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## SHADOW ECONOMY IN SERBIAIN THE TIME OF COVID 19 PANDEMIC

**Abstract:** *Even as a field of study, the shadow economy is a very complex phenomenon. Although primarily related to underdeveloped and developing countries, shadow economy is present in highly developed countries as well, which indicates its immense scope. The size of shadow economy in the earlier periods has varied, depending on many factors. The objective of this paper is to show the size of shadow economy in Serbia, with particular emphasis on production of goods and services mostly consumed within the households and on illicit employment in the time of COVID 19 pandemic. The fact that there are no universally accepted methods for measuring shadow economy, but a combination of various estimate methods is used instead, adds to the problem. In this paper, we will also discuss the measures that result in reduction of shadow economy. These well-known measures include improvement of business environment and macroeconomic stability, increase of registered GDP, recovery of labour market, improved inspection activities, stricter penalty policy and more efficient collecting of tax charges. Therefore, by implementing specific measures a country can have a direct impact on the size of the shadow economy, but before that the country must first consider complex and often opposed relations that might result from its decisions.*

**Keywords:** *shadow economy, COVID 19 pandemic, business environment, macroeconomic stability, country.*

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## **Introduction**

The world has experienced many epidemics and pandemics throughout history, but none has had as pronounced consequences for the global economy as the COVID-19 pandemic. Gradually, all the countries have started implementing the necessary containment and mitigation measures to limit the spread of the virus and to save human lives (Dašić, Dašić, 2021: 173). Implementation of said measures brought about the reduction of economic activity. Crisis caused by the coronavirus COVID 19 represents an unprecedented shock that hastaken world and its economy by surprise. (World bank group, 2020, 1). Interaction of supply and demand shocks combined with political response to COVID-19 pandemic, such as closing national borders, triggered a series of negative impacts on both national and global economy. Because COVID-19 is truly a global shock, international coordination is essential, in economic policy, health care and science, and containment and mitigation efforts. (Loayza, Pennings, 2020, 1)

From the economic point of view, the negative impacts of COVID 19 pandemic could surpass the global financial crisis of 2008-2009. Measures of market and policy uncertainty are higher now than at the peak of the global financial crisis. In parallel to the favourable prospects for the global economy, on average, uncertainty across the globe is declining. (Ahir, Bloom, Furceri, 2021).

According to the projections, we are facing an immensely strong but highly uneven recovery of the global economy. In 2021, global growth should reach 5,65% - the fastest pace after 1980s recession (World Bank Group, 2021, 3). Growth will be intense in several major economies, whereat majority of developing and transition countries will lag behind. According to the IMF as well, global economic growth is projected at 6% in 2021 (International Monetary Fund, 2021, 8).

In addition to continuous fighting against coronavirus by vaccination, the consequences of this unparalleled coronavirus crisis also depend on the efficiency of the economic policy implementation (Dašić, et al., 2021). Serbia is one of the leading countries in the direct combat with the pandemic caused by the coronavirus (procurement of vaccines and vaccination of the population in Serbia). Also, Serbia is

accomplishing good results on the economic level, which is supported by IMF's projection – a 5% growth of GDP in 2021 that should not go below 4% until 2026 (International Monetary Fund, 2021, 132).

The new global age that we live in comes with both positive and negative aspects. On one hand globalization stands for peace and worldwide democratic development, but on the other hand it creates the atmosphere of uncertainty and risk for the human existence that is favourable for shadow economy and other forms of organized crime (Borojević, et al., 2021). The time of crisis also implies the appearance of new and spreading of existing criminal and illegal activities. All those activities may jeopardize the recovery of the country and, as a result, the recovery of the entire global economy.

### **Theoretical aspects of the shadow economy**

It is believed that the study of the shadow economy requires a scientific multidisciplinary approach to not only economy but also anthropology, political science, sociology, psychology, public administration, criminology. The ubiquity of shadow economy is mainly connected to developing and transition countries, even though the shadow economy activities are a daily occurrence every where in the world, even in the most developed countries (Dašić, Kovinić, 2020; Dašić, et al., 2021).

The shadow economy is a complex phenomenon, and its activities are as old as humanity itself. Historically, all employment, businesses and economic activities were informal until policies and laws were introduced that created a divide between formal and informal, that is, between economic units that are registered with relevant administrative authorities and those that are not and between workers with employment-based social protection and those without (Chen, Carré, 2020, 1).

Shadow economy is often called black market, parallel economy, informal and irregular sector, hidden economy etc. The professional literature does not provide a single, unique definition, but instead offers quite a few definitions of “shadow economy” that are often conflicting. Many authors agree that shadow economy is “those economic activities and the income derived from them that circumvent or otherwise avoid government regulation, taxation or observation”

(Dell'Anno, 2003; Dell'Anno, Schneider, 2003; Dell'Anno, Schneider, 2009; Feige, 1994; Flaming, Hayolamak, Jossart, 2005; Fleming, Roman, Farrel, 2000). Those criminogenic activities are the consequence of organized crime, and they aim at avoiding detection in official estimates of gross domestic product. "The public authorities are naturally most interested in sales or income not reported for tax or regulatory purposes, whereas statisticians are more concerned about economic activities belonging, but not captured, in the official GDP estimates" (Smith, 1994, 3). According to OECD, shadow economy encompasses activities that are illegal, underground, informal and other unregistered production activities that cannot be captured by the statistical system of the country. (OECD, 2002)

Informal economy is completely opposite to formal economy that is observed as a sum of all economic transactions. Informal economy involves all economic transactions that are unregistered, unlicensed, untaxed and unregulated. (Thomas, 1992; Portes, 1995). Those are the activities that take place outside of the institutionalized economic environment, and people engaged in those activities aim at concealing them from the authorities. Regardless of so many definitions of the shadow economy, it can be said with certainty that it represents a market-based part of the legal economy that operates illegally and comprises all illegal activities, starting with unreported income from production of goods and services, via financial transactions and bartering arrangements, all the way to self-organized business activities (Schneider, 2011, 3).

Countries with highly developed shadow economy are highly criminalized countries, as shadow economy development leads to criminalization of the society. The fight against shadow economy is crucial when the country is fighting against these types of organized crime. A country must create and implement the measures that will primarily focus on including shadow economy into legal flows. For that to be accomplished, the country must first be fully aware of the causes and structure of those informal, illegal, criminal activities.

### **Methodology for estimating the size of the shadow economy**

It is important to point out that from the statistical aspect the shadow economy is classified into registered and unregistered form,

from the aspect of legality into legal and illegal form and from the fiscal aspect into taxed, taxable (but with the total or partial income concealed from tax authorities) and other forms (for which tax regulations are unclear and legal gaps are used) (NALED, 2019, 14). Although shadow economy has been investigated for a very long time, a single, universally recognized method for measuring shadow economy has not been developed yet. Reason for this is that information on shadow economy is inevitably incomplete and unreliable. Many scientists have been working on methodology for studying shadow economy (Bhattacharyya, 1999; Breusch, 2005a; Breusch, 2005b, Dell'Anno, Schneider, 2009). In most cases, estimates of the size of shadow economy are done on a macroeconomic level. Those methods imply estimate of the share of shadow economy in the gross domestic product (Schneider, Buehn & Montenegro, 2010).

There are three basic groups of methods for estimating shadow economy (Schneider, 2011, 5):

1. direct methods,
2. indirect methods,
3. statistical methods.

Direct methods for estimating shadow economy involve implementation of on-site investigation and specific surveys. These are investigations on microeconomic level (level of individuals, households, and companies) at one particular point in time. The quality of estimate based on this method depends on representativeness of the surveyed sample and on the extent of systematic errors that are the result of dishonest replies and concealment of intensity and forms of shadow economy (Tomaš, 2010, 55).

Indirect methods are applied based on available macroeconomic data with the objective to estimate the development of shadow economy at one particular point in time. Estimations are mainly done based on existing data, but they only make possible general measuring of the total size of shadow economy, its impact on GDP size, on fiscal income and on the total tax burden. (Tomaš, 2010, 56). Statistical methods estimate shadow economy as an invisible (i.e. hidden) variable using statistical tools.

Most frequently applied method for measuring the size of shadow economy is the so-called MIMIC method (Multiple Indicators, Multiple Causes) that is based on modelling and takes into

account multiple causes and multiple impacts of shadow economy. This is the most comprehensive measuring method, both by sectors (households, companies), and by activities. The starting point in this method is the assumption that the shadow economy remains within unknown parameters, but that its scope can be estimated based on indirect quantitative measurable elements, whereat the practical research is supported by causes that lead to shadow economy. "In application of this method, the causes of shadow economy imply variables such as tax rate and compliance with legislation, and indicators imply official figures by responsible national authorities" (Mirković, 2016, 25). Compared with other methods, the MIMIC method "has the most comprehensive coverage of shadow economy because it comprises all institutional sectors and all shadow economy forms" (Krstić, et al., 2013, 4). Since each of the methods has certain limitations and shortcomings, combined methods for estimating shadow economy are most often used.

### **Informal economic activity in Serbia**

Informal economic activity is pervasive in developing economies, accounting for one-third of GDP, on average (Ohnsorge, Yu, 2021, 203). It is similar in Serbia. Two main forms of hidden economic activities are: "illicit employment and production of goods and services mostly consumed within the household" (Madžar, 2013, 60). First, we shall take a look at the estimated size of shadow economy in registered companies concerning turnover of products and payment of salaries, and then at illicit employment in Serbia.

In 2017 National Alliance for Local Economic Development – NALED that is a member of the Coordination Body for the Suppression of the Shadow Economy of the Government of the Republic of Serbia, produced a study called "Shadow economy in Serbia in 2017" using the survey estimation method. According to the study, the size of shadow economy in registered companies, regarding turnover of products and payment of salaries, was estimated at 15,4% of GDP. According to same parameters, there was a considerable reduction in the size of shadow economy compared with 2012 when it was 21,2% of GDP (Krstić, Radulović, 2018, 17). In the same study, for the first time the scope of shadow economy was estimated using the new survey method called

“Shadow Economy Index”. According to this method, the scope of shadow economy in Serbia in 2017 was estimated at 14,9% of GDP. Compared to other countries included by research, the shadow economy in Serbia (as percentage of GDP) was found to be lower than in Montenegro (24,5%) and Latvia (20,3%) and similar to Estonia (15,4%) and Lithuania (16,5%). It is important to mention that the share of non-registered companies in Serbia was considerably higher compared to Baltic countries and amounted to 17,2% (NALED, 2019: 15). The estimated size of shadow economy in Serbia according to MIMIC method indicated a mild decrease in the period 2009-2013, from 31,6% to 27,9% of GDP, while the estimates for the period after that were not available. This is because the MIMIC method includes the shadow economy of non-registered companies as well, unlike direct method of estimate applied here (NALED, 2019: 15). The Fiscal Council of the Republic of Serbia stated that the scope of shadow economy in 2012, being 30% of GDP, placed our country in the group of negative record holders, such as Bulgaria and Romania (Fiscal Council of the Republic of Serbia, 2013, 15).

Following the improvement of methodology for estimation of the shadow economy size, macro estimation of shadow economy obtained by MIMIC method was revised due to rather high estimates. Correction involved deduction of legally purchased material used in shadow economy activities, illegal activities and “do it yourself” activities from the total estimated scope of shadow economy. This research included 158 countries. Results suggest that the average size of the shadow economy of these 158 countries over 1991-2015 was 32.5% of official GDP, which was 34.82% in 1991 and decreased to 30.66% in 2015 (Medina, Schneider, 2017). After this correction, the scope of shadow economy in Serbia totalled 22,3% of GDP in the period 1999-2013, and 18,1% of GDP in 2013 (NALED, 2019: 16).

As for the illicit employment, for the needs of this paper we will refer to “Overview of the informal economy in Serbia“, published by the International Labour Organization in 2020 (ILO, 2020). In this overview, a share of informal employment in the total employment in Serbia in 2020 was 18,7%, out of which 6,2% accounted for informal sector, 8,0% for formal sector and 4,5% for households. The remaining 81,3% accounted for formal employment. The situation concerning informal employment, i.e. prevalent forms of informal employment in Serbia, is shown in Table 1.

**Table 1: Structure of informal employment: What is the prevalent form of informality in the country?**

In the Informal Sector	Independent workers – IE/IS	27,4%
	Employees – IE/IS	3,3%
	Contributing family – IE/IS	2,7%
In the Formal Sector	Employees – IE/FS	20,2%
	Contributing family – IE/FS	22,6%
In Households	Independents – IE/ Households	21,7
	Employees – IE/ Households	2,2%
	Contributing family – IE/ Households	0,0%
	Total	100%

Note: IE=Informal Employment, IS-Informal Sector, FS-Formal Sector

Source: ILO, 2020: 1.

Regarding prevalence of shadow economy by economic sectors, the agricultural sector, a great potential of Serbian economy (Dašić, et al., 2020), accounts for over 40% in the total informal employment, followed by the domestic workers sector (24,4%), while the remaining 8 sectors account for less than 10% (Table2).

**Table 2: The sectoral dimension: The 10 prevalent sectors in the informal economy**

No.	Sector	%
1.	Admin. Support	1,3
2.	Transport	1,7
3.	Art, recreation	2,4
4.	Other serv.	2,6
5.	Accommodation& food	3,3
6.	Manufacturing	5,0
7.	Wholesale, retail trade	5,8
8.	Construction	8,4
9.	Domestic workers	24,4
10.	Agriculture	40,5

*Representation of sector X in total informal employment*

Source: ILO, 2020: 2.

Distribution of informal and formal employment by enterprise size is such that enterprises that have 50+ employees account for 2% share in the total informal employment. Enterprises that have:

- 10-49 employees account for 8%,



- 2-9 employees, for 34%,
- 1 employee, for 56%.

Concerning formal employment in enterprises, the situation is as follows:

- 50+ employees: 33%,
- 10-49 employees: 35%,
- 2-9 employees: 18%,
- 1 employee: 14%.

This distribution shows that a share of informal employment decreases with enterprise size, while it is the other way round with formal employment, i.e., the share of formal employment increases with the size of enterprise.

Table 3: The ruralurban dimension of informality

		Rural	Urban
Excluding agriculture	Formal	30,9	69,1
	Informal	55,6	44,4
Including agriculture	Formal	36,2	63,8
	Informal	68,3	31,7

Source: ILO, 2020: 2.

The situation in sectors that include agriculture that can be affected by natural and anthropogenic factors (Petrovic, et al., 2019), compared to sectors which exclude it, indicates the increase of informal employment in rural areas, and decrease of formal employment in urban areas.

### **Measures for mitigation of economic consequences in informal sectors**

Global crisis provoked by coronavirus COVID-19 pandemic has had a major economic impact, especially on countries with large informal sector. Informal sector has suffered greatly due to COVID 19 pandemic. Large informal sectors are often associated with underdevelopment, with activity typically characterized by labour-intensive production, less educated and more poorly paid workers, limited access to financial and medical service, and poor or non-existent

coverage by social security (Ohnsorge, Yu, 2021: 38). These features are likely to intensify the spread of COVID-19 among informal workers and worsen its adverse health and economic impacts (Nguimkeu, Okou, 2019). Lockdowns of countries and social distancing as government measures to prevent the spread of COVID 19 have had significant impact on majority of informal workers worldwide. Informal workers are most often out of reach of social support programs. If unreachable through benefits programs, informal workers are likely to feel compelled to continue working, despite the health risks (Maloney, Taskin, 2020).

Informal workers are most often employed in activities and at locations where social distancing is difficult to implement. They are compelled to work to earn a living as they do not have access to formal social benefits. Informal workers are forced to make desperate decisions and to choose whether to die of hunger or of virus. Although they usually fall outside the tax net, such workers are often not eligible for basic social security, nor protected by basic employment rights (Oxford Business Group, 2020). Unconditional support programs and implementation of efficient delivery channels for supporting informal workers and companies is one of the main measures in fighting the disease spread. High informality and the low coverage of social protection schemes imply very weak automatic social stabilizers. This strengthens the case for discretionary support to affected workers (Diez, et al., 2020, 1). Considering their limited resources, many countries with low income are compelled to ask for increased international financial resources for efficient implementation of such programs. In the time of COVID 19 pandemic, the assurance of welfare of most endangered workers, i.e. informal economy workers at this moment, is of crucial importance.

Every country, including Serbia, should primarily focus on stimulating transition of informal companies and workers into formal economy. In addition to measures aiming at mitigation of economic consequences in informal economy caused by COVID 19 pandemic, our country must continue with implementation of existing measures against shadow economy. The expert group of the Government of Serbia has started drafting a new National Program for the Suppression of the Shadow Economy. This new National Program should include such measures as further development of e-Inspector system,

improvement of the efficiency of misdemeanour proceedings, establishment of the Government Office for inspection and merging of related inspections, improvement of the process of legalisation of objects and the process of establishing the tax on transfer of absolute rights when buying used vehicles. Incentive measures are also of extreme importance, and they include further reduction of tax burden on labour, creation of public registry for non-tax charges, stimulation of cashless payments, expansion of system for registering seasonal and occasional workers in construction, tourism and catering and domestic work, regulation of non-standard forms of work. These measures should also include tax reliefs, such as tax exemption in the first operating year, especially for priority categories, such as flat-rate businesses or specific activities, regulation of the field of crafts, digitalization of administrative procedures and a series of educational campaigns.

It is estimated that the gray economy in Serbia is as high as 30 percent of GDP, which is an annual loss of over 15 billion euros. Serbia loses at least five or six billion euros a year through tax evasion. In one analysis, in the period 2015-2018, it was found that there were about 3,200 criminal charges related to various types of tax evasion. Out of that, in only 264 cases, a prison sentence was imposed, of which 110 were under house arrest. So, in only five percent of cases, the punishment for tax evasion was imprisonment. The key is the lack of specialization of courts in resolving cases of tax evasion, and training of courts in that direction would be part of the solution (Jovanović, 2021). The country must create such environment that would make legal operating the easiest and most profitable form of doing business, by providing equal conditions and clear and logical rules that are not difficult to comply with but also by imposing certain sanctions on those who fail to conform despite everything. Activities on suppressing shadow economy must be comprehensive, intense and uncompromising (Dašić, et al., 2021).

## **Conclusion**

Shadow economy as a part of economic activities is not included in the official statistics. It is hidden from the public authorities for monetary, regulatory, and institutional reasons. Monetary reasons include the avoidance of taxes and social security contributions,

regulatory reasons include the avoidance of government bureaucracy or regulatory burdens, and institutional reasons include corruption, related often to the poor quality of political institutions and weak rule of law. Shadow economy is especially destructive for the financial safety of the country and the society. It inflicts enormous damage on the economic and budget system and threatens national safety by creating discontent, social tension, budget deficit and political instability. In order to undertake the measures for suppressing shadow economy, first its size needs to be estimated. Measuring the size of shadow economy in one country is followed by methodological difficulties and various dilemmas. Although a unique methodology for measuring the size of shadow economy with 100% certainty has not been established yet, modern investigations of this phenomenon have reached the satisfactory level of objectivity and accuracy, so today they represent a foundation for making valid conclusions. The size of shadow economy in Serbia is similar to the developing countries and it accounts for somewhat less than one third of GDP on average. Almost one out of three companies operates in the shadow zone, and unregistered companies that account for more than 17% of the total number of companies largely contribute to that. Activities focused on reducing the share of unregistered companies in the total number of companies, as well as continuous reduction of those companies' share in the total scope of economy of the Republic of Serbia, represent a priority in fighting shadow economy. The fight against shadow economy still remains the imperative of every country, including Serbia.

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## **SIVA EKONOMIJA U PRIVREDI SRBIJE U VREME PANDEMIJE KOVID 19**

**Sažetak:** *Sama oblast izučavanja sive ekonomije je veoma složena pojava. O obimu ove pojave govori i činjenica da je ista rasprostranjena i u veoma razvijenim zemljama, iako se većinom vezuje za nerazvijene zemlje i zemlje u razvoju. Obim sive ekonomije tokom ranijih perioda je varirao u zavisnosti od mnogih faktora. Cilj i zadatak ovog rada je da pokaže obim sive ekonomije u privredi Srbije sa posebnim akcentom na proizvodnju dobara i usluga većinom namenjenih potrošnji u domaćinstvima i nezakonitu zaposlenost u vremenu pandemije uslovljene virusom KOVID 19. Poseban problem predstavlja činjenica da ne postoji univerzalno prihvaćen metod merjenja sive ekonomije, već isti predstavlja kombinaciju različitih metoda procene. U radu ćemo se osvrnuti i na mere koje imaju uticaj na smanjenje obima sive ekonomije. Poznato je da poboljšanje poslovnog ambijenta i makroekonomska stabilnost, rast registrovanog BDP-a, oporavak tržišta rada, unapređen rad inspekcija, oštija kaznena politika i efikasnija naplata poreskih prihoda doprinose smanjenju sive ekonomije. Dakle, država je ta koja sprovedenjem određenih mera ima direktnog uticaja na obim sive ekonomije, te stoga ista mora najpre razmotriti složene i često suprotstavljene odnose izazvane posledicama svojih odluka.*

**Ključne reči:** *siva ekonomija, pandemija KOVID 19, poslovni ambijent, makroekonomska stabilnost, država.*

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