

Assessing handicraft shadow economy in Macedonia

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1. Definition of the Shadow Economy

Shadow Economy is present and fact of life in every economy and every economy is trying to control and reduce it. Every attempt to measure, estimate and understand the shadow economy first face the problem of defining it. In general precise definition seems quite difficult, maybe impossible, because “the shadow economy develops all the time according to the principle of running water: it adjust to changes in taxes, to sanctions from the tax authorities and to general moral attitudes, etc” (Mogensen, et al. 1995 p.5)¹. Many theoretical controversies and political discussions are due to use of different or inadequate definitions².

Most used definitions for the Shadow Economy are following: Smith (1994, p 8) defines it as “market-based production of goods and services, whether legal or illegal, that escapes detection in the official estimates of GDP”. Shadow economy can be defined as unregistered, undeclared, and not taxed share of the whole economy³.

For better understanding what could be a reasonable consensus of legal and illegal underground or shadow economy we will use Table 1. From table 1 it becomes clear that the shadow economy includes legal goods and services either from monetary or barter transactions, hence all economic activities which would generally be taxable if they were reported to the tax authorities.

Table 1

	Monetary Transactions		Nonmonetary Transactions	
Illegal Activities	Trade in stolen goods: drug dealing and manufacturing, prostitution, gambling, smuggling, fraud.		Barter: drugs, stolen goods, smuggling, etc. Producing or growing drugs for own use. Theft for own use.	
	Tax Evasion	Tax Avoidance	Tax Evasion	Tax Avoidances
Legal Activities	Unreported income from self-employment; Wages, salaries and assets from unreported work related to legal services and goods.	Employee discounts fringe benefits.	Barter of legal services and goods.	All do-it-yourself work and neighbor help.

Source: Rolf Mirus and Roger S. Smith (1997, p.5), with additional remarks.

¹ For a detailed discussion see “Controversy: on the hidden economy” in Economic journal (Vol. 109, no. 456, June 1999)

² Here are small selections of terms used either synonymously or in different issue areas, according to the respective author: underground economy, illicit work, informal sector, irregular sector, leisure economy, alternative economy, black economy, hidden economy, unofficial economy, parallel economy, shadow economy, unobserved economy. See amongst others Thomas (1992, p.1225)

³ Development Economic Policy: How to integrate shadow economy, Boris Najman, Pars 3, Paris,

In this research definition for the shadow economy we will take from the Public Revenue Office because of the following reasons: there is big variety of definitions for the shadow economy and most of them are not offering complete understanding, our focus in this research is Macedonian shadow economy. Thus, according the Public Revenue Office, Shadow Economy is defined as doing economic activities which are legal but unofficial and undeclared for tax purposes, from individuals, unofficial groups and organizations⁴. According this definition in Macedonia illegal activities such prostitution, drug dealing and manufacturing are not taken as a part of shadow economy. In Macedonia shadow economy is most present in the following sectors: construction, tourism, transport, green markets trade, textile industries, auto services, home maintenance, furniture production, cosmetic and hair style services, painting services, renting, teaching and translation and hardware and software services.

2. Reasons for existing the Shadow Economy and its impact on the economy

The existing and growth of the shadow economy is caused by many different factors. The most important and most cited are⁵: the rise of the burden tax and social security contributions; increased regulation in the official economy, especially of labor market; earlier retirement; unemployment and decline of civic virtue and loyalty towards public institutions combined with decline tax morale.

Besides the mentioned factors from above in Easter Europe⁶, as well in Macedonia following factors are also important:

- Lack of competencies and trust in official institution (e.g. court, administration/bureaucracy, legislation);
- The administration is inefficient and corrupt;
- Property rights cannot be guaranteed by the official institutions and people search for other options;
- Inadequate of laws and regulations;
- High cost and administrative burden for entrepreneurs;

⁴ Definition from the Public Revenue Office in Macedonia

⁵ For an overall view, see the studies by: Tanzi 1982 and Schneider and Enste (2000)

⁶ See “The Shadow Economy and Institutional Changes in Transition Countries” Dr. Dominik H. Enste, Institut der deutschen Wirtschaft, Köln

- High taxes in combination with no adequate supply of public goods and infrastructure lead to lower acceptance;
- Sometimes “hidings in the shadows” is essential for surviving and establish business.
- A low probability to be caught as illicit worker or tax evader result in cost-benefit calculation where illicit work is more attractive the regular and official work;
- Broad acceptance of illicit work makes it difficult to fight this phenomenon.

Huge percentage of unemployment in the past 18 years of around 35% in Macedonia is one of the biggest reasons for the big percentage of Shadow Economy. All governments in the past, official or unofficial, were not interested to reduce the size of the Shadow Economy because of the social piece in the country. Very big part from the unemployed were working and earning money in the shadow economy and by that all governments had smaller problems on short term.

In the beginning of the transition and privatization of the economy Macedonian legislation was not prepared to ensure efficient market economy. Big numbers of entrepreneurs benefited from the lack of regulations and lows. After legislation is in place then the implementation was, and still, is a big problem because businessmen preferred to avoid paying taxes and working according defined standards. Huge steps in this area were made in 2000 when was introduced the Value Added Tax, which was one of the biggest reforms of the tax system in Macedonia.

Schneider and Neck (1993)⁷ in their theoretical model estimate that a more complex tax system implies, ceteris paribus, bigger labor supply in the shadow economy, because more complex tax system makes individual efforts to avoid legislation more profitable. Till last year, 2008, Macedonia has relatively complex labor tax system which was providing easy opportunities for avoiding some parts from the direct taxes. Big numbers of employers in low paid sectors were paying income tax, but no health or pension insurance or opposite. Starting from 1 January 2009 new reform is implemented for gross salary in order to make simpler the tax system and prevent avoidance from paying taxes and contributions. We will try to measure effects on the shadow economy from this reform.

Increased regulation reduces individuals’ choices in the official economy⁸. Intensity of regulations is often measured by the number of laws and requirements such as licenses. In the past few years in Macedonia the regulations and standards requirements is increased because of the process for joining in the EU, and fulfilling the EU standards. Some of the companies accept and fulfill these requirements but some companies were not able to implement EU standards,

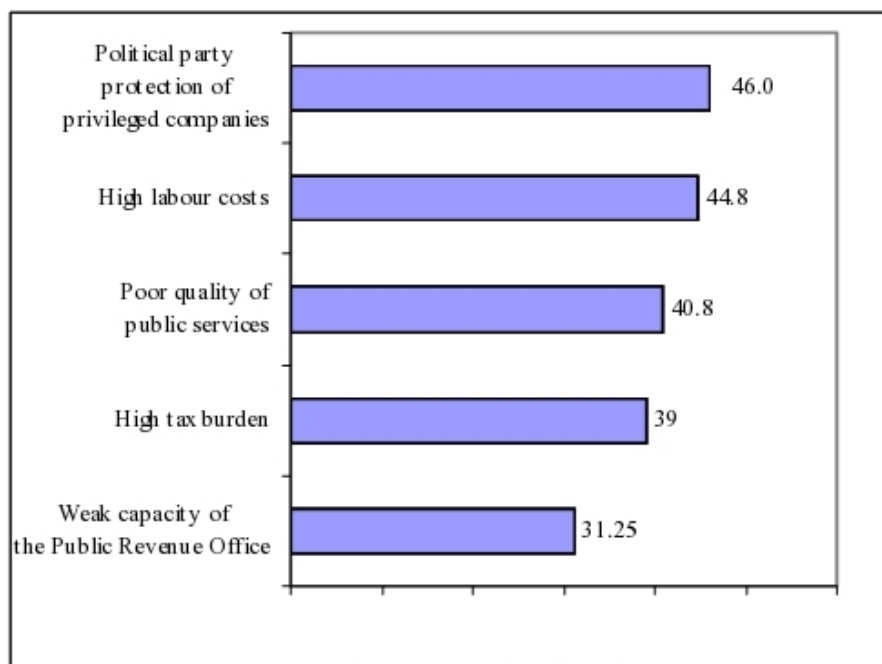
⁷ Shadow Economies: Size, Causes and Consequences, Friedrich Schneider and Dominik H. Enste, *Journal of Economic Literature*, Vol XXXVIII (March) pp. 77-114

⁸ See Schneider and Enste (2000) for an integration of this theory in an interdisciplinary (rational choice) approach.

which bring to their closing or moving to work in the shadow economy and also introducing not fair competition to those businesses that implements the legislation and standards requirements.

Relatively high total labor costs and regressive labor tax system are big reason in Macedonia for more people to work in the shadow economy. For a worker who is getting average salary in Macedonia social contribution are 33% and for those who are getting half of the average salaries social contribution is even higher 39%⁹.

Chart 1 - Implicit weighted-average responses



Note: 0=irrelevant, 100 high relevant

Source: Flat tax policy assessment in Macedonia, CEA, September 2008

According to the research done by CEA¹⁰ in 2008 for assessing flat tax policy in Macedonia, main reasons for tax evasion of the companies are following: excessive tax burden, poor quality of public services, weak capacity of the Public Revenue Office, political party protection of privileged companies and high labor costs.

⁹ Ministry for Finance, Pre-accession economic program 2009-20011

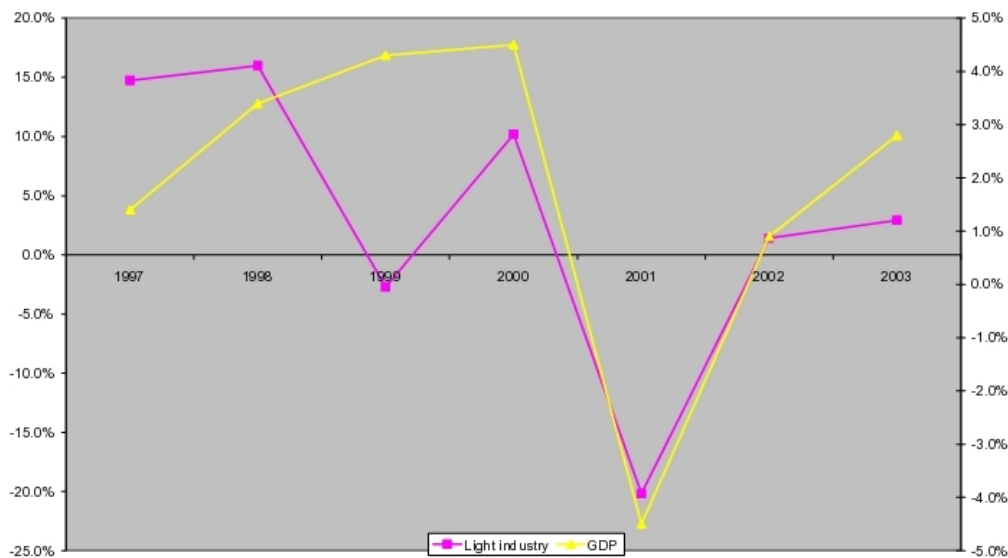
¹⁰ See more: tax policy assessment in Macedonia, CEA, September 2008, page 27.

Understanding effects from existing and increasing shadow economy to the official economy is very complicated and difficult and quality comprehensive empirical evidence is not valid. Most of the studies focus on lost revenue from the state budget and allocation of the resources. But is very important to mention that Shadow economy in the developing countries is keeping the social peace and support functioning of the system in the countries¹¹.

3. Shadow Economy in Macedonia

There is not so much official estimation of the size of shadow economy. One of the serious attempts to estimates shadow economy is made by M. Nikolov¹² using the model of Kaufman, Shleifer and Jonson (1997). Nikolov first estimate the unofficial economy as a percentage of GDP and after he convert this estimates into employment. The method is based on the assumption that electricity consumption is a rough measure of overall economic activity country, and it is usually found that the short-run elasticity of electricity consumption with respect to GDP is close to 1. Officially measured GDP captures only the registered part of the economy, and the difference between the overall and measured GDP gives the size of the unofficial economy. The change in the size of the unofficial economy is the difference between the change in electricity consumption and the change in official GDP.

Figure 1. Growth of electricity consumption and GDP in Macedonia



Source: Report on the labor market in Macedonia, 2005, Center for Economic Analyses (CEA)

¹¹ Shadow Economies: Size, Causes and Consequences, Friedrich Schneider and Dominik H. Enste, *Journal of Economic Literature*, Vol XXXVIII (March) pp. 77-114

¹² See more: Report on the labor market in Macedonia, 2005, Center for Economic Analyses (CEA), page 21.

By making the assumption that unofficial economic output (value added) and unofficial employment have the same percentage share in the economy, which is equivalent to assuming that productivity in the official and unofficial sectors are identical, Nikolov calculate that in Macedonia in 2004, there were almost 110,000 people who were employed in the unofficial sector (table 16). This enables us to recalculate the unemployment rate, which is now roughly 20% as compared to the official rate of over 35%.

According Nikolov, unofficial employment in Macedonia from 1996 till 2004 was between 100.000 and 150.000. Taking in consideration the number of unofficial employed in Macedonia we have real unemployment of around 20%.

Table 2. Unofficial GDP share and unofficial (un)employment in Macedonia.

	Unofficial GDP as a share of the total GDP	Number of unemployment under the LFS	Unofficial employment	Overall unemployment rate
1996	40.3%	251489	101350	19.0%
1997	45.7%	288213	131624	19.6%
1998	51.4%	284064	146060	16.8%
1999	47.8%	261451	124995	16.9%
2000	50.5%	262711	132747	16.0%
2001	42.6%	263196	112123	17.5%
2002	42.8%	263483	112822	18.3%
2003	42.9%	315900	135438	21.0%
2004	35.3%	309286	109300	24.0%

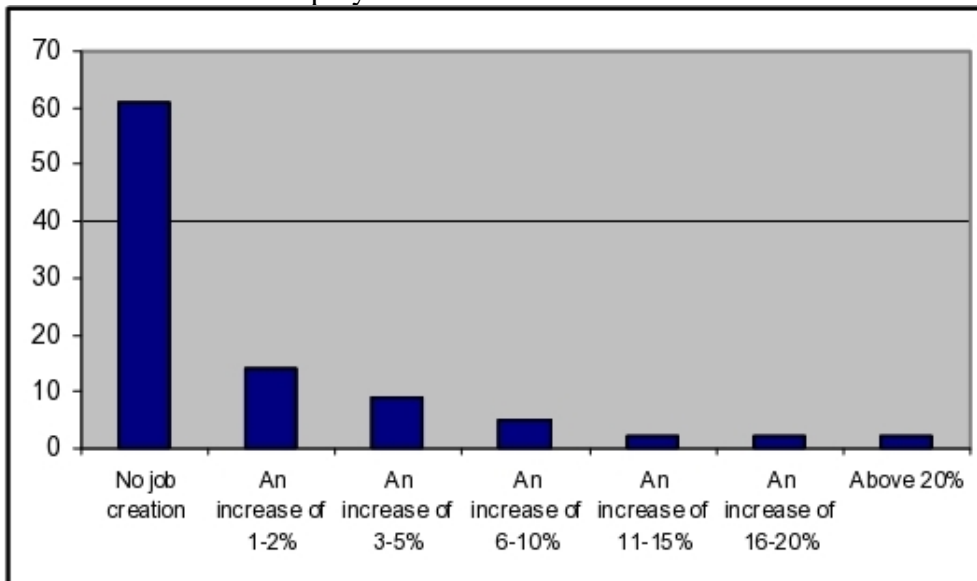
Source: Report on the labor market in Macedonia, 2005, Center for Economic Analyses (CEA)

In 2007 in Macedonia the taxation system was reformed by introducing the so coaled flat tax rate. With this reform it was expecting the shadow economy to be reduced and also to improve the business environment and to attract FDI.

According the research made on flat tax policy implementation in Macedonia¹³, done by CEA on September 2008, more than 60 % from the companies didn't increase the number of employs due to the flat tax system. On the other side 32% from the surveyed companies answered that they have increased the number of employs from 1% to 20%.

¹³See more: Flat tax policy assessment in Macedonia, CEA, September 2008, page 14.

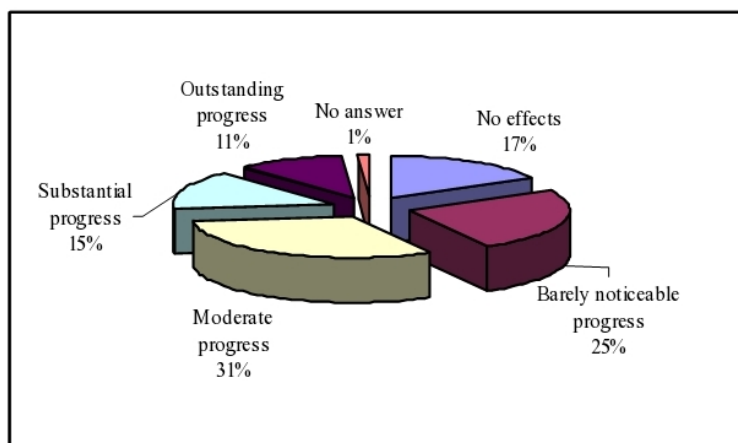
Table 3 - Percentage of companies that increased the number of employees due to flat tax introduction



Source: Firm-level survey in Macedonia, 2008.

According to the same research 17% of the respondents are not expecting any improvements, 25% are skeptical and expect barely noticeable progress, the largest group 31% is expecting moderate progress, whereas 15% believe there will be outstanding progress in improving the situation with the misreporting of the wages.

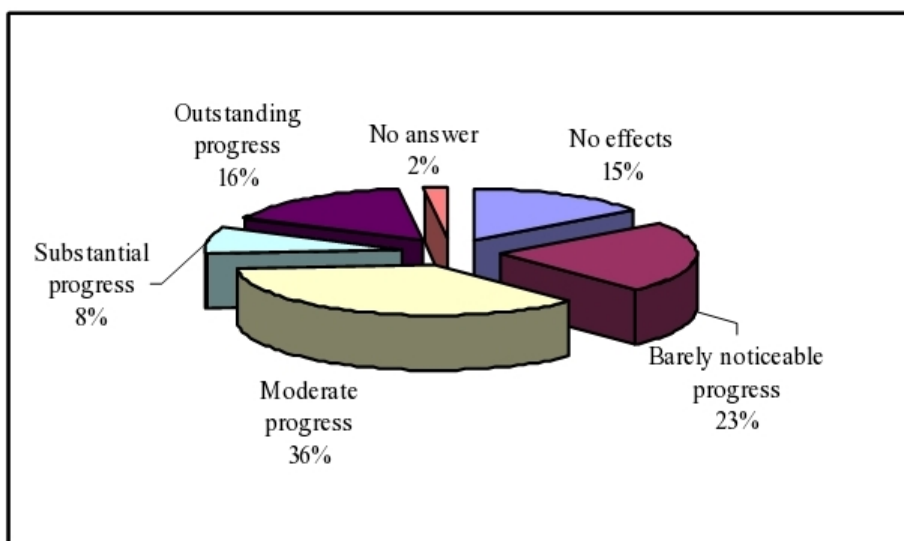
Chart 1 - Expected progress in improving the reporting of wages due to the simplified and reduced taxes



Source: Flat tax policy assessment in Macedonia, CEA, September 2008.

Implementation of flat tax policy motivates the employers to register¹⁴ their employees. As chart 17 illustrate, 36% from surveyed companies think that the flat tax regime will help reporting realistically the exact number of employs, 23% are skeptical and 15% of the respondents have odium toward this issue.

Chart 2 - Expected progress in improving the reporting of the number of employees in response to the introduction of the flat tax



Source: Flat tax policy assessment in Macedonia, CEA, September 2008.

With respect to the expected effects in combating the grey economy and tax evasion¹⁵, 21% of the respondents do not expect any progress in this area, whereas one third (33%) share the opinion that such tax policy would help a little. Hence, more than a half of the respondents were skeptical that the introduction of flat tax will reduce the incentives for staying outside the formal economy. Still, 15% contend that the flat tax rate would significantly decrease the grey economy and 29% expect moderate progress in combating the shadow economy. Although derived by qualitative assessment, they do offer a tentative picture of the relevance of the grey economy. These results reflect the opinion of the managers of the domestic companies, which constitute 78% of the sample.

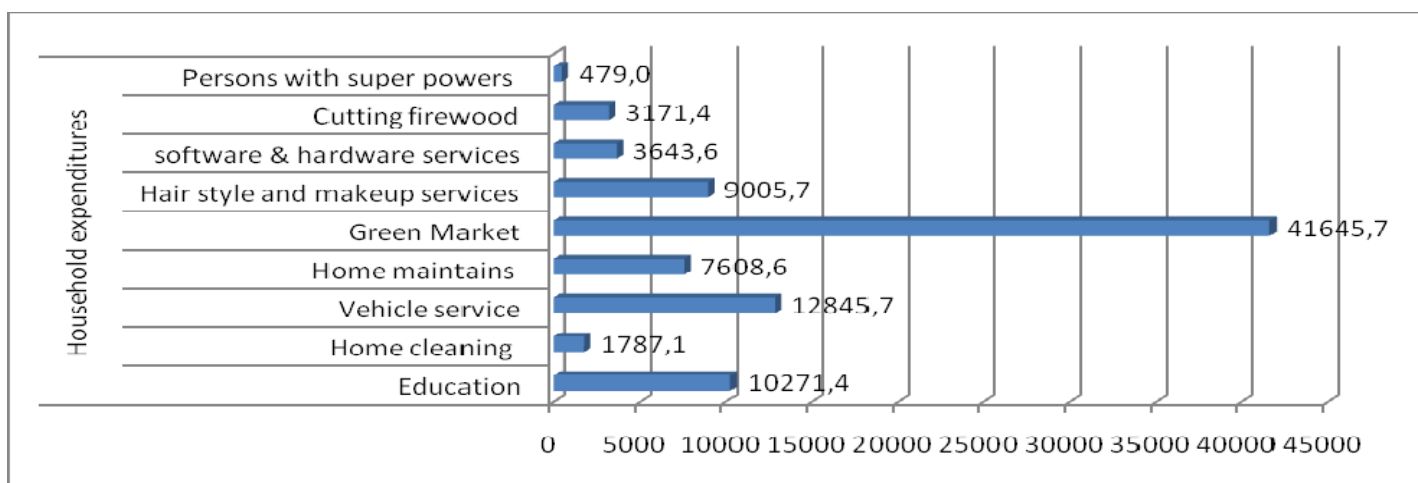
¹⁴ See more: tax policy assessment in Macedonia, CEA, September 2008, page 20

¹⁵ See more: Tax policy assessment in Macedonia, CEA, September 2008,

4. Handicraft shadow economy in Macedonia

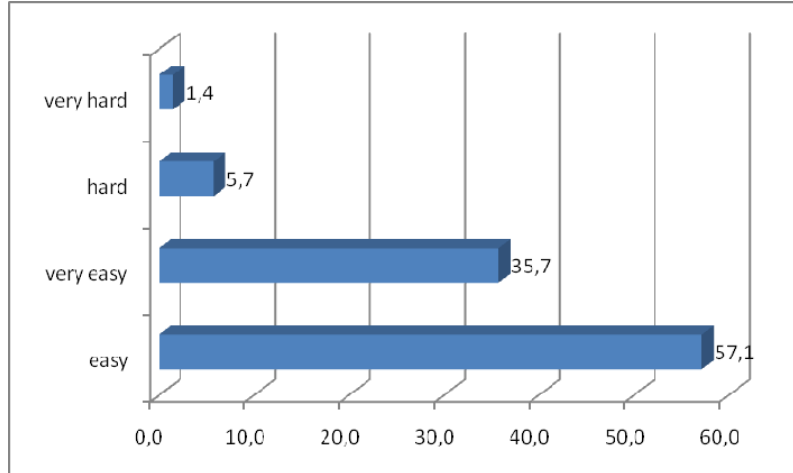
In Macedonia non-registered economy is assessed around 40-50 % of the GDP, with our research we were assessing the share of handicraft shadow economy in the country. The research was done in 10 bigger towns in Macedonia and the City of Skopje following the cluster sampling procedure, in February and March 2009 with 85 surveyed households. The amounts presented below are representing the results of this survey for household's expenditures for which they don't get receipt, bill or invoice. With the research following sectors were include: additional education, cleaning services, motor vehicle services, home maintenance, green markets, hair style and make up services, software and hardware services, cutting firewood and fortune tellers.

Chart 2. Household expenditures by handicraft sectors in Macedonia



According our research one family is spending on average 22.8 % from the income in the handicraft economy. From figure 1 we can see average spending for a year from one family in the green markets is 41.645 denars, which is the sector with biggest amount of money, and the lowest amount goes to fortune tellers who are seeing the future, priests etc, 479 denars annual average per family.

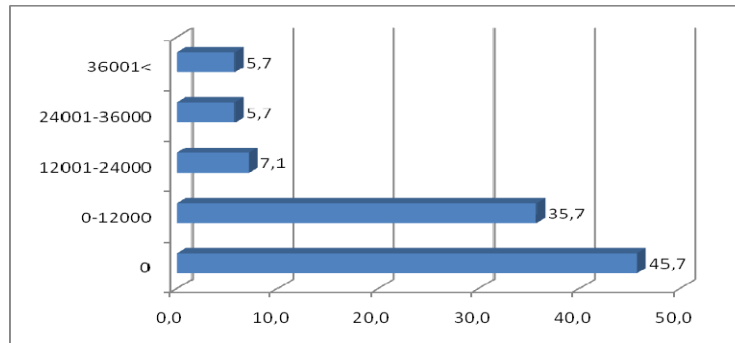
Chart 3. Do you have access to products and services from shadow economy



Over 90 % from the surveyed household are having easy or very easy access to products or services from the handicraft economy, This means shadow economy activities are present everywhere around the citizens in Macedonia and is becoming a normal thing. Around 90 % know what is shadow economy and that is not registered.

Question number 4 was asking how much of the families are spending for additional education, like English language classes, mathematics, preparation for exams and etc. Average amount spent for these services by households in Macedonia is 10.271 denars.

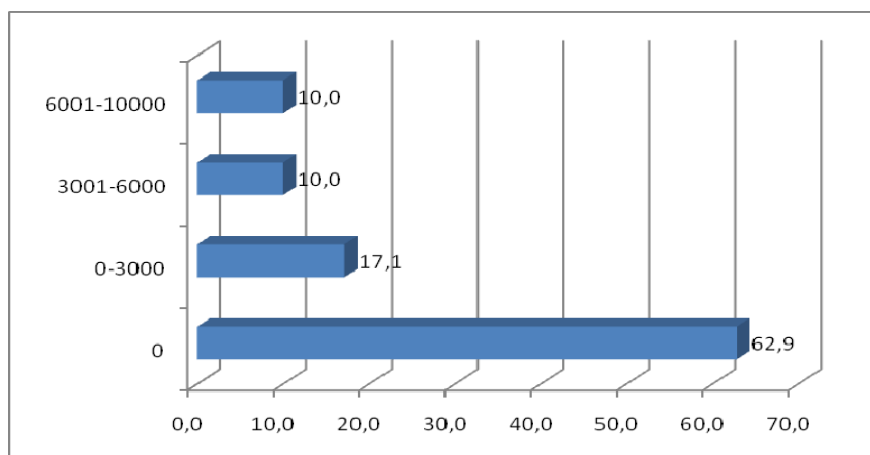
Chart 4. Household expenditures for additional education



Around 45 % of households are not spending at all for additional education, 35.7 % are spending below 12.000 denars annually, 7.1 % are spending between 12.001 and 24.000 denars annually, and 5.7 % are spending between 24.001 and 36.000 denars and the rest 5.7% spend over 36.000 denars for additional education for one year.

With the fifth question we want to measure how much money households are spending for cleaning their homes. For this services average spending from interviewed households is 1.787 denars.

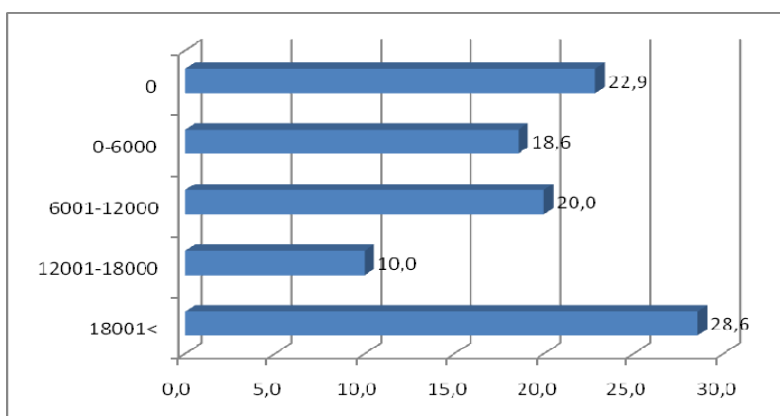
Chart 5. Household expenditures for cleaning services



Most of the families, 62,9 % are not paying anyone for cleaning services because they are doing it by them self. Around 17 % are spending less than 3.000 denars for cleaning and by 10 % are spending between 3.001 – 6.000, and 6.000 -10.000 denars.

Question number 6 measures the household expenditures for garage services for their vehicles from which they are not getting receipts or invoice. Average annual spending for this kind of services in Macedonia is 12.486 denars.

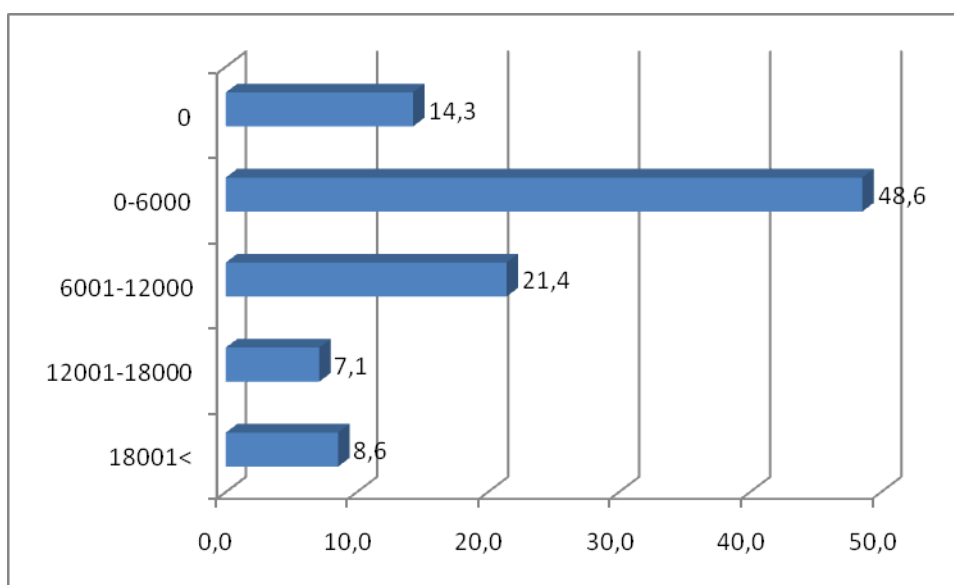
Chart 6. Household expenditures for vehicle services



Biggest group of the households, 28.6% are spending over 18.000 denars annually for vehicle repair and maintenance. Around 23 % from the households declare they are not spending at all for this kind of services. 10 % are spending between 12.001 and 18.000 denars, 20 % are spending between 6.000 and 12.000 denars and around 19 % are spending less than 6.000 denars.

The 7th question was measuring expenditures from households made for home maintenance, repairing, painting walls etc. Average spent money from one household for one year is 7.608 denars for one year.

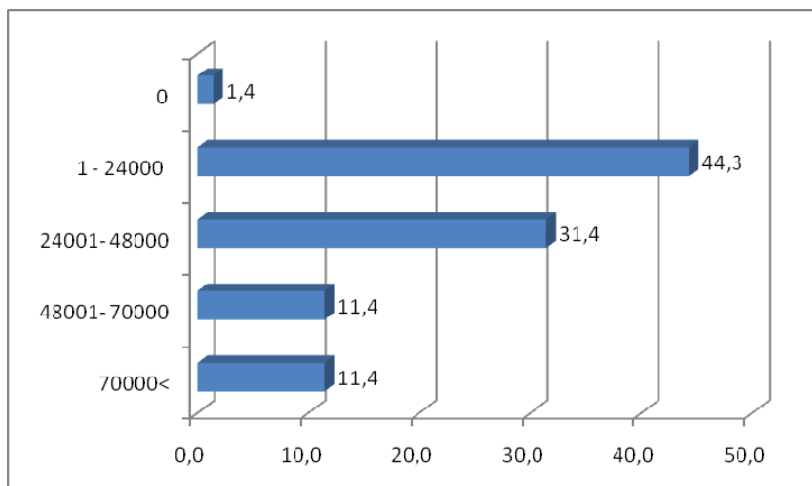
Chart 7. Household expenditures for home maintenance



14,3 % from surveyed households answer they are not spending money at all for this kind of services, which means they are taking care for their home. Biggest group 48,6 % are spending less than 6.000 denars, between 6.001 and 12.000 denars are spending around 21 %, between 12.001 and 18.000 denars are spending 7.1% and over 18.001 denars 8,6 from surveyed households.

Question number 8 was measuring amount spent on the green markets for different fruits, vegetables etc for which they don't get receipts. In this sector households are spending the biggest amount of money in the handicraft shadow economy, on average 41.646 denars for one year.

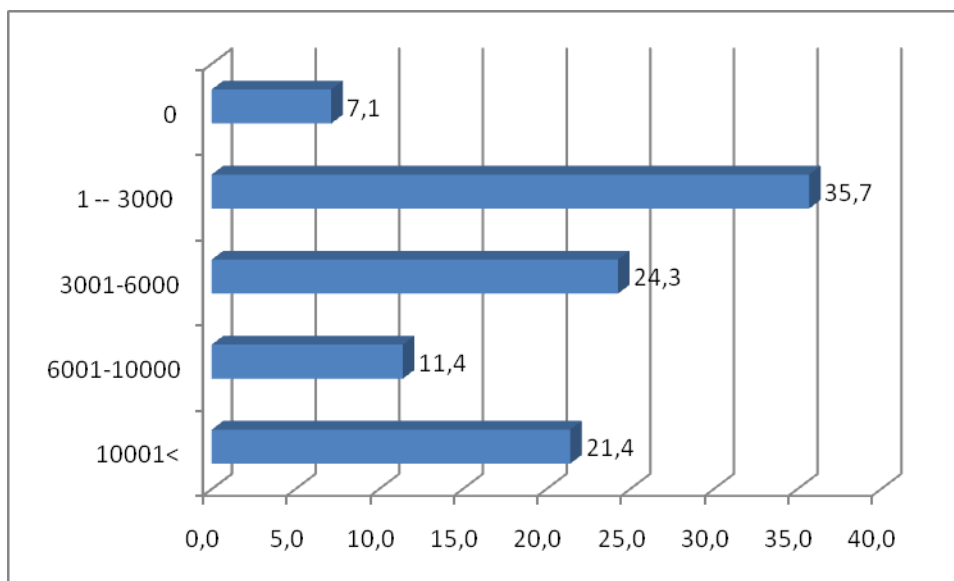
Chart 8. Household expenditures on the green markets



Only 1,4 % from the interviewees are not spending money for buying fruits and vegetables from nonregistered merchant in the green markets. Around 44 % are spending less than 24.000 denars, 31,4 % spent between 24.001 and 48.000 denars and 11.4 % are spending between 48.000 and 70.000 denars and over 70.000 denars. Almost every transaction in this sector is made in the shadow economy where the state doesn't have information or concrete number for the amount of transaction. If we take that in we have around 400.000 households in Macedonia and multiple by the average spending from the survey, result will be in the green markets are spent 16.658.400.000 denars. According State Statistic Office in Macedonia amount spent for vegetables and fruits in 2007 is 11.854.660.000 denars or average spending per households for fruits is 7.614 and for vegetables 15.386 for 525.420 assessed household.

With the question number 9 we were measuring how much households are spending for hairstyle and makeup services, annually. From the answers average spending is 9005 denars for one year.

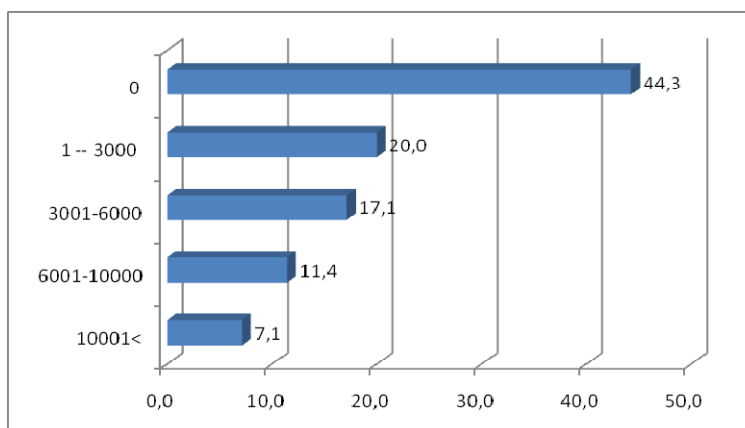
Chart 9. Household expenditures for makeup and hairstyle services.



Biggest number from surveyed households, 35,7 % are spending less than 3.000 denars annually for these services. Around 24 % are spending between 3.001 denars and 6.000 denars, 11,4 % spend between 6.001 and 10.000 denars, 21,4 % spend over 10.000 denars and around 7 % answered they are not paying for this kind of services.

With the increased number of PC the amount spend for software and hardware services is increasing as well. Question 10 was assessing the amount spend from the households for different kind of services for instalation, changing computer parts etc. Average annual amount spent from households in Maceodnia for this services is 3.644 denars.

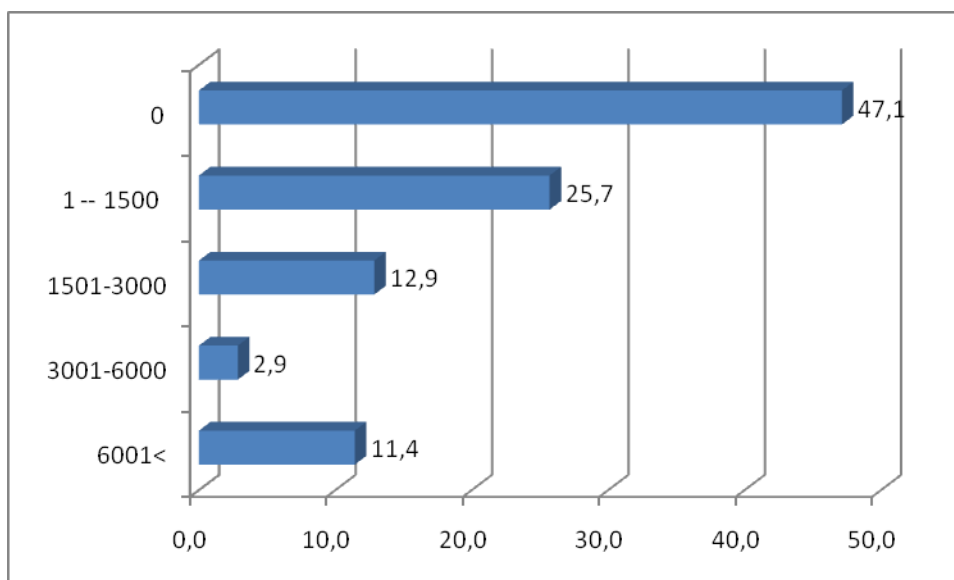
Chart 10. Household expenditures for software and hardware services.



From the surveyed households 44,3 % are not spending money for this services, 20 % are spending less than 3.000 denars, 17 % are spending between 3.001 and 6.000 denars, 11,4 % are spending between 6.001 and 10.000 denars and around 7 % more than 10.000 denars.

Question 11 was measuring expenditures for cutting firewood in the smaller towns where doesn't exists centralized systems for heating. According the survey average spent money for cutting firewood annually is 3.171 denars.

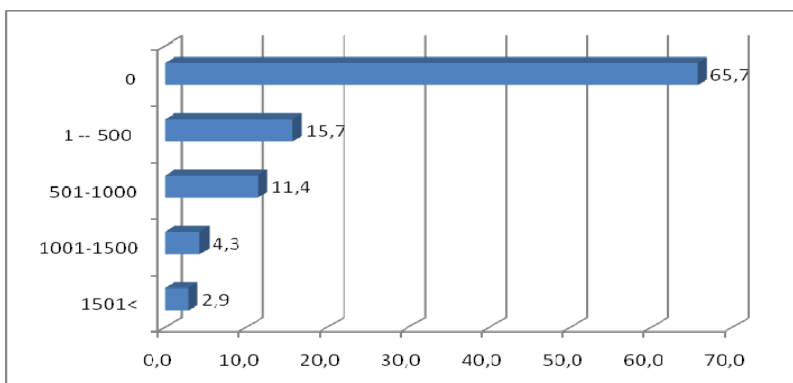
Chart 11. Household expenditures for cutting firewoods



Almost half of the households don't have this kind of expenditures, 25,7 % are spending less than 1.500 denars, 13 % spend between 1.501 and 3.000 denars, 3 % spend between 3.001 and 6.000 denars and 11.4 over 6.000 denars.

With the question 12 we were measuring amount of money spent for fortune tellers, priests, preachers etc. According the answers from the survey average spent money from households in Macedonia for services from above mention persons are 479 denars.

Chart 12. Household expenditures for fortune tellers, priests, ministers, preachers etc



Around two thirds from the surveyed households don't have this kind of expenditures; they are not using services from above mentioned persons. 15,7 % spent less than 500 denars, 11% spent between 501 and 1.000 denars, 4,3 % spent between 1.001 and 1.500 denars and around 3 % are spending more than 1.500 denars.

Table 4. List of sectors, annual household spending, percent from the handicraft shadow economy, percent from family income

Sector	Annual average spending from one household	Percent from the handicraft shadow economy	Percent from family income
Additional Education	7970,1	9	2,0
Cleaning services	1844,8	2,1	0,5
Motor vehicle services	12913,4	14,5	3,3
Home maintenance	7583,6	8,5	1,9
Green markets	41809,0	47,1	10,6
Hair style and make up services	9211,9	10,4	2,3
Software & Hardware services	3747,0	4,2	1
Cutting firewood	3291,0	3,7	0,8
Fortune tellers, priests, ministers, preachers etc	213,9	0,2	0,1

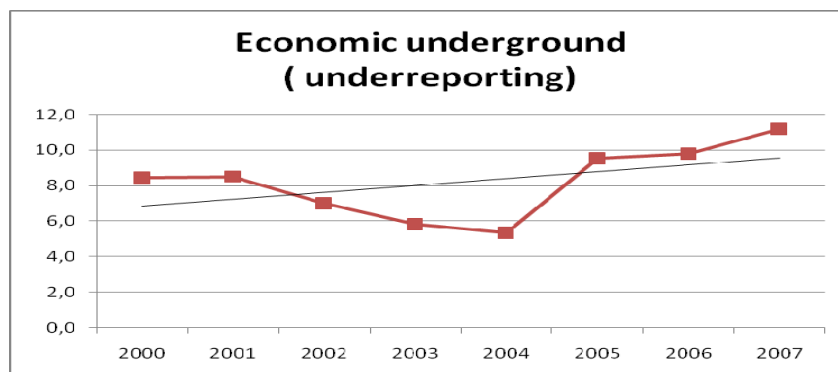
5. GDP Adjustments from the State Statistical Office for underground economy and informal sector

Macedonian State statistical office is making adjustments on GDP calculations in order to anticipate activities from the shadow economy. When calculating GDP by production method, exhaustiveness adjustments on the data obtaining from various sources are made in order a part of non-observed economy to be covered. In the calculations, adjustments are done on two types of non-observed economy:

- Economic underground (underreporting); and
- Informal sector (not registered, underreporting)

Economic underground is identified in hiding the real value of sale, overestimating of the intermediate consumption, hiding the real value of allowed pays in order to avoid payment of turnover tax, import duties, personal taxes and employers' social contributions. According State statistical office underreport activities as a part of adjust value of GDP has a trend of increasing. From 2000 to 2007 year average percent underground economy in the adjusted value of GDP is 8,2 %.

Figure 2, Underground economic activities as percent of GDP adjustment

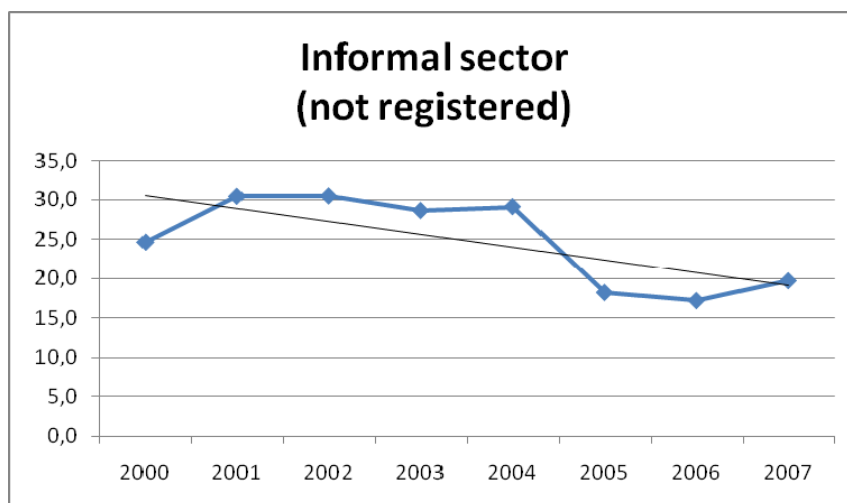


Source: SSO. Author's calculation.

Besides economic underground State statistical office is measuring the informal sector as well. The largest part of informal activities are concentrated in own household construction, manufacturing and service activities. Estimating of the output value regarding the construction of residential units and other facilities, performed on buildings under private ownership is based on

the data from the Department of construction. Estimation of the intermediate consumption is made on the base of the data from construction corporate enterprises and additional analyses.

Figure 3. Informal sector as percent of GDP adjustment.

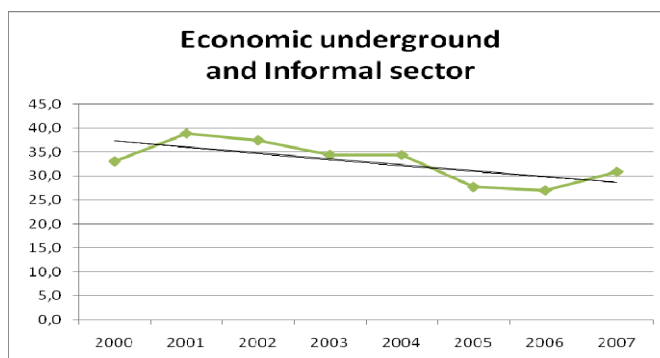


Source: SSO. Author's calculation

This part of shadow economy has a trend of decreasing from 2000 to 2007 year, for this period informal sector participate with 24,8 % of total adjust value of GDP.

If we put together the economic underground and informal sector they had a trend of slightly decreasing from 2000 till 207 year which is less than 10%. According the graph in the last few years there is some increasing of these shadow economy activities.

Figure 4, Economic underground and informal sector as a part of adjustments of GDP



Source: SSO. Author's calculation

6. Conclusions

Integration of shadow economy in the official economy is not an easy task. There are many reasons for people and companies to work unregistered, few of them are mentioned above. In the case of Macedonia it seems that unreported activities are deeply infiltrated in the everyday life and working of people. Short term measures and actions won't give any good results for improving the situation. Our suggestion to the government for decreasing the percent of not-registered handicraft economy is to develop long term strategy for integrating and give incentives for registering the handicraft economy into the official one. In the first couple of years people should have opportunities to register their work, but with small tax duties, lump sum taxes or timely tax exemption. At the same time opportunity cost for working in the shadow economy must be increased with severe penalties, which will make very risky and costly working unreported. After few years tax burden can be increased for a small percent.