Interactions between the shadow economy and the social security system

T. Gankova – Ivanova
gankova@tugab.bg

Abstract
The present paper analyses the interaction between the shadow economy and the social security system. It does not go into detail in the discussion about the nature, scope and manifestations of the shadow sector. The study is focused on the mutual influence of the shadow economy and various areas of the social security system – unemployment insurance, health insurance, pension insurance and social assistance. The aim is to show that the development of specific strategies of control and sanctions against the expansion of the shadow economy and measures for combating it must be directed to its causes.

Keywords: shadow economy, social security system

Introduction
Over the last decade, the phenomenon of shadow economy has attracted a growing interest in economic science and practical economic policy. According to estimates of experts from the Bulgarian Academy of Sciences, the size of this sector gravitates to about 40% of GDP. Undisputed is the fact that the shadow economy is harmful for the country as it is associated with evasion of tax and social security contributions. Its most adverse effect is the distortion of the market environment, as well as the deformation of competition and market mechanisms.

The reasons for the growth of the shadow sector indicated in specialized literature are the great tax burden and the heavy social security contributions. Deregulation, lowering taxes and the social security reform are seen as measures to combat the causes of the shadow economy. [1], [2], [3], [4], [9]. The economic literature lacks an unambiguous definition of the phenomenon of shadow economy. [9] This paper does not go into detail in the discussion about the nature, scope and manifestations of the shadow sector. The study is focused on the mutual influence of the shadow economy and various areas of the social security system – unemployment insurance, health insurance, pension insurance and social assistance. The aim is to show that the development of specific strategies of control and sanctions against the expansion of the shadow economy and measures for combating it must be directed to its causes.

Macroeconomic effects of the shadow economy
From a macroeconomic point of view, the existence of the shadow sector has both negative and positive effects. The negative are as follows: First: Distortion of the statistic data due to their incomplete and imperfect coverage, as well as their conversion into an unreliable basis for reforming economic policy; Second: Evasion of taxes and compulsory social security contributions by both the very worker “under the table” and his employer; Third: Circumvention of labour and social security legislation by companies who hire and employ workers “under the table”; Fourth: Emergence of social costs as a result of the distortion of competition through the provision of services in the shadow sector; Fifth: Circumvention of the regulations for consumer protection through services and activities in the black market (reduced market transparency, elimination of requirements for warranty and service).

The shadow economy also has positive aspects, which show that fighting it at all costs is undesirable: First: A greater flexibility due to avoiding some limitations of the labour legislation; Second: The effect
of automatic stabilization as a result of the expansion of supply through the black market in an unfavourable conjuncture when unemployment, the lack of possibility for working overtime and the early retirement force those who are affected to turn to the shadow sector. The incomes from the black market have a multiplication effect when spending them in the official market; Third: Performance of activities aimed at satisfying certain needs that the market is still or no longer able to offer (cleaning of houses, work in family farms, babysitting, private tutoring for students, etc.)

The listed positive and negative effects do not claim to be exhaustive, but they show the relationship between the shadow economy and the social security system. On the one hand, the traditional line of argumentation focuses on the evasion of compulsory social security contributions and the abuse when applying for social assistance. From the point of view of the social security system, this negative correlation between the shadow economy and the social security justifies the need for suppression of the shadow sector. It is necessary, however, to analyze to what extent it is responsible for these financial problems and to determine whether it can unload the social security system. [7] On the other hand, some authors express the opinion that the structure of the social security system influences the occurrence and the further existence of the shadow economy [5], [6], [10]. This opposite direction of the influence is essential since any attempt to expel the shadow sector would be futile in economic terms until there exist the rooted in the social system reasons for turning to it.

Effects of the shadow economy on the social security system

A central theme of criticism in the scientific discussion is the evasion of social security contributions. Other conditions being equal, this argumentation, which is limited to the requirement to reduce the shadow economy, should be accepted. However, given the interaction and the links between the shadow economy and the official economy, this simplistic approach is not economically valid. On the one hand, it has not been established with certainty whether the same activities will remain in the official sector if a ban on the shadow economy is enforced. On the other hand, the suppression of the shadow sector may limit some interrelated activities in the official sector, so that the social security contributions as a whole might even fall.

Unemployment insurance

If the shadow economy restricts the employment in the official economy, then the contributions for unemployment benefits will also fall. This reducing incomes effect is opposed to a relief on the expenditure side when the unemployment benefits are lower because the income base is lower due to the existence of parallel activities conducted in the shadow economy. Some people, who permanently cannot find employment in the official sector, are constant recipients of benefits. In the long run, the simultaneous receiving of these payments and working “under the table” during unemployment does not necessarily burden the financial system of the unemployment insurance if the associated with the work “under the table” willingness to work, respectively willingness for qualification improvement, increases in the long run the chances of finding a permanent job in the official economy.

Health insurance

In terms of the health insurance system, the activities within the shadow economy also entail a reduction of the social security contributions since the workers “under the table” get an income that is not reported. The health insurance payments, however, in their most part do not depend on the size of the individual
Interactions between the shadow economy and the social security system

1st International Conference on Business Management

The financial condition of the health insurance may be exacerbated as far as the activities in the shadow economy increase the risk of diseases and lead to additional insurance payments.

**Pension insurance**

The activities in the shadow economy reduce the basis for calculating pension contributions and lead to their decline. As a result of the unreported employment the lower bases for calculating the pension contributions during the labour activity lead to a lower initial size of the pension. If the increased activities in the black market cause a lower demand for workforce in the official economy and as a result a less pay rise and a higher unemployment rate, then the rate of pension increase for all pensioners will be lower and the dynamics of expenditure will be relaxed.

**Social assistance**

In the field of social assistance, the evaded incomes from the shadow economy with the missing regular income can justify claims for receiving social assistance. Such an abuse is a result of a falsely reported need, which burdens primarily the municipal budgets.

**Impact of the social security system on the shadow economy**

The autonomy of the economic actors when making decisions in market environment includes the possibility for them to perform part of their activities not in the official market, but to transfer them to the shadow sector. Rational decisions will lead to activities in the shadow economy when for instance the commitment of an illegal black market observing the likelihood of detection and subsequent sanctions generate a net benefit. From the point of view of the present subject of research, it is interesting whether and to what extent the introduction or modification of legal provisions in the field of social security influences the individual decisions for increasing the activities in the shadow economy. The explanatory content of such a rational statement must, of course, be approbated through empirical research.

**Social security contributions**

The contributions for pension and health insurance and the unemployment benefits are generally tied to the gross income of the insured person and increase proportionally with the income. From the perspective of an employee, the social security contributions to be paid lead to a decline in the net income and thus to a decline in purchasing power along with the decline caused by the income tax. Under equal other conditions, the changes in the social security contributions will have the same effect as the changes in the rates of the income tax.

The cumulative total burden of the compulsory public debts means on the one hand a higher average tax burden to the net tax burden of the income tax. Since, in terms of the income tax scale, the social security contributions are deducted from a relatively low level in relation to the tax burden of the income tax, the burden of the social security contributions is relatively high at the lowest incomes. As a result of the possibility for deduction of social security contributions from the tax base of the income tax, the pressure of the social security contributions’ burden decreases with the income increase. After reaching the limit of the contribution the relative weight decreases as the social security contributions remain constant. Hence the aggregate weight of the deductions in respect of the income tax burden increases absolutely, but the
difference between the lowly and highly burdened recipients of income is significantly reduced. Therefore, the progressive impact of the income tax is reduced by the social security contributions.

This limitation of the social security contributions’ impact becomes clearer when analyzing the marginal tax burden for recipients of different incomes. If the possibility for deducting social security contributions is initially excluded, then the proportional structure of the contributions will increase the marginal weight of the contributions of all payers with the same absolute rate, but in any case only to the maximum basis of the contributions. Then the marginal burden of the social security contributions jumps to zero and the cumulative burden of deductions coincides with the marginal tax rate of the income tax. This progression limiting effect is further reinforced by the possibility to deduct social security contributions from the tax base. The progression limiting impact of the social security contributions is essential to the mutual influences between the shadow economy and the social system as far as the aggregate tax burden from compulsory taxes and contributions even for very low income causes a net loss of purchasing power by 30 – 40% and thus influences the economic decision of the taxpayers.

It is known from the economic theory of the endogenous solutions “working time-leisure time” that the effect of the marginal tax rate change on the labour supply is a priori indefinite as the discouraging substitution effect can be weakened by a stimulating effect of the income or even can be compensated by it (inverse reaction of labour supply). This „catch of the tax” is characteristic primarily for low-income receivers and is a consequence of the low utility of the leisure time as compared to consumption. Exactly in this segment of employment it could be achieved by simultaneous employment in the shadow sector. The economic incentive for shifting to the shadow economy is as stronger as to a greater extent with the deletion of the deductions related to the gross salary, in the black market, a structure arises, in which workers, company and/or user can share the illegally concealed or legally avoided amount of social security contributions.

Unemployment benefits

In accordance with the equivalent principle, the unemployment benefits are tied to the amount of the salary before the onset of unemployment, so that the commitment in the shadow sector will become economically attractive when the risk of job loss is very small or when the salary is so high that the maximum payment as compensation in case of job loss has been already reached.

If the unemployment is a fact, then the utility of the leisure time falls so heavily that even the very low-paid employment becomes attractive since it does not entail suspension of unemployment benefits. As in this case the possibility for formal employment is eliminated, the only remaining is the work “under the table”, the unpaid mutual aid between neighbours, friends and relatives, as well as the activities in the family farm or household. The transition to the shadow economy in case of unemployment will increase its duration as the return to the official labour market is rational from the economic point of view only when the net salary is higher than the sum of the unemployment benefit and the incomes from the shadow economy (taking into account the risk of detection and respectively sanctions).

Health insurance

Payments from health insurance are largely independent from the amount of the contribution. A special element of health insurance is the insurance protection for unemployed members of the family. Unlike the working family members, who can only count on health protection while maintaining the formal terms of employment, in the cases when insuring officially unemployed family members, an incentive arises to work in the shadow economy without paying social security contributions and to take advantage of the
full package of health insurance. Hence, the insured family members – mainly women – are ready to take formal terms of employment only at very high gross salaries, and this leads to an expansion of the shadow sector.

**Pension insurance**

Unlike the health insurance and the unemployment benefits, the pension payments are more tied to the contributions paid and thus they reduce the incentive for evasion of social security contributions. The implications for the shadow sector arising from the expenditure side of the pension system lie primarily in lowering the retirement age as a result of the early retirement due to the large number of insurance years and as a result of the special social programs for unloading the labour market. The induced by these legal provisions increase of leisure time of the affected fully employable pensioners increases the potential for activities in the shadow economy.

An incentive exists for the retirees to turn to the shadow economy in case of opportunity for receiving both a pension and an income from work. In any case, it is doubtful whether an additional activity in the shadow economy will be rejected, if the income from work increases, all the more that the incentive for evasion of social security contributions and taxes is available. By working in the shadow economy the receivers of social assistance can also try to improve their own well-being without giving up the social assistance benefits.

**Conclusions**

The present analysis does not offer a secure economic justification of the specific interactions between the social security system and the shadow economy. However, it shows that, if the purpose of the economic policy is to suppress, to limit the shadow economy mainly through increased control, it is more likely not to take into account either the multiple layers of the phenomenon of shadow economy, or the economic models of influence arising from the tax and social-legal regulations to achieve success.

Except for that, a strategy of social policy aimed at solving the financial problems of the social security system by combating the shadow economy has little prospect for success until more attention is paid to the economic models of influence of the legal provisions in the field of social policy and the impact of the marginal tax rates on the social security contributions. The economically sound estimation of the interrelations and influences, of the interaction between the shadow economy and the social security system needs an empirically justified verification. It would be useful to make a quantitative analysis of the elasticity of decisions “working time – leisure time” in terms of salaries and the elasticity of the decisions for saving in terms of interest for the different types of households. Based on this, empirical testing should be done for those social groups, who would be most prone to work in the shadow economy. Without an adequate empirical economic justification, a danger dictated by the budgetary requirements exists that the fight with the shadow economy through control and reduction of social security payments will become a Pyrrhic victory which compensates the suppression of the shadow economy with high social costs, but this does not lead to the recovery of the social security system in the long run.

**References**


Interactions between the shadow economy and the social security system


Schmahl, W., /Prinz, Aloys, (1986). Gibt es positive Wirkungen der Schattenwirtschaft auf das soziale Sicherungssystem?, Arbeitspapier 189, SFB 3, Frankfurt/M.

