SPECIFIC MECHANISMS AND METHODS FOR ESTIMATING TAX FRAUD

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Abstract
In the last decades, tax fraud has grown, being catalogued as a serious impediment in the way of economic development. The paper aims to make contributions on two levels: a) Theoretical level - by synthesis methodologies for estimating tax fraud and b) Empirical level - by analyzing fraud mechanisms and dynamics of this phenomenon, properly established methodologies. To achieve the objective, we have appealed to the qualitative and quantitative analysis. Whatever the context that generates tax fraud mechanisms, the ultimate goal of fraudsters is the same: total or partial avoidance of taxation, respectively obtaining public funds unduly. The increasing complexity of business (regarded as a tax base) and failure to adapt prompt of legal regulations to new contexts have allowed diversification and “improving” the mechanisms of fraud, creating additional risks for accuracy estimates of tax fraud.

Keywords
fiscal fraud; tax fraud; VAT; corporation tax; corporation and personal income tax; fraud mechanism; method

JEL Classification
F02; F14

Introduction
The complexity and diversity of imposable processes, free movement of capital, goods and people inside the EU, technological progress, fiscality, financial and economic crisis, risk reduction goals and the need to maximize gains and amenities, have redefined the behavior of fiscal actors (especially taxpayers). In the last decades, due to insufficient public funds, reducing tax fraud (as part of matrix underground economy) has become a major preoccupation of world states. Tax administrations around the world are facing two major challenges: a) economic globalization and increasing velocity of information flows and b) increasing social needs, growth materialized in increasing public spending which imposed taxes on the measure. In this context, more and more taxpayers (economic operators and individuals from different countries) are moving towards areas off shore, or choose to act, in whole or in part, in the underground economy, avoiding payment of taxes, or to take the risk of fraud.

The main objective of the research was to analyze the mechanisms of tax fraud and to present theoretical and empirical methods for estimating tax fraud. To achieve this goal, the paper is structured as follows: the first section presents different taxonomies of tax fraud mechanisms; the second part shows the main methods used to estimate fiscal...
Fiscal fraud. The taxonomy of fiscal fraud mechanisms

*The Convention on the protection of The European Communities’ financial interests* (OJC, 1995), defines fraud as any intentional act or omission relating to: a) the use or presentation of statements or documents false, inaccurate or incomplete, which has the effect diversion or incorrect retention of funds from the general budget of the European Communities or budgets managed by them or their behalf; b) hiding information and violation of a specific obligation, with the same effect; c) misuse of such funds for purposes other than those for which they were originally granted.

We can accept, by extension, that the definition of fraud might be adopted regarding tax fraud, with the specification that, in this case, socially dangerous deeds take place in the process of forming budget resources needed for EU function and community development as well as Member States’ budgets.

Although it was and is the subject of many studies and works of theoreticians and practitioners of tax law, tax evasion remains a difficult concept to define and there is no universally accepted legal definition. The doctrine distinguishes between:

- Tax fraud, regarded as a form of tax evasion committed intentionally, which generally it is subject to criminal penalties. The term includes situations that are intentionally presented false declarations or counterfeit documents.
- Tax evasion, that designates the illicit methods through which fiscal obligation is hidden or ignored, and the contributor pays lower taxes than it should have, by hiding information or income as against fiscal authority.

We subscribe to the opinion, that tax evasion and tax fraud are “the result of logical flaws and inconsistencies of imperfect legislation and wrong treated, of faulty methods and modalities of application, of lack of regulation and the legislator incompetence whose excessive taxation is as guilty as those they provoke to evasion” (Şaguna & Şova, 2011).

Based on the purpose, three evasion methods can be identified: full abstraction from payment, partial abstraction and illegal reimbursement from the consolidate state budget. Fraud mechanisms can be more largely detailed starting from the nature of the imposable operations that generate fraud: circulation of goods, entity income (profit and dividends received), individual income.

1. **Mechanisms of fraud based on value added tax** are specific of sectors where the rotational speed of amounts is greater and cashing the value of goods is carried out at a time close or identical to the time of delivery (fruits / vegetables, cereals / crop agricultural products, construction materials, energy products, meat / meat products).

The main mechanisms identified are: a) the setting up in the short term (45 days - within 3 months) of phantom companies which “disappear” after intra-Community purchase products; b) registration on the documents accompanying the transport of fictitious beneficiaries, who cannot be identified and verified in real time during transit through border points; c) tax code theft (on intra-Community acquisition documents appear real businesses but they have no connection with the transaction, and - therefore - do not recognize it.

Specialty literature is detailing four methods to defraud the state budget by the carousel method (Pătroi et al, 2013):

a) The classic method (using phantom companies);

b) The improved carousel method (the cheapening of the products covered by the successive transactions are compensated with “gain of VAT”);

c) The simulated delivery method (in which the documents are drawn up Community delivery, but the goods are actually sold domestically [without invoice], and the
operation is performed without the knowledge or with complicity of the foreign partner; 
d) The parallel sale method (a fictive sale with minimum addition - to not increase profits - , doubled by a sale on a “parallel market” at prices much higher than those recorded in the accounting records

2. Mechanisms of fraud in field of excise. The object of this fraud consists of tobacco products (especially cigarettes), alcoholic beverages, but especially fuels. From a fiscal point of view, the excisable products involve the payment of sums representing obligations to the state budget. These tax obligations are reflected in a percentage (sometimes significant) in the market price of the product. Therefore, tax evasion in this area materializes to circumvent payment of such tax obligations (excise). The major fraud context is the storage of excise goods under excise duty suspension, which allows postponing payment of excise duty to the state budget. Other mechanisms can be added, such as: a) mixing alcohol with still fermented beverages or wine, yielding products within the intermediate product group, which are difficult to verify if the manufacturing recipe is identical with the proportion declared when was obtained the authorization; b) counterfeiting or substituting other non-excisable goods (non-excisable mineral oils sold illegal as a fuel); c) illegal removal of goods under the supervision of tax (tax warehouse); d) to not declare to customs the total quantity of excise goods, respectively smuggling; e) creating certain “favorable conditions” that permit excise recovery on fuel.

3. Mechanisms of fraud by corporation tax and tax on dividends. Corporate taxation is relatively simple in a closed economy, but it becomes more complicated when companies operate in different countries (Noor et al., 2015). Managers can handle the revenues for their own personal benefits. The most common way of evading paying corporate tax consists in the artificial increase of expenses and the decrease in the tax base, by using invoices issued by phantom companies. The tax base decrease can also be achieved by not recording in full the revenues achieved, by transferring the taxable incomes to the newly established entities within the same group, or by incorrect classification during the exemption period.

Another mechanism of defrauding is generated by the intent of tax optimization, by setting up companies in offshore jurisdictions with a “favorable tax climate”. The main elements of the attraction of tax havens are the “tax lightness”, the banking secrecy, a good communications network and the political stability. Seen as refuges for natural or legal persons with high incomes, who aim to avoid taxation in their native country, tax havens and offshore centers are characterized as sophisticated tools of international tax evasion (Haita et al, 2015), existing as it is shown in literature (Trandafir, 2012), a very fine and sensitive line between “tax evasion” and “tax avoidance right”. The recent discoveries undertaken by “Panama Papers” have reestablished the boundaries between tax optimization and tax evasion.

4. Fraud mechanisms aiming at personal incomes are based on moonlighting and transfer / hide of incomes. As regards moonlighting, the main methods of defrauding are (NAF A, 2015):

a) activity which is not outlined and taxed carried out without individual labor agreement, without legal tender drawn up and payment of obligations to the state budget without timesheet for highlighting norm of time, without documents for highlighting norm of production and the type of work and not appointing in any way the person who carries out the work;

b) work partly highlighted and taxed carried out by double recording of the working time and hence of the salary paid and, respectively, a dissimulation of full-time work, through part-time contracts, the salary payment being made partly under the contract and partly “in hand”;
c) work during the so-called “trial periods”, not outlined within documents, or the permanent activity which is dissimulated into “day laborers”.

In a report published by Special Eurobarometer (2015), there are presented the evasion mechanisms by black labor both from the perspective of the carrier of the labor demand (who purchases goods / services conducted through unstated work), and from the perspective of the workforce bidders (providing goods / services performed by unstated work). The key motivation for the purchase of these unstated resources is the price.

The final conclusion that emerges from the research of tax fraud mechanisms is that, in temporal perspective, we are witnessing an increase in their complexity, passing from the hidden transactions, Ponzi schemes and falsification to the more serious issues such as international fraud, identity theft, phantom companies etc. On the line of recommendations, we consider it is very important to clearly delineate two aspects: fiscal optimization and tax fraud. Because the concerns of tax optimization can be used as a front for tax fraud.

Methods of estimating tax fraud

According to the researches of profile, identification of tax fraud is difficult. However, using modern statistical means can achieve estimate the size of this phenomenon, having a reasonable degree of trust. The dynamics of tax evasion can be analyzed retroactive, insofar this is identified and sanctioned on its specific manifestations. We adhere to what is stipulated by the literature according to which, about tax fraud, can be admitted only estimates and not accurate assessments.

The literature reveals the following methods in estimating tax fraud (Filipescu, 2011): approximate methods, methods based on social surveys and methods based on fiscal control.

The approximate methods evaluate tax fraud based on logical suppositions and methodical estimates. The logical suppositions use speculative deductions in a certain context with the main objective influence on public opinion and politico-economic environment, in particular about the existence of the phenomenon and, as finality, the awareness of danger and reduce its (Figure 1).

![Figure 1 Estimated tax evasion based on logical assumptions](http://www.capital.ro/ofensiva-anaf-creste-preturile.html)

The methodical estimates use specific statistical methods, respectively, economic and sociological tools; central elements of this method are: the projected state budget and
the budget incomes, in close correlation with national accounting; the most commonly used method is the method of representative sample. In that case, an eloquent example are the analyses made by The Fiscal Council, which, using statistical methods and economic tools, estimates tax evasion in absolute amount for each tax item, and also, in percentage of GDP (Table 1).

### Table 1: Dynamics of the evolution of tax evasion in Romania

<table>
<thead>
<tr>
<th>Tax evasion from: (millions lei)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>- income tax</td>
<td>5093</td>
<td>4968</td>
<td>4852</td>
<td>4749</td>
</tr>
<tr>
<td>- social security contributions</td>
<td>16393</td>
<td>15989</td>
<td>15617</td>
<td>15285</td>
</tr>
<tr>
<td>- the value added tax (VAT)</td>
<td>50347</td>
<td>57476</td>
<td>72399</td>
<td>76747</td>
</tr>
<tr>
<td>- profit tax</td>
<td>3512</td>
<td>3126</td>
<td>2624</td>
<td>2795</td>
</tr>
<tr>
<td>- excise duties and vice tax</td>
<td>3663</td>
<td>2616</td>
<td>2323</td>
<td>2438</td>
</tr>
<tr>
<td>% from GDP</td>
<td>2010</td>
<td>2011</td>
<td>2012</td>
<td>2013</td>
</tr>
<tr>
<td>- evasion from black labor</td>
<td>3.18%</td>
<td>3.14%</td>
<td>2.89%</td>
<td>2.61%</td>
</tr>
<tr>
<td>- tax evasion in the informal sector (population)</td>
<td>0.92%</td>
<td>0.62%</td>
<td>0.60%</td>
<td>0.58%</td>
</tr>
</tbody>
</table>

Source: Own processing after The Fiscal Council, Annual Report 2014

The social survey method enables understanding the phenomenon and its causes (using surveys, questionnaires, interviews). The method presents both advantages (information from source) and disadvantages (dishonesty those surveyed). The specialists say such a method is more eloquent when it is applied to limited areas and specific activity (not at the macroeconomic level but rather on the branches and domains); the areas concerned are (Condrea, 2013); customs system, excise goods, trade with vegetables and fruits etc. Indicators targeted are: the number of institutions with powers of control; frequency and density of checks performed by state bodies; number of applied sanctions; frequency and number of legislative changes. Simultaneously with the concerns estimate of tax fraud and other fiscal issues can be targeted: assess of general attitude towards evasion, correlated with study of the tolerance degree for it; analyzing the impact of tax evasion at micro and macroeconomic; the escapist type behavior study and people’s willingness to resort to tax evasion and fraud; identifying typologies inclined to evasion and the most corrupt sectors of activities; identifying measures to combat tax evasion (Condrea, 2013).

Surveys of National Agency for Fiscal Administration (NAFA, 2015) on a representative sample of 13,500 taxpayers and 1,500 officials reveal that only one third of contributors pay their taxes willingly and the share of illegal evasion increases with the size of the taxpayer (Table 2).

### Table 2: Estimated tax evasion based on sample survey

<table>
<thead>
<tr>
<th>Category</th>
<th>Neutral / Undecided</th>
<th>Voluntary compliance</th>
<th>Forced compliance</th>
<th>Licit evasion</th>
<th>Illicit evasion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals</td>
<td>9</td>
<td>26</td>
<td>32</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Small enterprises</td>
<td>9</td>
<td>28</td>
<td>31</td>
<td>19</td>
<td>14</td>
</tr>
<tr>
<td>Medium taxpayers</td>
<td>9</td>
<td>29</td>
<td>26</td>
<td>25</td>
<td>10</td>
</tr>
<tr>
<td>Large taxpayers</td>
<td>11</td>
<td>32</td>
<td>19</td>
<td>31</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: NAFA (2015)
The control method enables estimation of the size and dynamics tax fraud, making deductions and generalizations. Fiscal control is not only to documents and statements of taxpayers (control summary) but also covers the verification of facts and script, direct and cross (depth control). The method allows: predicting overall (national) and partial fraud (by sectors of the national economy). At the same time and other aspects are identified and useful for improving fiscal behavior, such as: types of sanctioned taxpayers; acts committed and the sanctions imposed; types of taxes which are commonly involved in tax evasion.

The reports drawn up by NAFA structures shows that in the period 2014-2015, though was reduced the number of fiscal inspections, increased volume of additional obligations set, decreased number of fines, but increased their value, also increased the number of criminal complaints and calculated value of related damages (Table 3).

**Table 3 NAFA - The tax audit activity**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2015</th>
<th>Fourth quarter 2014</th>
<th>Fourth quarter 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of inspections carried out</td>
<td>81053</td>
<td>16869</td>
<td>15313</td>
</tr>
<tr>
<td>Additional obligations established (millions lei)</td>
<td>18841,4</td>
<td>4152,3</td>
<td>4438,4</td>
</tr>
<tr>
<td>Number of fines applied</td>
<td>11117</td>
<td>3029</td>
<td>2780</td>
</tr>
<tr>
<td>Value of fines applied (millions lei)</td>
<td>24,9</td>
<td>6,6</td>
<td>7,1</td>
</tr>
<tr>
<td>Confiscation of goods and cash (millions lei)</td>
<td>22,1</td>
<td>2,3</td>
<td>2,4</td>
</tr>
<tr>
<td>Number of criminal complaints</td>
<td>3384</td>
<td>768</td>
<td>804</td>
</tr>
<tr>
<td>The damage calculated (millions lei)</td>
<td>11253,3</td>
<td>2335,4</td>
<td>2527,0</td>
</tr>
<tr>
<td>Value of precautionary measures (millions lei)</td>
<td>4966,0</td>
<td>948,6</td>
<td>920,3</td>
</tr>
</tbody>
</table>

Source: Own processing after NAFA – Official Statistical Bulletin no.4 / 2015

On the other hand, the control activity about tax fraud, conducted by specialized structure of National Agency Fiscal Administration (Fiscal Antifraud General Directorate) reveals an increase in the number of checks and the number of fines, ascertaining the same time, an increase their value and value of the damage calculated by criminal complaints made (Table 4).

**Table 4 NAFA – The fiscal control activity**

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2015</th>
<th>Fourth quarter 2014</th>
<th>Fourth quarter 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of checks carried out</td>
<td>42936</td>
<td>6294</td>
<td>11335</td>
</tr>
<tr>
<td>Number of fines applied</td>
<td>30835</td>
<td>2646</td>
<td>8114</td>
</tr>
<tr>
<td>Value of fines applied (millions lei)</td>
<td>145,7</td>
<td>13,3</td>
<td>42,2</td>
</tr>
<tr>
<td>Confiscation of goods and cash (millions lei)</td>
<td>228,9</td>
<td>58,9</td>
<td>136,8</td>
</tr>
<tr>
<td>Number of suspended activity</td>
<td>849</td>
<td>282</td>
<td>87</td>
</tr>
<tr>
<td>Number of criminal complaints</td>
<td>810</td>
<td>235</td>
<td>167</td>
</tr>
<tr>
<td>The damage calculated (millions lei)</td>
<td>4700,3</td>
<td>1740,2</td>
<td>1892,5</td>
</tr>
<tr>
<td>Value of precautionary measures (millions lei)</td>
<td>2590,2</td>
<td>783,6</td>
<td>692,9</td>
</tr>
</tbody>
</table>

Source: Own processing after NAFA – Official Statistical Bulletin no.4 / 2015
Each of the methods discussed have advantages and disadvantages, conditionings and limits. Therefore, when analyzing the dynamics of tax fraud is advised caution when interpreting the data.

**Conclusions and recommendations**

It is widely recognized that tax evasion and fraud are the main obstructs the mobilization of tax revenue, tax revenue losses caused by them having various etiologies.

In terms of time, between the occurrence of fraud mechanism, detecting fraud (analyzing and processing information to estimate its size and structure) and adopting measures to combat this phenomenon, are interposed time periods larger or smaller. Reducing these periods is related to the capacity and efficiency of tax administration to prevent and to correct fiscal behavior toward desirable models.

Regardless of the context (causes) that generate tax fraud mechanisms, the ultimate goal of fraudsters is the same: total or partial avoidance of taxation, respectively obtaining public funds unduly. Analysis of operations generating fraud allowed the identification some more prolific areas of fraud mechanisms (movement of goods, formation and distribution of businesses income and labor taxation) or some more arid areas (taxation for buildings, lands and means of transport).

Because of the broad scope of applicability of taxes (general and special) on the movement of goods, the complexity and extent of transactions, permissiveness and interpretability of the regulatory framework, the fraud mechanisms were “perfected” and diversified. According to estimates by the Fiscal Council, performed on the data provided by INS, mostly tax evasion is attributable to value added tax. Mechanisms of fraud uncovered in economic practice (internal and external) were based on acquisitions undervalued, evasion of tax, illegal deduction of VAT, illegal VAT reimbursements etc.

In terms of excise duty, the fraud mechanisms are based on failure to register or partial registration of sources of income in the accounting records, decreasing the tax base, using lower odds than real ones or misstating the real operations with excise goods under cross-border traffic.

In the taxation field of profit, the most frequent means of evading tax obligations is the artificial increase of expenses and the decrease of tax base (by failure to integral register of income obtained or by transferring taxable income to the newly established entities within the same group, or by framing incorrect in the period of exemption).

In regard to labor taxation, the fraud mechanisms are pursued on two levels: black labor and transferring or hide the incomes.

The research of fraud mechanisms must not omit the tax optimization mechanisms. That is because the declared intentions of tax optimization may serve as fronts for tax fraud.

In matter of tax fraud, can be admitted only estimates, but not accurate assessments. This aspect obliges for caution in interpreting the data. The estimation of tax evasion is based on retroactive quantitative and qualitative analysis. The most relevant methods for estimating tax fraud is based on fiscal control and statistical analysis, economic and sociological. At the opposite pole are positioned methods based on logical assumptions. Due to the complexity and diversity of taxable transactions, are frequently used surveys, respectively, questionnaires.

Due to its negative consequences, the tax fraud has been and will remain one of the most discussed economic and social phenomena in doctrine and practice fiscal and its eradication is practically impossible.

**Limitations and future directions of research.** The study is a synthesis of recent research results in the field. To overcome this limit, in future research, we consider the
realization of own estimates, relevant, about dynamics and structure of tax fraud in periods of growth, stagnation and economic decrease respectively pre and post crisis.

References

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