

# The Tax Avoidance in Bulgaria: the Human Capital Approach

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## I. INTRODUCTION

Every taxpayer faces a serious dilemma when he has to answer the question: "What part of my income shall I declare in my tax declaration?" According to the various answers to that question we can distinguish three major types of taxpayers:

- completely fair taxpayers who meticulously declare the full extent of their yearly incomes;
- not completely fair taxpayers who use various instruments for legal tax avoidance plus some ways of tax evasion thus reducing their overall personal tax base;
- entirely unfair taxpayers who either do not declare any incomes or declare non-taxable income levels.

The present research aims to investigate the processes of tax avoidance from a new point of view - the concept of tax avoidance as a form of protection of investment incomes by the rational investors forming human capital. According to this theory the society has certain rights on the individual incomes but only to the extent of the percentage of utilized public investments for creation of human capital through the public educational system. When there is equilibrium we may assume that expenses on public education as a form of human capital formation shall be shared equally between the individuals and the society. Thus we may distinguish the following two theoretical models:

1. If the financial benefits from the education of a certain individual measured through the difference between incomes for positions requiring higher educational degree and those for position that do not require such a degree are shared equally between the individual and the society then the pay-back period for both of them will also be equal;
2. If the financial benefits from the education of a certain individual measured through the difference between incomes for positions requiring higher educational degree and those for position that do not require such a degree are not shared equally between the individual and the society then the pay-back period will be shorter for the individual to the extent of excess revenue that remains for that individual and vice versa.

As a result we could establish a matrix of combinations

where

1. EFC<sub>i</sub> - individual educational financial costs;
2. EFC<sub>s</sub> - social educational financial costs;
3. EFB<sub>i</sub> - individual financial benefits;
4. EFB<sub>s</sub> - social financial benefits

Table 1

<b>Combinations for distribution of the financial costs and benefits from the human capital formation</b>			
Distribution of costs	Distribution of benefits		
	E <sub>Bi</sub> >E <sub>Bs</sub>	E <sub>Bi</sub> =E <sub>Bs</sub>	E <sub>Bi</sub> <E <sub>Bs</sub>
E <sub>CI</sub> >E <sub>CCs</sub>	1 equilibrium	2 non-equilibrium in benefit of the society	3 non-equilibrium in benefit of the society
E <sub>CI</sub> =E <sub>CCs</sub>	4 non-equilibrium in benefit of the individuals	5 equilibrium	6 non-equilibrium in benefit of the society
E <sub>CI</sub> <E <sub>CCs</sub>	7 non-equilibrium in benefit of the individuals	8 non-equilibrium in benefit of the individuals	9 equilibrium

As we can see from the above table the diagonal combinations (those in the 1<sup>st</sup>, 5<sup>th</sup> and 9<sup>th</sup> quadrants) express equilibrium states. The other combinations express misbalance that goes to extremes in the 3<sup>rd</sup> quadrant (extreme misbalance beneficial to the society) and in the 7<sup>th</sup> quadrant (extreme misbalance beneficial to the individual). We may also point out that:

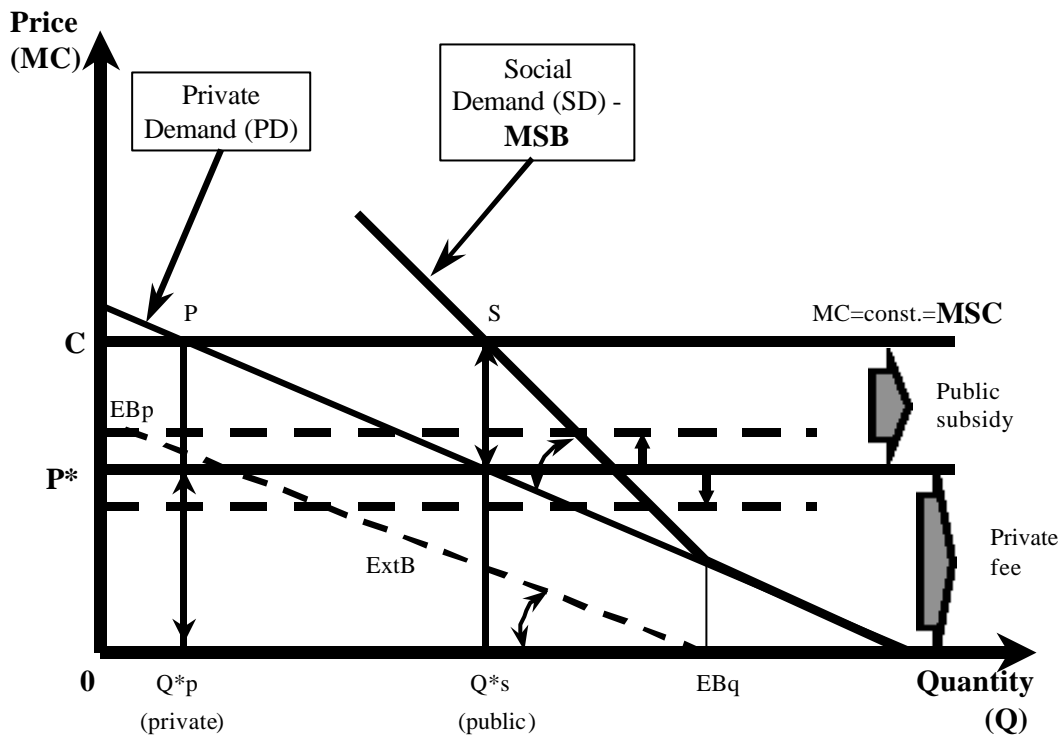
Firstly. The non-equilibrium combinations in the 2<sup>nd</sup>, 3<sup>rd</sup> and 6<sup>th</sup> quadrants are most typical when the state organizations (administrative bodies) have superior position than those of the citizens. Under those circumstances the rational individual is motivated to avoid taxes by the misuse of rights on the incomes generated by the individually owned human capital by the society.

Secondly. The non-equilibrium combinations in the 4<sup>th</sup>, 7<sup>nd</sup> and 8<sup>th</sup> quadrants are most typical when the state organizations (administrative bodies) have weak position than those of the citizens. Usually under those circumstances the tax rate is below the level, which motivates for tax avoidance.

According to the public finance theory the education is a mixed good with non-competitive characteristics. Such a good could be missed from certain number of citizens. The reason for such decisions is related with lack between the real investor in education and real benefit-taker. The benefits from education could be obtained by the individuals different from the individual in who is invested through education. Otherwise, because the owner of the education as a good is the private person, more precisely the education could be accept as a private good with externalities.

Certain private goods with externalities could be produced according optimality criteria. The main aim of the model is to offer optimal distribution of all human capital formation costs between all benefit-takers. Such a model will decide where will be the exact location of the point of competitive equilibrium between education demand and supply. Otherwise, were to locate the point fulfilling the requirements of Pareto optimality - where the marginal public benefits are equal of the marginal public costs. But because the marginal public benefits are cumulative expression of all benefits generated as a result of the human capital formation through education we will find how to distribute optimally all related costs for investments in human capital formation (see fig. 1)

## Non-equalities in the model for optimal distribution of the costs for the human capital formation



**Fig. 1**

If we suppose that the society covers the provision of 35% of all funds needed for producing one unit of human capital (the line  $F^*C$ ), later with the help of the income tax the society should accumulate only the amount equal to those 35% initially invested in human capital formation through education.

If political or other reasons lead to a situation when the state will try to use the fiscal system in order to cash in incomes that will be above the accepted level then the ordinary taxpayer will be right in undertaking all relative steps to avoid taxes.

In other words when the introduction of the tax extends the payback period of human capital investments then the rationally acting individual will take all measures to reestablish the initial payback period (under the conditions of a perfect market).

## **II. HYPOTHESES, DATA AND METHODOLOGY**

### **1. Testable Hypotheses: the Human Capital Approach on Tax Avoidance**

Under the conditions of a high unemployment level and a high business risk, the firms and their employees undertake common, low-conflict actions for the reduction of fiscal and insurance payments related with labor contracts. The level of introduction of this process is counter-proportional function of the size of the firm as a taxpayer evaluated by the number of its employees. As supporting

factors we can find the influence of lack of local trade unions, policy of fixed-term labor contracting, etc.

## 2. Data Description

The research organized in the summer of 2001 of Bulgarian private firms clearly shows the importance of HR as a factor for business success. We received 82 replies to the more than 400 distributed questionnaires.<sup>1</sup>

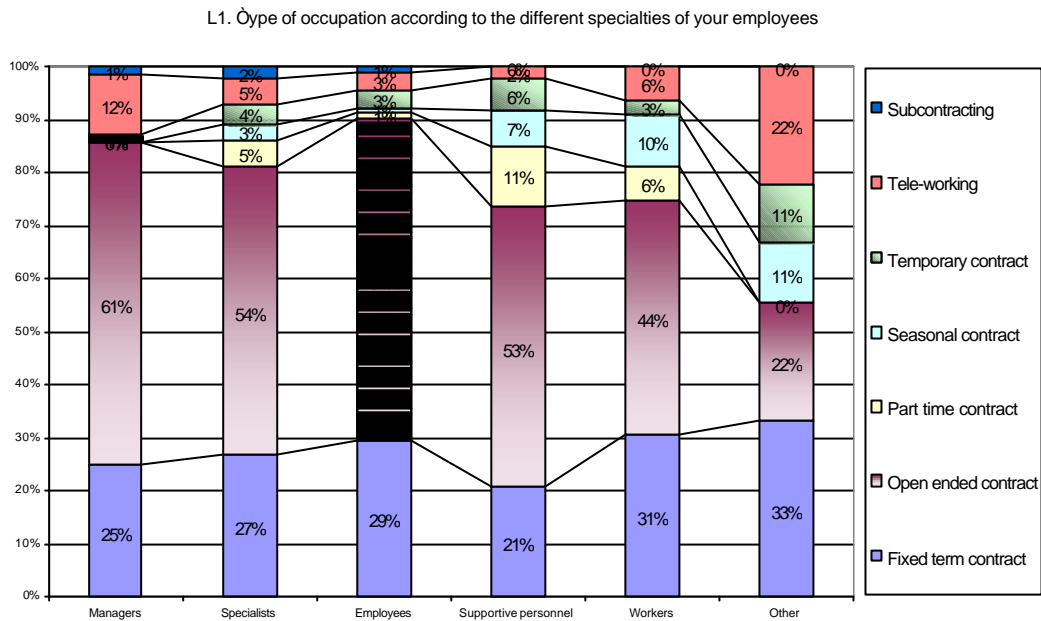
The full distribution of answers is shown below:



<sup>1</sup> The research was organized in the framework of the program INTERREG M 6.3.



**Fig. 2**



**Fig. 3**

Mode characteristics of the sample are related with the firms:

- registered as Joint Stock Company (near fifty percent);
- established in the period 1996-1998 (over 27 percent);
- operated in industry sector (manufacturing, engineering, etc.) - over 72 percent;
- with 100 % private ownership (86 percent from the sample);
- medium sized with personnel between 50 and 199 persons (42 percent);
- without trade union (58 percent);
- without introduced system for quality control (59 percent);
- with very much confidence (over 50% of responds) in the contribution of HR management for the success of the firms business;
- with organized HR department (53 percent);
- with executive directors who are in charge for the HR Management (53 percent);
- with open ended contracts for occupation of managers (61 percent), specialists (54 percent), employees (61 percent), supportive personnel (53 percent) and workers (44 percent) and with fixed term contracts for the personnel with other type of responsibilities (33 percent).

L2. Number of cases of usage of types of occupation according to the different specialties of your employees

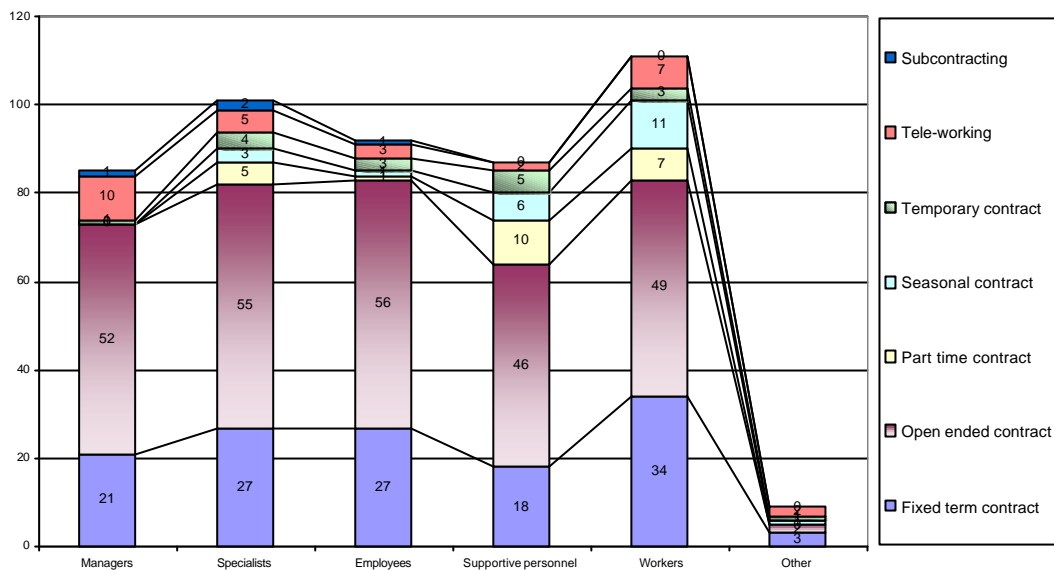


Fig. 4

### 3. Methodology

The methodology of the research is based on the establishment of the relationship between:

a) The distribution of fixed term contracts according to the hierarchy status of the employee in some small, medium and large companies in Bulgaria:

$$(1) Y_{FTC} = a + bX_{HIERARCHY},$$

where: Y = application of fixed term contracts (FTC);

X = hierarchy status;

b) The distribution of fixed term contracts according to the existence of local trade union:

$$(2) Y_{FTC} = a + bX_{UNION},$$

where: Y = application of fixed term contracts (FTC);

X = the percentage of registered unions at the firms from the sample;

c) The size of the company according to the number of employees and the official taxable income according to the corporate policy on labor contracting and social insurance:

$$(3) Y_{INCOME} = a + bX_{SIZE},$$

where: Y = official taxable income established on insurance bases;

X = size of the company according to the number of employees;

In order to test the above hypothesis for our sample of Bulgarian firms we apply correlation and regression analysis. Initially the firms from the sample are distributed in five groups according to the number of employees:

I	Small firms (up to 49 employees)
II	Middle firms - category 1 (50-199 employees)
III	Middle firms - category 2 (200-349 employees)
IV	Middle firms - category 3 (350-499 employees)

### III. ANALYSIS OF KEY RESULTS

The key results of the survey are related to the three main relationships indirectly expressing the size and the reasons for tax avoidance in Bulgaria. From figures 5 and 6 it is seen that distribution of fixed term contracts is a function of the size of the company and the hierarchy status of the employees.

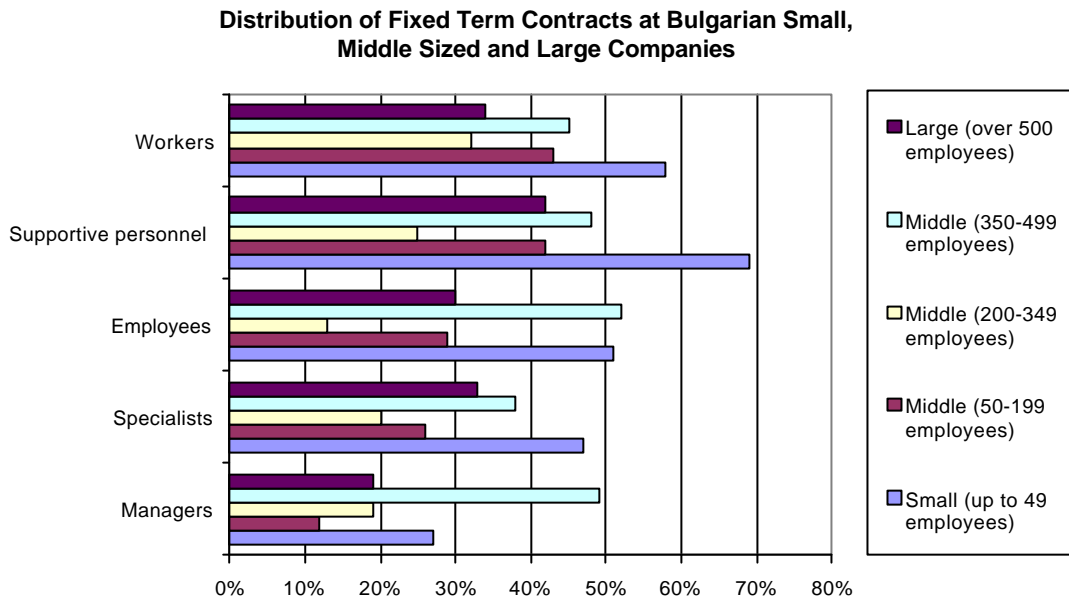


Fig. 5

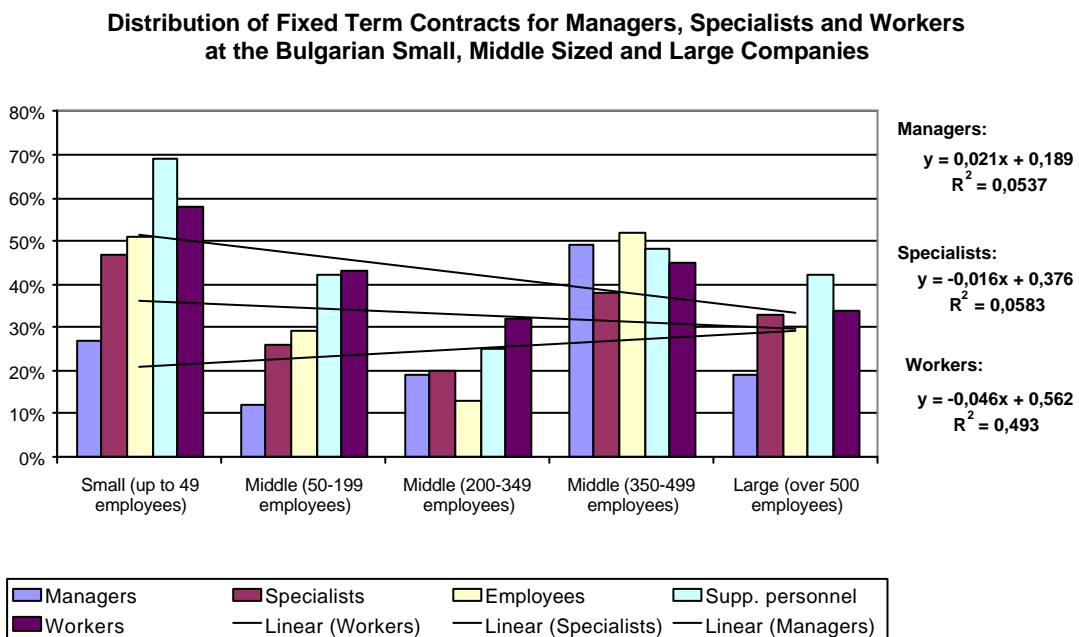
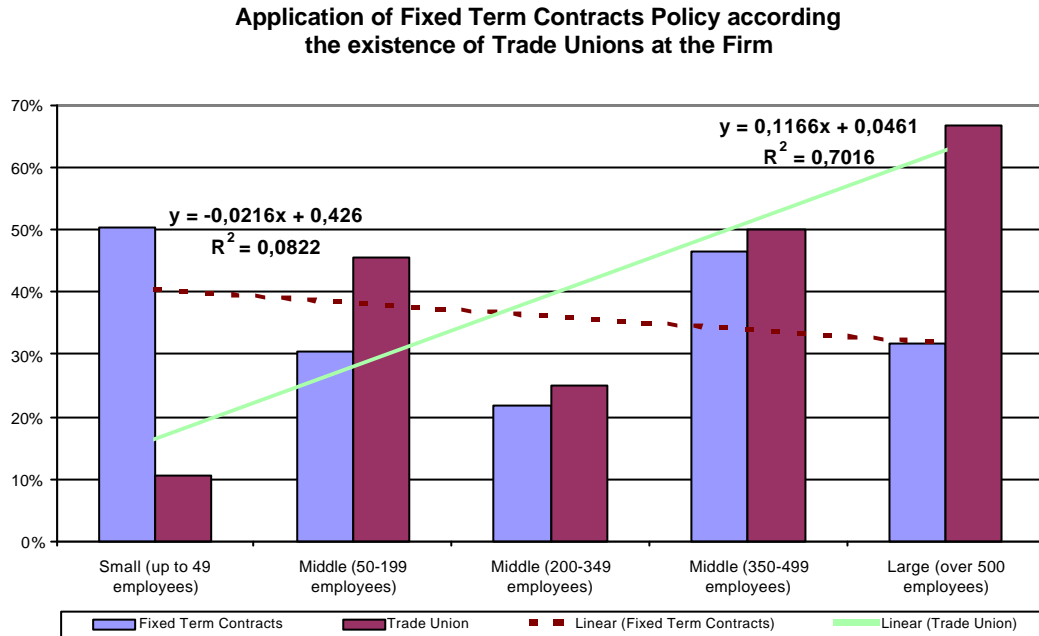


Fig. 6

According to the size of the company for the categories specialists and workers the regression line has negative beta ( $\beta = -0,016$  for specialists and  $\beta = -0,046$

for workers). Otherwise for the category managers the regression line has positive slope. The explanation is related to the enlargement of the use of JSC legal form for registration relative to the size of the company. All governing bodies are usually contracted under fixed terms.

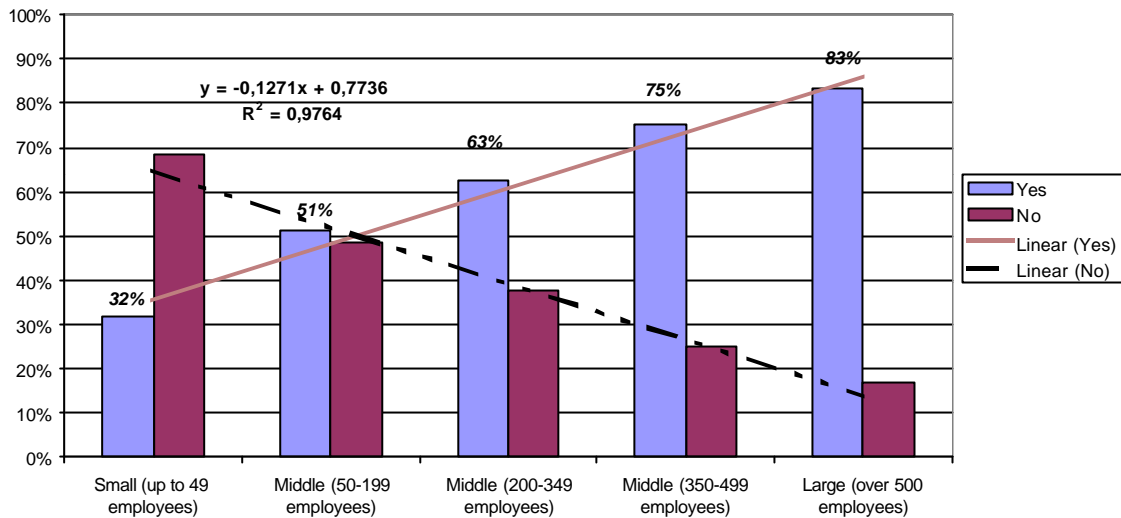


**Fig. 7**

The existence of trade union is also an important factor for introducing a policy for fixed term contracting as a tax-avoidance factor. The larger the company the better represented the trade unions are and vice-versa (the trendline confirm our hypothesis with  $R^2=70\%$ ).



**Does your company offer pension insurance (public & private)  
to its employees on taxable income bases?**



**Fig. 8**

The final and most representative figure for the purposes of the research is fig. 8. After the question “Does your company offer pension insurance (public & private) to its employees on taxable income bases?” we were able to confirm the relationship between the size of the company and the policy of insurance of the company employees on non-taxable bases. The intensity of such policies of tax avoidance declines with 13% for every subsequent category of firms according to the “number of employees” criterion. 98% of the variation of the observed trend can be explained by changes in company size. The remaining 2% of the variation cannot be expressed with the above factor influences.

**IV. SUMMARY AND CONCLUSIONS**

The research confirms the intensity of the use of the policy of tax and insurance avoidance in Bulgaria. This is particularly obvious for SMEs. Some of the major driving forces of the introduced trends can be explained as follows:

- the employees agree with the introduction of corporate policy for tax and insurance avoidance because of the unemployment risk. Such a risk directly reduces the return rate from the investments in human capital formation through education.
- the lack of trade unions allows the management and accounting staff to increase the use of tax avoidance with or without the agreement of the employees.
- the reduced payments towards the state and social insurance funds free resources for new corporate investments and for certain increase in the disposable income of the personnel, ceteris paribus.
- due to the small size of the companies the local tax offices perform tax check-ups quite rarely, thus reducing the probability of tax-avoidance revealing to an

acceptable for the corporate management risk level. Otherwise the larger taxpayers (the firms with over 350 employees) are very often surprised with check-ups from the tax office. As a result the large companies prefer to pay fair level of salaries, income taxes and social insurance rather than penalty payments.

- the size of tax and insurance avoidance cases in Bulgarian private firms varies from 17% to 68%.