

Beyond The Formal Economy: Evaluating The Level of Informal Employment In Montenegro

Milivoje Radović • Milena Lipovina-Božović • Jovan Đurašković

Abstract This paper aims at investigating the level of informal employment on the Montenegrin labour market. For estimating the size of informal employment a direct method was applied using two surveys based on the opinion of the enterprises and employees. This two surveys are used for the approximation of the level of informal employment, as well as for the evaluation of the losses for the fiscal revenues and the Budget as a whole. The conducted analysis reveals the significant degree of the anomalies on the labour market, especially regarding degree of the informal employment which is highly correlated with many structural reforms in the economy and the crisis that affected the Montenegrin economy in the preceding period. The authors conclude that that employment should be a corner stone of the future development of Montenegro and therefore, diminishing the level of informal employment should be one of main tasks for the Montenegrin Government since it produces many negative effects for the economy.

Keywords Informal Employment - Labour - Taxes and Contributions

JEL Classification J46 - O17 - E26 - C83

1. Introduction

The shadow economy is a global problem. Its expansion, especially in developing countries jeopardizes the foundations of a socioeconomic system. Numerous scientific studies conducted by the International Labour Organisation (ILO) and other international institutions, scientists and economic researchers suggest that the shadow economy is ubiquitous, regardless of the nature of the economic system (neoliberal, social market or transitional) and that it gains in strength continuously, particularly in those countries where there is no sufficiently strong institutional framework. As an inseparable part of the shadow economy, informal employment is a crucial issue for economic policy makers, especially fiscal and labor market policies. Since this question is at the heart of the research, we should, first of all, be very careful when providing a conceptual definition of the informal sector, as well as its causes and effects.

One of the first difficulties faced by economic researchers is to clearly define the phenomenon of informal business operation. The most commonly used working definition of shadow economy is the following: “market-based production of goods and services, whether legal or illegal, that escapes detection in the official estimates of GDP” (Schneider & Williams 2013). Using a somewhat different approach this term is defined as follows: “shadow economy represents those economic activities and income derived from them, which altogether circumvent or avoid government regulation, taxation and control” (Feige 1989). According to the ILO definition, the informal economy comprises “all activities that are, in law or practice, not covered or are insufficiently covered by formal arrangements” (ILO 2013).

As a theoretical concept, informal sector became the subject of economic research at the beginning of the 1970s. Two studies played an important role in the proliferation of scientific papers on informal sector, one by a British anthropologist Keith Hart (1972) on the Ghana example and the other by the International Labour Organisation on the Kenyan example. In both cases, continuous expansion of unregulated and unregistered economic activities was noted. In the decades that followed, many theorists attempted to identify the nature and causes of economic activities which were part of the informal sector.

However, regardless of the causes and nature of informal sector, a greater presence of “shadow” economic activities presents serious problems to the state budget, businesses, the market and the economy as a whole.

It is precisely due to all the more significant negative externalities arisen from this problem, both at the micro and macro levels, that the theoretical approach in economic research got a wider dimension. Namely, after the 2002 International Labour Organisation Conference, the concept of informal sector has been expanded into the concept of informal economy, which implies that informality is no longer

seen as a property of a certain sector of economy, but as a universal characteristic of all economic sectors.

Researchers who have done research in informal economy on the market have paid special attention to the phenomenon of informal employment. This is due to the fact that the relationship between employers and workers is one of the most complex transactions in economy. Labour law, labor statistics and labor organization have all given the central position in their analysis to the symbiotic relationship between the two groups of subjects in the labor market. The interdependence of employers and workers is characterized by a shared interest in generating business income, as well as a degree of competition when the income is distributed. However, many workers in the labor market, receiving a certain wage, are not recognized as being subjects in an employer-employee relationship; they are not registered or work unreported – “off the books”. They are, in fact, characterized as informal employees or “non-standard” workers. Employment in the informal sector comprises: “all jobs in informal sector enterprises or all persons who, during a given reference period, were employed in at least one informal sector enterprise, irrespective of their status in employment and whether it was their main or a secondary job.” This definition of the International Labour Organisation from 2002 was amended a year later, because the original one left out one important segment of informal employment – informal employment outside of informal enterprises. Broader understanding offered a new definition of informal employment, as “total number of informal jobs, whether carried out in formal sector enterprises, informal sector enterprises, or households” (Jutting, Parlevliet and Xenogiani 2008). Thus, *employment in informal sector* and *informal employment outside of informal sector* represent two different forms of informalization of employment. Employment in informal economy is the sum of both categories. In addition to the often quoted definition of the ILO, researchers often provide their own definition of the concept of informal employment, in order to take into account local or national specificities of the labor market. In this regard, a working definition of informal employment in our research has been made which reads: “*informal employment is employment without secure contracts, employment benefits or social protection, that is, activities of unreported work engagement in which companies do not register their workers or report only part of their earnings to avoid or reduce the tax burden.*” This definition offers a broader approach to informal employment. It primarily recognizes a wide-spread practice in many economies, particularly the Western Balkans: the employer will declare only a certain part of the employee’s wage to the fiscal authorities (usually at minimum wage level) while the remaining part of the wage is paid “in cash” or, informally (ILO 2011). The effects of this practice are similar to those of other forms of informal employment, such as taxes and social security contributions evasion, employment benefits evasion etc. Undoubtedly, it is a problem that illustrates the complexity

of distinction between formal and informal business operation. What follows is an overview of previous research on the topic of shadow economy with a focus on the results achieved in Montenegro. The third part explains the methodology of the research conducted. The fourth part presents the results of the research with an estimate of the volume of the informal employment and an estimation of losses to the Budget of Montenegro. In the fifth part the authors give the conclusions of the conducted analysis.

2. Literature Review

Recent studies of shadow economy on the example of OECD countries, suggest that this is a socio-economic “disaster” that does not subside and whose presence is significantly felt even in most developed economies. In addition to the size of shadow economy, a number of key processes that condition its expansion have been identified. The impact factors are illustrated in the following way (Schneider & Buehn 2012):

1. *The higher the tax burden*, measured by the personal income tax, payroll taxes, and/or indirect taxes, *the bigger the shadow economy*, ceteris paribus.
2. *The lower the tax morale* is and the weaker social norms, the higher the shadow economy, ceteris paribus.
3. *The higher unemployment* is, *the bigger the shadow economy*, ceteris paribus
4. *The more regulated official business activities* are, *the bigger the shadow economy*, ceteris paribus.
5. *The higher the self-employment quota* is, *the bigger the shadow economy*, ceteris paribus.
6. *The lower the quality of institutions* measured by the rule of law is (or lower levels of corruption), *the bigger the shadow economy*, ceteris paribus.

Of these factors, the coefficient of the unemployment rate variable has the biggest influence on the shadow economy with a standardized coefficient between 0.53 and 0.65. It is followed by the personal income tax with a standardized coefficient between 0.27 and 0.40; followed by the tax morale variable between 0.21 and 0.3; followed by business freedom with a standardized coefficient between 0.29 and 0.35, etc (Schneider & Buehn 2012). The extent of the shadow economy in OECD countries decreased in the period 2000-2010. At the beginning of the period, the shadow economy was at the level of 20.7% of the official GDP, and at the end of the period, it was 18.3%. There is an evident trend of a slight growth of the shadow economy in most OECD countries, during the global economic crisis (eg. in Canada, from 14.9% of GDP in 2008 to 15.5% of GDP in 2009, in Norway, in the same period, from 17.7% to 18.6% of GDP, etc.). The OECD countries with the highest volume of shadow economy in relation to GDP in 2010 were Bulgaria (31.9%), Romania (30.9%) and Mexico (30%). On the other hand, the lowest share

of shadow economy in national GDP was recorded in Switzerland (8%), the USA (9.1%) and Luxembourg (9.6%). (Schneider & Buehn 2012).

Looking at the average relative impact of causal variables on shadow economy in the period 1999-2010 in the example of 39 OECD countries, the same study comes to the conclusion that indirect taxes had the greatest relative impact on shadow economy – up to 29.4%. The latest research of the shadow economy in Europe (A.T.Kearney 2013), shows that the lowest volume of the “gray” zone in the previous 10 years was recorded in 2013. The European average is 2.15 billion euros, or 18.5% of European GDP. Of course, there are some differences between regions. Thus, Eastern Europe lags well behind Western Europe. While the level of the shadow economy in Austria and Switzerland is around 8% of GDP, it is about 30% in Lithuania, Latvia, Bulgaria and Croatia.

Taking into account the sectoral approach, a greater presence of shadow economy is evident in the sectors of construction (31%), wholesale and retail trade (20%), hotels and catering (19%) and manufacturing (15.5%). Several factors have contributed to the dominance of informal business operation in these sectors – first of all, undeclared work (especially in construction) and a large number of small value cash transactions (an overnight hotel stay, a short taxi ride, etc.).

In recent years, a growing number of researchers have been shifting the focus of analysis from formal employment towards informal employment problems, as evidenced by numerous research papers. An evident increase in the number of studies on the subject of informal employment is expected due to the fact that the relative share of informal employment compared to formal employment has been on the rise in many regions of the world (OECD 2002; Schneider 2008; ILO 2011). Taking into account the existing forms of informal employment the important conclusions of reputable studies that have been conducted on the examples of the SEE countries should not be overlooked. A Eurobarometer survey on the example of five countries of South Eastern Europe (Bulgaria, Cyprus, Greece, Romania and Slovenia) indicates that informal wage employment in the percentage of 24% is the cause of informal employment (Williams 2010a,b). In the research of the last decade quasi-formal employment has been identified, which means that employees in the formal sector receive two wages – both an official and an unofficial, «envelope» wage. (Neef 2002; Žabko and Rajevska 2007; Williams 2007; Woolfson 2007; Round et al. 2008; Williams 2008, 2009). According to the above-mentioned Eurobarometer survey, 16% of all employees in the surveyed economies receive envelope wages which make up an estimated 60% of total earnings.

There is widely accepted evidence that informal employment is in higher percentages characteristic of self-employed and individual entrepreneurs (ILO 2002; Renooy et al. 2004; Williams 2004; Perry and Maloney 2007). A 2007 Eurobarometer survey concludes that 76% of the total informal employment is generated in the area of self-

employment. In South Eastern Europe, as shown by the same research, 46% of the total informal employment is accounted for by small businesses to support friends, relatives, neighbours, acquaintances and other close social relations (Williams 2010a). Small, rural family businesses in the region of Southeastern Europe that often do not place their products on the market are mostly influenced by informal employment (Hudson et al. 2012).

Bearing in mind the determinants of informal employment, authors mostly agree that informal employment is closely related to: the size of enterprises (smaller businesses have a greater share in informal employment) (Rice 1992; Hanlon et al. 2007; Williams 2006; Tedds 2010); the legal form of business activities (individual entrepreneurs participate in higher percentage in informal employment compared to other subjects); the age of a company (newer firms are more susceptible to informal employment than older businesses) (Williams 2006; Tedds 2010).

Studies in the phenomenon of informal economy have been carried out recently in some countries of the Western Balkans. In March 2013, a research report on the informal economy was presented in *Serbia*. According to the research, the volume of the shadow economy in Serbia was estimated using the three methods listed below. According to the MIMIC model (multiple indicators, multiple causes) the shadow economy amounted to 33.2% in 2001, it dropped to 30.1% by 2008, then increased to 30.6% in 2009, and dropped again to 30.1% in 2010. The second, the HTC (household tax compliance) method is based on data from the macroeconomic accounts. Based on these calculations, it was concluded that the volume of the shadow economy in Serbia amounted to 23.6% of GDP in 2010. Finally, based on a survey of business conditions, it was found that the shadow economy accounted for 21% of GDP (Fond za razvoj ekonomske nauke 2013). According to research conducted in *Bosnia and Herzegovina*, it was estimated that the shadow economy accounted for about 23% of all economic activities in B&H; about 25% in FB&H, 18% in RS and 25% in Brcko. 290,000 people were engaged in the shadow economy sector in 2008. Of these, 80% were unemployed persons. If the entire estimated amount of the shadow economy had been registered as formal economy, the domestic product of Bosnia and Herzegovina in 2008 would have risen by 16.53% (Tomaš 2010). The 2011 International Labour Organisation research which dealt with the phenomenon of informal employment in the case of Albania, Bosnia and Herzegovina, Moldova and Montenegro, confirmed the previous estimates of the extent of informal employment. In fact, in all four countries, at least 30% of all employees work “off the books”. An interesting fact is that out of the total number of informally employed in Montenegro, 77% are engaged in the formal economy, while 15.8% are self-employed. The largest number of informally employed is engaged in agriculture, and in terms of age, most of them belong to the younger population. Workers with fewer skills and less education are more susceptible to

informal employment. One of the conclusions of the research is that partial payment of wages as envelope wages is a common practice and one of the most important adverse effects on budget revenues (ILO 2011).

In 2003, a research was conducted on the informal economy and unprotected work in Montenegro. Using a survey method it was estimated that more than 30% of workers in Montenegro were informally employed. The lack of legal employment opportunities and thus lack of opportunities for provision of resources necessary for life were cited as key factors when deciding to work “off the books”. As many as 63.4% of employers stated high tax and contribution liabilities on wages of employees as the main reason for hiring workers in an informal way. There is an interesting finding from 2003, which is almost identical to a recent UNDP survey, which shows that almost half of the workers do not work within their own professions. Approximately 40% of the surveyed workers were informally employed for more than two years, indicating that this problem in Montenegro was pronounced and long-term in character (Radović & Bakrač 2003). It is important to note that the phenomenon of informal employment has not been the subject of detailed analysis recently, which is the main impetus to devote more research attention to the issue. Therefore, this work is one of the most significant contributions to the understanding of this issue in the aftermath of the crisis, whose solution is of particular importance in terms of the integration process of Montenegro into the EU.

3. The Research Methodology

The methodology of estimating the volume and effects of informal employment is in many ways specific. Although the phenomenon is not unknown in economic theory and practice with a long tradition of research on this subject, there is no straightforward procedure for its monitoring and measurement. Each model is oriented towards estimation, because the nature of informal employment and shadow economy in general is such that it is hard to quantify. If it is assumed that there are two large groups of methods of assessment of informal employment (direct and indirect) (Tomaš 2009) in this study a combination of the methods will be used in order to take advantage of both methods and minimize disadvantages. In the direct method which is used in this paper, primary data were obtained in a study involving a survey of a representative random sample of Montenegrin citizens older than 15 years, and a survey on a representative quota sample of registered employers.

The advantages of this approach compared to other approaches are multiple because in this way more detailed information can be gathered that will allow analysis of different aspects of the problem of informal employment, which does not exist in the secondary data sources. However, the quality of assessment via this method is highly correlated with the level of representativeness of the sample, that is, the coverage of the target population and the degree of socially desirable responses

that may be the result of a possible cover-up of the intensity of involvement in the shadow economy in the labor market.

In addition, the indirect method is used here as an auxiliary tool to complement the study of the already existing statistical base as well as for conducting an expert correction in the analysis. In the framework of the implementation of the indirect method with previously obtained results based on the direct method, an overall estimation has been performed of the scope and impact of informal employment on the Budget of Montenegro. The research on the informal employment in Montenegro was conducted based on a survey whose main objective was an estimation of the volume and effects of the informal employment. The survey was conducted at two levels (conducted by IPSOS Strategic Marketing in the period from July 27 to August 3, 2013): based on the opinions of business entities and individuals separately. When it comes to the survey with businesses, the sample was defined as a quota. The sample allocation for businesses was done on the basis of region, activities and size class of the businesses (size class was determined based on the number of employees in a business, not taking into account revenues). Data were collected during field surveys, and the sample size was 209 business entities.

Legal entities were selected from a list of companies and entrepreneurs registered in the Central Registry of the Commercial Court and classified by strata. The stratification was based on: Region, Company Size, Activities. The sample allocation to strata was proportional to the size of the given strata in the basic set. A simple random sample was used without replacement by strata. The sample is representative at the national level and for these strata.

It is important to note that the survey has covered only the officially registered companies. However, many studies suggest that in almost all countries of the world the level of informal employment is significantly higher in non-registered enterprises than in those registered (ILO 2011). Nevertheless, conducting a survey research on a sample of non-registered business entities is almost impossible. One of the reasons is a lack of records on non-registered business entities, which is a limitation in terms of formation of a representative sample. This is why we tried to supplement information by conducting a comprehensive survey of citizens on the extent of informal employment. Based on the information that they possess, we tried to acquire, at least partially, a perception of the informal employment in both registered and non-registered companies. This is possible because the respondents are often employed in non-registered companies. As previously mentioned, defining the sample implies a previous stratification of the basic set, schedules in the choice of primary and secondary sample units and, finally, establishing quotas by categories of respondents. Bearing in mind the risk that directors/managers of companies might refuse to participate in a survey or give candid answers about their involvement in various forms of informal employment, it was decided that the

survey be conducted on a sample of natural persons in whom a higher degree of willingness to give honest answers was observed. Despite all the risks, the survey was carried out successfully with a high percentage of answers to the questions in the questionnaire.

Using a field survey method, 927 natural persons were examined. The selected sample was random two-stage and stratified. The selection of households was carried out by simple random sampling, while the choice of the household members was made on the basis of the Kish grid. The stratification of the sample was carried out based on the type of settlement (urban or rural) and geo-economic regions. The post-stratification was performed on the basis of gender, age, type of settlement, education, ethnicity and geo-economic regions.

The questionnaire that was used for businesses consists of several parts. The first part relates to general information about the company. The second part contains information on informal businesses and employment. These are followed by questions about the causes and motives of informal employment. Finally, the last part includes questions that will help in defining policy proposals for reducing informal employment.

On the other hand, the questionnaire on the basis of which the attitudes of natural persons concerning informal employment were examined is divided into three parts. The first part includes information on basic demographic characteristics of the respondents. The second part is related to their personal experience, while the third part contains questions related to labour rights, as well as the causes of informal employment and recommendations for its elimination.

4. The Research Results

(1) The characteristics of informal employment

Analyzing the perception of employers and individuals on informal employment, we tried to identify the extent to which both are familiar with the real meaning of the term “informal employment”. Comparing the responses of employers and individuals, we conclude that both see the notion of informal employment as work without payment of contributions on earnings in legally registered businesses. Also, a significant number of the respondents believe that informal employment can be identified with working for employers who have not registered their businesses. Informally employed persons are considered to be those individuals who are paid contributions in part or who are not paid contributions at all. Table 1 shows the percentage of formal and informal employment by main characteristics of the surveyed companies. According to the type of business entity, entrepreneurs are more involved in the activities of informal employment than companies (43.8% versus 31.9%, respectively).

Table 1 Percentage Of Formal And Informal Employment By Enterprise Characteristics

	Formal employment	Informal employment	
	% employees who are paid full contributions	% employees who are paid contributions in part	% employees who are not paid contributions
Total	66.7	19.9	13.4
Type of company			
Company	68.2	19.2	12.7
Entrepreneur	56.2	25.3	18.5
Number of employees			
1-Sep	54.6	28.7	16.7
Oct-49	72.6	16.2	11.2
50-250	77.8	10.7	11.4
251 and over	67.7	19.6	12.7
Ownership structure			
Private	60.3	23.0	16.7
State	97.0	1.7	1.3
Other	64.1	29.9	6.1
Activity			
Production	71.6	19.5	8.9
Trade	51.7	27.2	21.1
Tourism and catering	47.0	34.7	18.3
Other	75.7	14.0	10.3
Region			
North	71.9	15.7	12.4
Center	73.2	14.4	12.4
South	43.2	39.8	16.9

Different studies point to a link between informal employment and the size of an enterprise, which shows that businesses with a smaller number of employees are more prone to informal employment (Williams 2006, Hanlon, Mills and Slemrod

2007, Tedds 2010). The survey shows similar trends in Montenegro. Namely, informal employment is most present with micro enterprises and entrepreneurs (45.4%). Informal employment is predominantly represented in the private sector, while almost negligible in the state sector, which is manifested through the payment of contributions on only one part of the earnings.

In relative figures, informal employment is for the most part present in tourism and catering (53%), followed by trade (48.4%). On a regional basis, the largest part of informal employment occurs on the Coast, which was expected due to the large number of seasonal workers (the survey was conducted during the summer season). The analysis of the structure of informally employed based on the survey of individuals shows that 12% of informally employed persons are not Montenegrin citizens. In terms of gender structure, the share of men was significantly higher in the population of informal employees (66%). The reasons lie primarily in high inactivity rate of women in Montenegro, working conditions in the informal sector and traditional gender roles. Based on the estimates, in the opinion of individuals, one in five business entities in Montenegro is engaged in some form of informal employment. According to the same survey, majority of the informally employed completed primary or secondary education only.

(2) *The estimate of the volume of informal employment*

The estimation of the volume of the informal employment was done separately on the basis of the survey for natural persons, on the one hand and the survey with businesses, on the other. Namely, based on the survey of 209 companies a base of registered business entities in Montenegro was formed from which we obtained data on the share of informal employment in the formal sector. The estimation was performed on the basis of the respondents' opinion on the following issues: (1) participation of their own enterprises in informal employment, and (2) their estimate of the involvement of other companies similar to theirs in informal employment. Analyzing these two sets of data, an estimation was made of the lower and upper limits of the informal employment in the formal sector. The data obtained by analyzing the attitudes of employers about the presence of various forms of informal employment in companies similar to their own are presented in Table 2. The percentages in the table were obtained from a survey based on the responses about the number of employees in their company and the number of employees in companies similar to theirs.

Table 2 Estimate Of The Volume Of Informal Employment On The Basis Of Employers' Opinion On The Share Of Informal Employment In Similar Companies

	Formal employment	Informal employment	
	Full taxes and contributions paid	Taxes and contributions paid in part	Taxes and contributions not paid
Share of informal employment	66.70%	19.90%	13.40%
Estimate of informal employment	33.3%		

Based on the data from the previous table, the estimate of the volume of informal employment, including those workers who are paid taxes and contributions partially or not at all and work in similar companies, amounts to 33.3%. However, when estimating the share of informal employment in similar businesses, the respondents considered all economic entities regardless of whether they are registered or not.

Table 3 Estimate Of The Volume Of Informal Employment In The Formal Sector On The Basis Of Information On One's Own Company

	Formal employment	Informal employment	
	Full taxes and contributions paid	Taxes and contributions paid in part	Taxes and contributions not paid
Share of informal employment	79.15%	13,23%	7,62%
Estimate of informal employment	20.85%		

Table 3 shows the information obtained directly from employers about the number of employees in their company. The data suggest that employers reported some forms of informal employment themselves, in about 21% of cases. This figure is alarming in view of the expectation that respondents might tend to report it lower than it actually is, due to the embarrassment and fear of being punished by the state authorities. However, such a high share of informal employment, according to information received from the employers, is worrying in a sense, because it speaks of the social acceptability of this phenomenon, as evidenced by the results from the

second part of the research.

The lower limit of the volume of informal employment, obtained on the basis of the survey with businesses, refers exclusively to assessing the extent of this phenomenon in the formal sector (i.e. with registered companies). Since, in order to estimate the total loss due to the informal employment in the Montenegrin economy, it is necessary to include the presence of this phenomenon in the informal sector as well (i.e. companies that are not registered), the base of survey questions with individuals was used to assess the volume of informal employment. The estimate obtained in this way is more complete because it covers employees in both the formal and informal sectors. Also, an additional estimate based on surveying the data obtained from individuals serves to check the credibility of the previous estimates based on the survey with companies. Therefore, it is the estimate of the informal employment share in the total employment in the reference week. The percentages obtained represent the share of informally employed in relation to the total number of workers who performed an activity in exchange for money in the reference week. The share of the population who performed an activity in exchange for money in the reference week amounts to 41% of the total population of citizens older than 15 years.

Table 4 Estimate Of The Volume Of Informal Employment According To The Survey Of Natural Persons, %

Status of the re-	Taxes and contri-	Taxes and contri-	Total number of
spondents	butions partially	butions partially	informal employ-
	paid	not paid	ees
Lower limit	12.0	10.2	22.2
Central estimate	15.7	13.6	29.3
Upper limit	19.4	17.1	36.4

Based on the data from Table 4 it can be concluded that, according to the individual respondents, the estimated share of informal employment accounts for 29% of the total employment. This estimate is closer to the upper limit estimate based on the survey with businesses, which is in line with our expectations, because when assessing the share of informal employment in similar businesses, the employers did not take into account only the registered companies but all the businesses of similar size and activity, regardless of whether they are registered or not. It should be borne in mind that this estimate ignores those employees who think that they are paid full taxes and contributions, and in fact do not know whether this is the case and to what extent. The confidence interval, which allows drawing conclusions with a probability of 95% for the evaluation of the number of workers that are partially paid taxes and contributions ranges from 12.0% to 19.4%, and the boundaries of

this interval are taken as the lower and upper limits of participation in the total employment of those who are partly paid taxes and contributions. The confidence interval for those that are not paid taxes and contributions ranges between 10.2% and 17.1%.

(3) *Estimation of losses due to informal employment*

The estimation of losses due to informal employment was done in two ways: (1) based on the data from the survey of employers the loss was calculated in relation to the Budget due to the informal employment in the formal sector outside the state administration and (2) based on the data from the survey of natural persons the total loss was assessed due to the informal employment in relation to the Budget. According to the Monstat data, the number of people from the category of 15 years and older is 501, 278. The survey, which was conducted among citizens, showed that in the reference week, 41% of the total population performed an activity in exchange for money, which at the level of the total population is 205,524. As the survey with business entities included registered companies only, for the purpose of assessing the losses on the basis of this survey, the total number of employees in the registered companies was used which amounted to 164, 309 employees.

In this study, the loss due to the informal employment (IE_m) in July 2013 is expressed as a sum of part of the loss arising from unpaid taxes and contributions: (1) for those who are not paid taxes and contributions, and (2) those who are partially paid taxes and contributions,

$$IE_m = IE_{nc} + IE_{pc} \quad (1)$$

whereby IE_{nc} is the loss in cases where taxes and contributions are not at all paid, and IE_{pc} the loss in situations where taxes and contributions are paid in part. It should be noted that it was impossible to determine precisely by the survey on which part of the total wage taxes and contributions were paid when they were paid in part, and in the further analysis we had to start with the assumption that the workers who were not paid full taxes and contributions had their earnings registered in the statutory minimum amount of net income and that the total contributions were paid at the rate of 67% of net earnings.

The symbols used in the model are defined as follows:

n - 41% population older than 15 years;

n_f - number of employees in the formal sector;

$\alpha = 67\%$ - the rate of conversion of net wages in the amount of taxes and contributions;

p_{nc} - average net earnings of the respondents who are not paid taxes and contributions;

p_{pc} - average net earnings of the respondents who are paid taxes and contributions in part;

p_{min} - net minimum wage;

β_i - estimated participation of the employees who are partly paid taxes and contributions;

γ_i - estimated participation of the employees who are not paid taxes and contributions;

The values of the coefficients β_i and γ_i vary depending on whether an estimation of the lower or the upper limit is performed, as shown in Table 4.

Based on the survey of individuals, the loss incurred with the employees who are not paid taxes and contributions was calculated as follows:

$$IE_{nc} = \gamma_i \cdot n_f \cdot \alpha \cdot p_{nc} \quad (2)$$

The damage incurred due to non-payment of taxes and contributions on the full amount of wages, but on the amount of the minimum wage, was determined on the basis of the formula:

$$IE_{pc} = \beta_i \cdot n_f \cdot \alpha \cdot (p_{pc} - p_{nc}) \quad (3)$$

Bearing in mind that the survey was conducted during the summer tourist season, when the economic activity in Montenegro increases and the number of seasonal workers is particularly high, a slight correction was made of the obtained estimates, based on the data on the participation of seasonal workers among informally employed, which were obtained from the survey.

Specifically, the survey results show that among the employees who are not paid taxes and contributions, there are 30% of seasonal workers, while seasonal workers account for 20% of those who are partially paid taxes and contributions. Thus, these percentages were used to balance seasonal fluctuations, reducing the previously estimated losses by 30% and 20%, respectively, for a nine month period (except for June, July and August), in order to obtain a final estimate of annual damage. The correction of the equation (1) due to seasonal fluctuations and converting monthly losses into annual losses were performed using the following equation:

$$IE_a = IE_m \cdot 3 + (IE_{pc} \cdot 0,8 + IE_{nc} \cdot 0,7) \cdot 9 \quad (4)$$

The estimated share of informal employment (β_i and γ_i) in the formal sector is shown in Table 3. For the estimation of the loss incurred to the Budget as a result of the volume of informal employment, the previously obtained estimates were used as well as the data on the amount of the Budget for 2013 and the budget revenues. If we consider the fact that the budget revenues for 2013 amounted to €1,161,800,821 and the Budget for 2013 to €1,375,793,668.99, the percentage of losses to the budget due to informal employment is given in the following table.

Table 5 Estimate Of Damage Due To Informal Employment In The Formal Sector

Loss in July 2013	Loss per annum	Loss relative to the Budget revenues	Loss relative to the Budget
5,212,560 €	50,807,551 €	4.4%	3.7%

Taking into account the seasonal fluctuations, the total annual loss due to informal employment in the formal sector is estimated at 50.8 million or 4.4% of the Budget revenues. Using a procedure similar to that described in the above models, the volume of total informal employment was estimated based on the survey of a representative sample of citizens older than 15 years. The model presented by equations 1 to 4 was also used for the estimation on the basis of the responses of natural persons, with one difference. Namely, instead of the number of employees in the formal sector (n_1), the information about 41% of the population older than 15 years was used here (n).

Table 6 The Total Loss Due To Informal Employment Based On The Survey Of Natural Persons

	Lower limit of the interval	Estimate	Upper limit of the interval
In July 2013	7,316,057 €	9,696,936 €	12,077,814 €
On an annual basis	70,692,104 €	93,640,685 €	116,589,266 €
In relation to budget revenues	6.1%	8.1%	10.0%
In relation to the Budget	5.1%	6.8%	8.5%

Based on the estimate from the survey with natural persons it has been found that the total loss due to informal employment annually amounts to about 93.6 million. The estimated damage incurred to the Budget in 2013 ranges in the interval from 5.1% to 8.5% and from 6.1% to 10.0% in relation to the budget revenues.

Finally, it is important to note that the analysis conducted was focused on the estimation, not the exact determination of the share of informal employment in the total employment. Therefore, this fact should be kept in mind when using its results. This is all the more so because it is a phenomenon that is difficult to analyze, given that informal employment is not in the domain of the regular and institutional, but occurs in almost every form of economic activity and in various forms.

5. Conclusions

Reducing informal employment is one of the biggest challenges facing the Montenegrin economy. Informal employment is a significant obstacle to the functioning and development of a market-oriented economic system. Although work in the area of informal employment for many households remains an important source of income for living expenses, its negative consequences, both for individuals and for the society as a whole, exceed its benefits.

As with any research, this research has its objective limitations, primarily related to the degree of sincerity of the respondents when answering questions. The data obtained by the survey are the result of beliefs, attitudes, opinions and perceptions of the respondents, and as such are to some extent unreliable. For example, there are situations in which employees receive a salary and think that they are paid taxes and contributions, and, in fact, that is not the case. Therefore, when designing the survey questionnaire, attention was paid to the nature of the questions, the way they were asked, their order, and thus the previously mentioned problems were minimized. The dilemma of the comprehensiveness of the survey is certainly always present, even when it is about making a list, not to mention a very subtle kind of research such as this. The problem occurs due to the fact that there is no sample framework that would allow precise targeting of unregistered employers engaged in economic activity. Also, surveys with citizens systematically ignore participation of marginalized groups living in informal settlements, as well as those with the highest socio-economic status. However, the selected sample contains all the necessary elements that a representative sample should have.

Based on the results of the survey research with employers and individuals, it has been found that informal employment is predominant in the private sector (the services sector, trade, tourism and construction sectors). In regional terms, informal employment is highly present in the central part of Montenegro and on the Coast, primarily due to seasonal workers. Also, the survey has found that companies established in the recent past are to a greater extent involved in informal employment because this is how they become more competitive, especially if they faced a barrier to market entry. In addition, according to the survey, 60% out of the total number of informally employed work in officially unregistered enterprises, while out of the total number of those engaged in an activity for profit in the reference week, 42% were once engaged in a form of informal employment. Based on the results of the survey with employers, the volume of informal employment in the formal sector outside the state administration has been estimated. The reported levels of the informal employment as a proportion of the population employed in commercial entities outside the state administration range from 20.9% to 33.3%.

Based on the survey with individuals, the estimated share of informal employment in relation to the total number of workers performing an activity in

exchange for money in the reference week is 29.3%. The estimated 95% confidence interval ranges between 22.2% and 36.4%. Using the model for estimation of losses due to informal employment, it has been estimated that the damage incurred to the Budget amounts to about 96.5 million annually, which is a significant loss to public finances of a small economy such as Montenegro. These results indicate that we should start solving this problem as soon as possible, since making these flows regular would significantly improve quite an unstable fiscal position of Montenegro.

The basic precondition for the reintegration of informal employment in the legal channels is a rapid completion of a market-oriented economic system, consistent implementation of the law, full protection of property rights and contracts, establishing macroeconomic stability and developing financial markets. It is noteworthy that significant results in solving this problem cannot be achieved by the application of isolated measures and activities without joint efforts aimed at developing democratic institutions and the general improvement of the overall economic environment.

These measures and actions must be accompanied by the support of all social partners, as well as their greater participation in and contribution to solving this problem. They must be immediate and long-term in character accompanied by an appropriate strategy, performed at a measured pace and based on a combination of stimulative and repressive measures.

References

- A.T.Kearney (2013) *The Shadow Economy in Europe*, VISA Europe, UK
- Feige EL (1989) *The Underground economies, Tax evasion and information distortion*, Cambridge University Press, Cambridge.
- Fond za razvoj ekonomske nauke (2013) *Siva ekonomija u Srbiji: novi nalazi i preporuke za reforme*, multiple authors, Belgrade
- Hanlon M, Mills L, Slemrod J (2007) An empirical examination of corporate tax noncompliance in: Auerbach A, Hines JR and Slemrod J (eds) *Taxing Corporate Income in the 21st Century*. Cambridge, Cambridge University Press, pages 140-62
- Hudson J, Orviska M, Caplanova A (2012) *The impact of governance on wellbeing*. Social Science Indicators
- ILO (2002) *Decent work and the informal economy*. Geneva: International Labour Office,
- ILO (2011) *A comparative Overview of Informal Employment in Albania, Bosnia and Herzegovina, Moldova and Montenegro*, International Labour Office, Geneva
- ILO (2013) *The informal economy and decent work: a policy resource guide, supporting transitions to formality*, International Labour Office, Geneva
- Jutting J, Parlevliet J, Xenogiani T (2008) *Informal Employment Re-loaded*, OECD, Working Paper No. 266
- Neef R (2002) Aspects of the informal economy in a transforming country: the case of Romania. *International Journal of Urban and Regional Research* 26(2): 299-322
- OECD (2002) *Measuring the non-observed economy*

- Perry G, Maloney WF (2007) Overview: informality- exit and exclusion in: Perry GE, Maloney WF, Arias OA, Fajnzylber P, Mason AD and Saavedra-Chanduvi J (eds) Informality: exit and exclusion. The World Bank, Washington DC, 1-19
- Radović M, Bakrač R, Đurić D (2003) Neformalna ekonomija i nezaštićeni rad u Crnoj Gori, SSSCG i CRID, Podgorica
- Renooy P, Ivarsson S, van der Wusten-Gritsai O, Meijer R (2004) Informal employment in an enlarged Union: an analysis of shadow work – an in-depth study of specific items. European Commission, Brussels
- Rice E (1992) The corporate tax gap: Evidence on tax compliance by small corporations in: Slemrod, J. (ed) Why People Pay Taxes: Tax Compliance and Enforcement. Ann Arbor, MI: University of Michigan Press, 24-39
- Round J, Williams CC, Rodgers P (2008) Corruption in the post Soviet workplace: the experiences of recent graduates in contemporary Ukraine. *Work, Employment & Society* 22 (1): 149-66
- Schneider F (2008) The hidden economy. Cheltenham: Edward Elgar
- <<<<<<<<<<the Driving Forces?, Institute for the Study of Labor (IZA), Discussion Paper No. 6891, Bonn
- Schneider F, Williams C, The Shadow Economy (2013) The Institute of Economic Affairs, London
- Tedds LM (2010) Keeping it off the books: an empirical investigation of firms that engage in tax evasion. *Applied Economics* 42 (19): 2459-73
- Tomaš R (2009) Siva ekonomija u Bosni i Hercegovini, Friedrich Ebert Stiftung
- Tomaš R (2010) Kriza i siva ekonomija u Bosni i Hercegovini, Friedrich Ebert Stiftung BiH,
- Williams CC (2004) Cash-in-hand work: the underground sector and the hidden economy of favours. Basingstoke: Palgrave Macmillan
- Williams CC (2006) Evaluating the magnitude of the shadow economy: a direct survey approach, *Journal of Economic Studies* 33 (5): 369–85
- Williams CC (2007) Tackling undeclared work in Europe: lessons from a study of Ukraine, *European Journal of Industrial Relations* 13 (2): 219–37
- Williams CC (2008) Beyond necessity-driven versus opportunitydriven entrepreneurship: a study of informal entrepreneurs in England, Russia and Ukraine, *International Journal of Entrepreneurship and Innovation* 9 (3): 157–66
- Williams CC (2009) Formal and informal employment in Europe: beyond dualistic representations, *European Urban and Regional Studies* 16 (2): 147-59
- Williams CC (2010a) Tackling undeclared work in southeast Europe: some lessons from a 2007 Eurobarometer survey, *Southeast European and Black Sea Studies* 10 (2): 123-45
- Williams CC (2010b) Evaluating the nature of undeclared work in South-Eastern Europe, *Employee Relations* 32 (3): 212-26
- Woolfson C (2007) Pushing the envelope: the informalization of labour in post-communist new EU member states, *Work, Employment and Society* 21 (3): 551-64
- Žabko MA, Rajevska F (2007) Undeclared work and tax evasion: case of Latvia, Paper presented at colloquium of the Belgian Federal Service for Social Security on Undeclared Work, Tax Evasion and Avoidance. Brussels, June,