

**SHADOW ECONOMY IN BULGARIA:
SMALL AND MEDIUM ENTERPRISES & TAX EVASION**

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SHADOW ECONOMY - GENERAL CONCEPT-

Shadow economy is a global phenomenon and sometimes even much more important in the developed world than the developing countries.¹ Especially very recent allegations in the US about the liability of auditing companies revealed these facts. It has been reported in the popular press that statisticians assume in their analyses approximately 9 trillion USD of world-wide output is not reported,² largely due to the existence of the shadow economy³. Friedrich Schneider⁴ concludes that shadow activity is nearly 15% of the officially reported GDP. His assumptions are the result of research carried out in 76 developed and emerging economies. Thus the informal sector can be as important as the official economy, especially when it accompanies the economic development of the transition countries.⁵ According to an estimate made by Johnson, Kaufman and Zodia-Lobaton⁶ the shadow economy in the transition countries varies between 7 - 43% for the period 1989-1993. So the transition process in ex-communist countries would be a fertile ground for SE.

Till today there is no precise definition of the shadow economy. Friedrich Schneider and Dominic Enste define it as a multitude of activities that are not reported by the official statistics. According to Feige⁷ the development of the shadow economy is due to regulations and rules imposed on business by the state. De Soto⁸ has also contributed to the explanation of the shadow economy phenomenon. He holds that the quality of regulations as well as their enforcement are of great importance for the development of the shadow economy and emphasises the change in the attitude of the economic agents towards the institutions and the legislation,

¹ Editor Portes Alejandro, *The Informal Economy Studies in Advanced and Less Developed Countries*, The John Hopkins University Press,

² The Shadow Economy, *The Economist*, August 28, 1999, Vol. 352.

³ IMF estimated global GDP in 1998 was 39 trillion USD, almost 9 trillion USD ($9 \cdot 10^{12}$) of activity equivalent approximately to the American output went undetected, *ibid*.

⁴ Schneider, Friederich and Dominic Enste, *Shadow Economies Around the World – Size, Causes, and Consequences*, Jena, 1999.

⁵ Latouche Serge, *In the Wake of the Affluent Society*, Zed Books Ltd, 1989

⁶ Studies of Illegal and Unreported Activity (Michigan: WE Institute for Employment Research, 1996) and *Journal of International Affairs*, Vol. 53.

⁷ See: Philip Smith, *Assessing the Size of the Underground Economy. The Canadian Statistical Perspectives*, *Canadian Economic Observer*, Catalogue number 11- 010, 18 March 1994.

especially in the transition countries. In his book 'Other Path' De Soto even defines shadow economic activities in Peru as a movement to more liberal economic structure which operates much better than very inefficient public sector. Weck and Frey more concentrated on taxation and defined shadow economy as the part of the income creating (value adding) economic activity which is presently not included official statistics.⁹ Taxation and Shadow economic activity relation for Bulgaria will be discussed in more detailed version in following parts of the study.

Another restriction in the definition of irregular economy is the economic systems in countries. Especially ex-communist countries have different definition of shadow economy. The term 'second economy' has first used by Karol in order to reveal the difference of soviet-type economic structure.¹⁰ During the transition even new ethic codes emerged in these countries and informal sector created some transaction costs as well.¹¹

Shadow economic activities have a lot of consequences on the economic structure of countries, either positive or negative. These are shortly listed below¹².

Negative impacts;

- **Unreal official economic indicators**, which means that macroeconomic variables such as GDP, inflation etc are not reliable and policy makers are not provided with reliable data to cure economic problems.
- **Unfair competition for registered economy**: for those who are fulfilling requirements of tax authority will incur higher production costs compared to firms operating in unregistered economy.
- **Ongoing budget deficits**: High SE means low tax base which in turn decreases government revenues in budget.

⁸ See: de Soto, Herhando *The Other Path*, NY: Harper & Row, 1989. De Soto's formulation is based on the cases formulated in the context of Peru's economic development (that Peru is governed by a set of laws that are relatively less efficient than those that guide the informal sector).

⁹ Weck Hannalore, Frey Bruono, *Public Finance and Quest for Efficiency*, Proceedings of 38th Congress of the International Institute of Public Finance, Copenhagen 1982 pp 313-327

¹⁰ Dallago Bruno, *The Irregular Economy*, Dartmouth Publishing, 1990, p. 6

¹¹ See. Radaev Vadim, *Formation of New Markets in Russian*, Transaction Costs and Business Ethics, Paper presented at 14th World Congress of Sociology, Montreal 1998

¹² For further reading, İkız Ahmet Salih, *Shadow Economy and Its Impacts on Economic Growth*, unpublished Ph.D. Dissertation, Dokuz Eylül University, Turkey, 2000

- **High public sector borrowing rate:** Alternative financing of government expenses due to insufficient tax collection such as T-Bill and notes would create higher PSBR which in turn make 'crowding out effect'
- **Negative financial structure in social security system.** The net impact of unregistered employment will diminish revenues of social security organizations which in turn weakens the quality of services they provide.
- **Negative impacts on public reconciliation,** which means negative public opinion against government policies.

Although open to discussion SE has some positive impacts such as;

- **Creation of economic boom,** at least in short term due to lack of restriction on production.

- **Increase in labor employment,** which is the case if labor market is operating without any restriction.
- Postpone or decrease the power of public unrest
- Positive effects on economic growth

The positive impacts of SE mainly effective in short term and would have more severe negative impacts in long term.

There are many causes for the existence of the shadow economy, but some of the most important can be readily identified. These are

- 1) **High tax burden:** The very net impact of increase in tax burden on individuals is increase in tax evasion. In fiscal policy it called Laffer Curve restriction. Increase in tax rate after optimal point diminishes total taxes collected due to increase in tax evasion.
- 2) **Weak banking systems:** Bottlenecks in financing the enterprises due to the weak financial intermediaries pushes these business to seek other source of financing mainly in shadow economy.
- 3) **Business regulations and legislation:** Over regulation in an economy and imposing unduly legislative barriers are also give incentives to operate in irregular sector.

- 4) **In-efficiency of government institutions:** Especially in developing countries there is a high red tape in almost all of the governmental institutions in every stage. Thus individuals prefer to keep away from state bureaucracy in order not to face time consuming operations.
- 5) **High unemployment rates:** High unemployment and weak social security system is very lucrative source for shadow employment of masses.
- 6) **Low GDP per capita:** The shadow economy tends to be greater in the developing and transition countries due to more corruption and low incomes.

Main estimation methods of shadow economy have been given as direct and indirect methods. In direct method, the volume of SE is detected by more touchable means, ie. questionnaires, auditing statistics etc. In this study for example electricity consumption level used. Indirect estimation methods are explained under three categories. These are;

- Estimation methods based on national income.
- Estimation methods based on employment rate .
- Estimation methods based on monetary variables.

Since this paper devoted on SE in Bulgarian economy, in following part of the study after this introductory review developments in Bulgarian economy during the transition period and indicators of SE will be shortly discussed.

SHADOW ECONOMY IN BULGARIA – SIGNIFICANCE OF STUDY

On its way to joining the EU Bulgaria has to show strong and sustainable GDP growth to catch up with the lowest income economies in the Union. If research on shadow activities proves a high relative share of shadow economy to official GDP, this finding can reveal a serious resource for economic growth and the number of years needed for convergence to the EU average would be drastically reduced. Government measures can be targeted toward improving the business environment and removing administrative barriers to small and medium enterprises (SMEs). Reducing the tax burden, which is usually associated with the main motive for being in the shadow economy, can decrease the costs for firms to stay in the shadow sector. This will increase the tax base significantly and improve the tax collection ratio. Though these are benefits and costs to informal operations, on

the macro level the total effect of the SE in Bulgaria should be negative. This is because companies cannot use various public and private services. The most obvious example is the tendency to avoid the bank services. This results in reduced volume of sales, especially for exports. While the shadow sector may be quite flexible on local markets, it is less competitive on external markets. The negative impact of the SE on national competitiveness is the main disadvantage for a small economy like Bulgaria, which should have an export-oriented policy. Monitoring key economic statistics, we can point out the following indicators that suggest a high level of the shadow economy in Bulgaria and justify our survey on the subject:

1. The transition from planned to market economy. Following the collapse of the planned economy in the late 80's, the newly established private sector is concentrated in the service sector in the form of SME's. These are characterized by frequent changes of main activities, non-bank sources of financing, short business history and institutional gaps. This makes the work of the NSI (National Statistical Institute) extremely complicated as it practically impossible to cover the fast moving private sector, even if it is official and legally operating. In addition, with the transition to a market economy, the NSI has had to introduce a new system of national accounts and operate in a totally different environment from that which existed under the old regime.

2. In kind production. This is very important in rural areas, but significant in kind production is found also in the big cities, especially in the service sector. It is a traditional phenomenon for Bulgaria and quite typical for planned economies when the quality and variety of goods and services was poor. In depth estimates of the share of in kind production are presented in the annual report of the AEAF¹³ for 1997 and estimate that about 10-20% of household incomes come from in-kind production (20-40% for rural areas and 5-10% for large towns). These activities are difficult to calculate in the official GDP figures, and serious underestimation is likely to exist.

3. Different outcomes from expenditure and income approaches for GDP. One of the indicators for the existence of a shadow economy is the different result that comes from the expenditure and income approaches for measuring the GDP. While in accounting terms these methods should produce equal results, in the case of Bulgaria the approach that sums sectional value added gives growth rates about 2 percentage points lower than the expenditure approach for 1998 and 1999. In other words, the expenditure approach shows 5.4%

¹³ See "Bulgaria 1997 Economic Survey", Agency for Economic Analysis and Forecasting, Sofia, 1998, part 3: "The crowding out effect of the economy in kind over the market economy", p. 28.

and 4.4% GDP growth for 1998 and 1999 respectively, while official numbers are 3.5% and 2.4%. This is probably the consequence of the firms' tax avoidance tendencies to underreport incomes.

4. Aging population and high social insurance burden. The dependency ratio for Bulgaria (the ratio of the pensioners to employees) is very high – the highest of all applicant and member countries of the EU. In combination with the pay-as-you-go pension system the incentives to avoid the social insurance burden are enormous. Typical practice for SMEs is to pay taxes on the legally required minimum wage and deliver the rest of the remuneration unofficially. Though the share of the private sector in gross value added is 65.3% for 1999 and 63.3% in the total number of employees, the revenues to the National Social Insurance Institute amount to much less than 50% (official numbers not published).

5. Currency substitution of the economy. During the financial crises in the early 1990's and 1996-1997 a large share of national savings was transformed into foreign currency. Some of the transactions were made in foreign currencies and the process seems to have a long memory. With the introduction of the currency board just a small part of the de-dollarization took place in the short run. Around 50% of total bank deposits are held in foreign currency, chiefly United States dollars (USD). The prices of real estate are still quoted in USD. USD are still offered in the exchange offices as their rates (adjusted for a variety of commissions and fees) for buying and selling USD is have been continuously below the official rate of the central bank.

6. Geographical situation and cross-border trade. Bulgaria is situated on the junction of many international roads associated with legal or illegal traffic of goods and people. Many unregistered transactions and incomes are not adequately covered in the official statistics, which can be also a factor for the immense supply of foreign currencies.

In following part of the study physical input approach which is used for the estimation of share of SE in Bulgaria explained shortly. Application of this method provided us rough estimate of SE in Bulgaria. This is more macro economic approach for Bulgarian SE and would provide us recent trends of irregular activities during the transition period.

PHYSICAL INPUT APPROACH

For the macro- estimation of the shadow economy in Bulgaria we would like to use energy consumption. It is obvious there is a strong relation between economic activity and energy consumption.¹⁴ So the difference between estimated GDP via energy consumption figures and official GDP would give us the share of shadow economic activity in Bulgaria. In this study we will try to measure the total economic activity level (TA) in Bulgaria by assuming that the electricity consumption in the country is proportional to the total activity TA. Thus, any change in consumption, which is not matched by a corresponding change in the total activity level in the country, should reflect a change in its shadow economy (SE) level. In other words, the growth in the ratio of energy to total activity is an indicator of the growth in the parallel markets of a country. We can then establish a formula for the level of the shadow economy as a percentage of the GDP which we denote by SE.

By our assumption of constant proportion of energy to total activity,

Equation 1

$$TA_n = E_n * \frac{TA_{base}}{E_{base}}$$

where subscripts n and base stand for the base year and the year in question, and E denotes Energy (or Electricity) consumption. We also have

Equation 2

$$SE = \frac{TA - Y}{Y} = \frac{TA}{Y} - 1$$

where Y is the country's GDP, let $SE_{base} = x$ be the fraction of shadow economy of GDP in the base year. Then

Equation 3

$$TA_{base} = Y_{base} (1 + x)$$

$$TA_n = E_n * \frac{Y_{base} (1 + x)}{E_{base}} = (1 + x) * \frac{Y_{base} * E_n}{E_{base}}$$

¹⁴ For more detailed reading on this method, Daniel Kaufmann and Aleksander Kaliberda (1996): "Integrating the unofficial economy into the dynamics of post socialist economies: A framework of analyses and evidence," Washington, D.C., The World Bank, Policy research working paper, 1691.

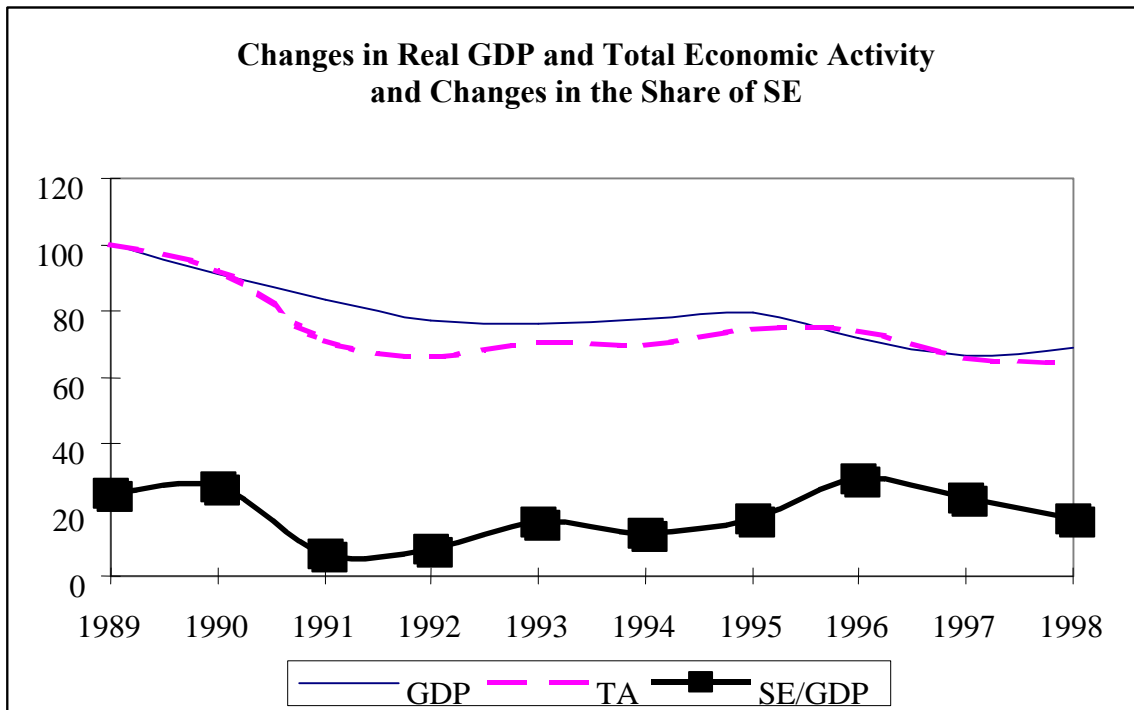
So for the shadow economy in year n we have:

Equation 4

$$SE_n = \frac{TA_n}{Y_n} - 1$$

$$SE_n = (1 + x) * \left(\frac{Y_{base}}{E_{base}} / \frac{Y_n}{E_n} \right) - 1$$

From the formula we see that, *ceteris paribus*, the shadow economy is determined both by the level of the shadow economy in the base year and the ratios of GDP to energy consumption in the base and given years. Note that here the term base year simply refers to the starting year of our calculations, and once we know the shadow economy in a given year, and the relevant statistics for energy consumption and GDP, we can recursively find the shadow economy levels for the subsequent years. Unfortunately, this convenience of easy calculations also underlies the shortcoming of the method. We can never find an absolute value for the shadow economy size without using some exogenous estimate for this size in the base year.



The graph illustrates different levels of the share of shadow economy in GDP respective to the different tabulations. As we see the shadow economic activity peaked in 1996. In the first phase of transition after 1989

there was a slight increase in shadow economy. Like all of the countries in transition during the transition period Bulgarian GDP slightly declined in real terms. In inflationary period till 1997 following overheated economy from 1994, ended with catastrophe and all financial system collapsed which in turn switched the ownership of remaining intermediaries from national to foreign capital. During the running inflation period SE peaked as it is shown on the graph. After the introduction Currency Board Regime which is simply the pegging of local currency lev to hard currency DM then Euro, Bulgaria managed to have one digit inflation figures. So since 1997 Bulgarian economy slightly managed to reduce the share of SE in GDP.

SMALL AND MEDIUM ENTERPRISES & SHADOW ECONOMY

As small and transforming economy the role of SME's is quite important in Bulgaria. In this section after listing main obstacles in business environment their role in boosting shadow economic activity will be discussed.

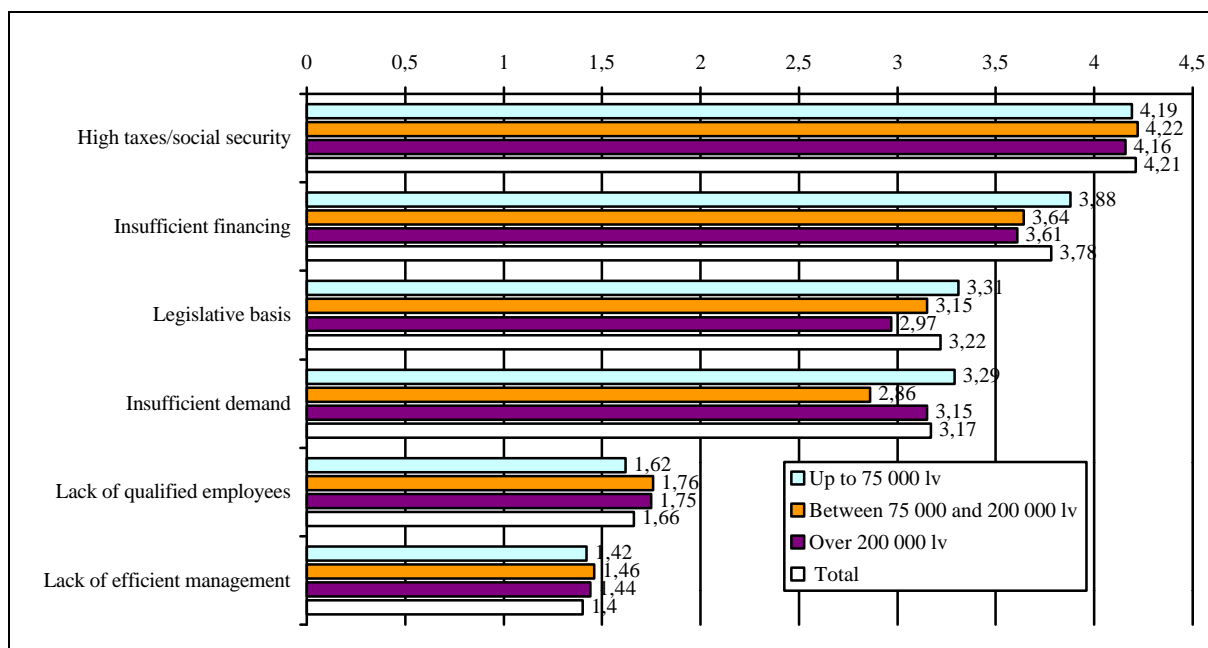
The data collection method was face-to-face interviews with company managers using standardized questionnaires.¹⁵ The firms' managers point out tax burden, social insurance and insufficient financing as major obstacles to development and expansion of businesses. The following graph reveals the following about the main obstacles for business expansions by company size:

- The tax burden is evaluated as the most significant barrier for all types of companies.
- Insufficient financing is a higher barrier for the small than for the big companies, though all firms, especially those with a small turnover, indicate insufficient financing as a problem.
- Legislative basis restricts development of smaller more than bigger companies.
- The lack of qualified employees and management does not significantly restrict either small or big companies.
- Construction, wholesale and retail trade companies indicate insufficient demand as a serious problem.

The licensing and permission requirements usually constitute a substantial part of the cost of operation "out of the shadow." These costs include direct expenses made for obtaining and maintaining the license or permission, as well as the indirect costs in terms of man-days for the firm spent dealing with the issue.

What Are the Obstacles to Business Expansion?

1 - not a problem at all; 5 - very serious problem



EFFECT OF THE TAX AND INSURANCE BURDEN ON THE SHADOW ECONOMY

Tax evasion is one of the main incentives for the existence of the shadow economy. In Bulgaria the larger part of the social security system is based on the pay-as-you-go principle, which does not establish a definite relationship between the payments which are made and obtaining the respective benefits. As social

¹⁵ The author wishes to extend his great gratuities to Institute of Market Economics for providing this statistical

security payments are obligatory, they must be regarded as *de facto* taxation. With healthcare insurance the amount of payments made is not related in any way to services offered for these payments. With pension insurance, there is only a minimal presumed relationship between the payments and the pension, which is received later on. As a result of the constantly increasing age structure of the population, all revenues are allocated to pay out pensions, the average amount of a pension giving no more than 20% of the market capitalization of the average pension insurance. In case of death the payments are 100% lost. Therefore pension insurance is clearly a tax which is paid by the active population and consumed by the population at retirement age. That is why in Bulgaria the tax burden is defined as: "All direct and indirect taxes, pension and healthcare insurance." Comparing the personal income tax rate and the insurance rate we can conclude that the incentives to evade insurance payments are much greater.

In the analysis of the incentives for tax and insurance evasion we have to take into consideration the tax burden as well as the quality of services in tax administration. Ineffective functioning of the tax authorities and unpredictable legislation are factors, which can further increase the cost of reporting tax and insurance payments. But the tax rate, and not the administrative barriers, is a primary incentive for considering the tax burden a major problem, though both are important

A higher tax burden would imply an increase in incentives for tax avoidance and evasion and is a primary cause for transition from the formal to the shadow economy. As a result of questionnaires it is also a major barrier to business development. In this context any economic measures aiming at decreasing the tax burden would positively influence business environment and economic growth. Special attention must be paid to reduction of social security payments, which are some of the most frequently avoided payments. From this study we may conclude that current tax and social insurance system does not contribute to the development of legal business. Thus it is necessary to improve the respective regulations so more companies can operate in the formal sector.

CONCLUSION

The research on the shadow economy using the physical input method indicates that the relative share of shadow economy has fluctuated between 25% and 37% of GDP over the 1989-1998 period. If we use an assumption of 30% SE in 1989, the SE economy in 1998 as a share of official GDP is estimated to be 22%. The

database .

absolute peaks of the shadow activity are calculated for 1990 (32.2%) and 1996 (34.4%). We observed a declining trend since 1996 in the relative share of the shadow economy. This is not surprising given the fact that the currency board's introduction in mid-1997 marked a steady rise in tax revenues to GDP. The high tax rates and social insurance payroll taxes are the major barriers to the development of the businesses. In that sense this study confirms Feige's concept that shadow activities are a form of non-compliance with excessive state regulations concerning licenses and permissions, and the tax and social security systems.

Finally, the shadow economy reduces the overall efficiency of the economy, as businesses are concentrated on efforts to avoid the administrative burden rather than increasing productivity. Companies engaging in shadow activities also have to refrain from some public and private services (e.g. bank transactions). This worsens the economic competitiveness that is crucial for a small export-oriented country like Bulgaria.