE 2014

Keywords: Fuels; tax evasion; value added tax

1. Introduction

The beginnings of serious examination of tax evasion date back to the early 1980s. However, the practice of tax evasion is inherent in the existence of tax levy, which has its origin in the remote past. Studies focusing on determination of the extent of hidden economy by existing theoretical models were published as late as at the beginning of the 21st century.

Allingham and Sandmo (1972) formed a static and later also dynamic model of the taxpayer's behavior, where the variables of tendency to tax evasion were tax rates as such, severity of penalties and probability of inspection which determines the probability of detection. However, they recommend empirical investigation to verify the facts.

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The above mentioned models are based on the optimal portfolio theory and theory of economics of uncertainty. Andreoni (1992) introduces an interesting fact into the decision-making process concerning engaging in tax evasion: punishment for the evasion in the case of detection comes later than the gain resulting from the tax evasion. Therefore the situation is in favor of tax evasion. The above effect assumes a certain short-sightedness of those who commit the fraud. This implication applies both to the direct tax and to the indirect tax, which is the subject of our research.

The commodity under examination is fuels, which are subject to several indirect taxes at a time. Even if we disregard the fact that tax evasion is an economic crime, the evasion itself causes a significant loss in the revenue of the state budget. Tax evasion may represent billions of Czech crowns per year, depending on the link of the distribution chain where the tax evader operates and the manner in which the tax duty is circumvented. Identification of possible estimates has been performed on the case of the Czech Republic. According to official estimates, annual loss should amount to CZK 4–8 billion (MF CR, 2011; CAPPO, 2012), which only concerns the value added tax. The methods of estimating the amount are not known, and therefore it cannot be proved or disproved.

We have to decide how to approach the issue of tax evasion. It is possible to work with real data and situations, to describe the reality and examine its changes according to factual analysis, and yet avoid the application of results in the form of economic and political recommendations and judgments about the actual state of affairs. The alternative is to examine and describe the optimal situation, derive value judgments and recommendations, focus on the ideal relations between the variables and stress the implications of the results on the economic policy, with the resulting judgments about what the state of affairs should be and what must be done to achieve it. The theory of tax evasion distinguishes between the positive and normative approach (Slemrod, 2007). It is apparent that authors adhering to the positive approach, such as Becker (1968), Allingham and Sandmo (1972), Sandmo (2005) or Chen and Chu (2005) focus on methods of determination of tax evasion rate or tax gaps with the ideal aim to objectively describe existing features and facts. At the same time they monitor results of measures that have been applied in order to reduce tax gap or tax evasion, e.g. Torgler (2003) or Scholz and Lubell (2001). The alternative is testing taxpayers via laboratory experiments, which is supported by research of Spicer and Becker (1980) or Alm et al. (1992). The normative approach to tax evasion, on the other hand, is based on available data on the tax evasion rate and seeks or regulates tools for its reduction; e.g. Mayshar (1991) or Slemrod and Yitzhaki (2002). The above authors scarcely combine the positive and normative approach; more often they use either one in individual publications.

Unlike the mentioned authors, we shall concentrate on a particular (not general) issue and its concrete solution; we do not intend to stipulate general principles of resolution of tax evasion. After introducing the situation of tax evasion first in general and subsequently more specifically concerning the value added tax in the Czech Republic, our aim is normative formulation of a tool for measurement of tax evasion in this particular area. This approach is also preferred by Blough (1952). Because the area of our research is very narrow, we can afford to take advantage of the positive and then the normative approach to the issue of tax evasion in the context of value added tax on fuels in the Czech Republic.

2. Methods

We started our research with finding out about the conditions and manners of distribution which are usual in the market. The fuel distributor is a person that sells or is authorized to sell fuel in the Czech Republic, except sale of fuel from petrol stations (Section 2 j), Fuel Act). Approximately 160 distributors of fuels were registered at the beginning of 2014 (Customs Administration, 2014). Such distributors have a special recording duty. They monthly fill in reports for the tax administrator, containing e.g. date of purchase, supplier's specification, and unit price per liter or ton of mineral oil. The price may be referred to as one of the fuel identifiers affected by tax evasion. Entities participating in the tax fraud can afford to sell at lower prices than their fair competitors, and yet achieve excessive profits. At the same time they can gain the market share that would have been unattainable had they not committed tax evasion and had they set reasonable prices (David and Semerád, 2014). The sale, or the purchase prices are not publicly known, but it can be assumed that they are available to the General Financial Directorate (“GFD”), and therefore they may be used in theoretical calculation. Under Act No. 106/1999 Coll., on Free Access to Information, as amended, we asked the GFD (2012) to provide us with distributor prices ensuing from the fulfilment of the special recording duty in 2012. However, the GFD was able to give us only average distributor prices AP_{GFD} and

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