

DOI: 10.55643/fcaptp.3.44.2022.3763

Kovalenko V.

D.Sc. in Economics, Professor of the Department of Banking, Odessa National University of Economics, Odessa, Ukraine;
e-mail: kovalenko-6868@ukr.net
ORCID: [0000-0003-2783-186X](https://orcid.org/0000-0003-2783-186X)
(Corresponding author)

Slatvinska M.

D.Sc. in Economics, Professor of the Department of Finance, Odessa National University of Economics, Odessa, Ukraine;
ORCID: [0000-0002-7356-1189](https://orcid.org/0000-0002-7356-1189)

Varnalii Z.

D.Sc. in Economics, Professor of the Department of Finance, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine;
ORCID: [0000-0002-6654-8760](https://orcid.org/0000-0002-6654-8760)

Sheludko S.

PhD in Economics, Associate Professor of the Department of Banking, Leading Specialist of the Department of Valuation and Collateral Operations, Pivdenny Bank PJSC, Odessa, Ukraine;
ORCID: [0000-0003-0636-4940](https://orcid.org/0000-0003-0636-4940)

Valihura T.

Post graduate student of the Department of Taxes and Fiscal Policy, West Ukrainian National University, Ternopil, Ukraine;
ORCID: [0000-0002-1297-0907](https://orcid.org/0000-0002-1297-0907)

Received: 03/05/2022

Accepted: 19/05/2022

Published: 30/06/2022

© Copyright
2022 by the author(s)



This is an Open Access article distributed under the terms of the [Creative Commons CC-BY 4.0](https://creativecommons.org/licenses/by/4.0/)

THE SHADOW ECONOMY'S PHENOMENON AND ITS IMPACT ON THE DEVELOPMENT OF CORPORATE BUSINESS AND HOUSEHOLDS IN UKRAINE

ABSTRACT

The shadow economy, along with macroeconomic imbalances and limited resources, will become a key global risk for the next decade. Withdrawing cash flows from the shadow sector and directing them to the legal economy solves numerous political, social, and economic problems of a country. That's why assessing the level of the shadow economy and solving problems of legalizing cashflows in any country has theoretical and practical significance. The purpose of this study is to assess the level of the shadow economy in Ukraine and to identify the problems, which give rise to it in the context of new challenges of the crisis phenomena both in Ukraine and around the world. The paper presents a comprehensive study of the shadow economy phenomenon, examines the root causes of its occurrence. The specificity of the study consists in assessing the level of the shadow economy in Ukraine according to the existing methods, namely: the unprofitableness of enterprises "household expenses – retail sales and services", electrical and monetary. According to the review of scientific works, it is necessary to use a comprehensive indicator of the shadow economy assessment. Thus, considerable attention is paid to deepening the methodological aspects of assessing the shadow economy based on multi-criteria methods. The result of the study is the calculation of the shadow economy's level, considering the shadow currency turnover, based on the fact that Ukraine is a dollar-dependent country. A large proportion of the capital withdrawal into the shadow circulation is associated precisely with currency fraud. The obtained results confirm that the legalization of currency cash turnover should be mandatory in the process of foreign exchange regulation's transformation in Ukraine. Achieving this goal is associated with the deregulation of the foreign exchange market and the banking sector on the basis of moderate liberalization, warning the country's economy against the deployment of credit booms, improving the institutional provision of financial intermediation, developing a full-fledged market for derivatives, harmonizing national legislation with the best world experience and international standards of regulation, supervision and reporting, continuous monitoring of public opinion on the actions of monetary authorities and the consequences of these actions for the welfare and economic stability of corporate business and households.

Keywords: shadow economy, corporate business, households, real sector, assessment methods, corruption

JEL Classification: C43, F02, F63, O11

INTRODUCTION

The shadow economy, along with macroeconomic imbalances and limited resources, will become a key global risk for the next decade. Nowadays the shadow economy is an urgent problem for Ukraine. Its reasons are the widening gap between rich and poor, the loss of corporate business and households confidence in state authorities. Assessing the situation, analysts of the Bloomberg agency back in 2015 put Ukraine in second place in the World Poverty Index, calculated on the basis of indicators of poverty and inflation. To a greater extent, this influences the behavior of households, which, creating small and medium-sized enterprises, cause an increase in the level of informal employment. On the one hand, thanks to the shadow economy, households have a chance to

survive, however, on the other hand, it contributes to the prosperity of corruption in its various manifestations: in everyday life, economic, political, destructively affects the socio-economic development of Ukraine.

Corporate business is also subject to the phenomenon of the shadow economy, namely: the crisis of the financial system; high rates and complex tax calculation mechanism; establishment of preferential conditions for the functioning of individual business entities; the desire of entrepreneurs to obtain super-profits by evading government bodies; the relationship between business and criminal structures.

Corruption and the shadow economy circumvent tax laws and regulations, which further leads to lower tax revenues, increased public spending, and impedes productivity and economic growth (Hoinaru, R et al., 2020) [1]. Therefore, the phenomenon of the shadow economy depends on the viability of public administration, primarily in terms of efficiency and effectiveness (Dubynaa, M. et al., 2021) [2]. The relevance of the study of the shadow economy is determined by the negative consequences of its impact on the economic, social and political systems, as well as the need to develop theoretical and practical recommendations for bringing the shadow economy into the sphere of legitimate economic activity.

LITERATURE REVIEW

The phenomenon of the shadow economy in the scientific literature is interpreted in different ways. Lawyers consider the shadow economy as an economic activity prohibited by law. In a narrow sense, the shadow economy includes all legal market production of goods and services which are deliberately hidden from public authorities in order to avoid paying income or value-added taxes, etc.; to avoid paying social insurance contributions; to avoid the need for complaining certain legal labor market standards, such as minimum wages, maximum working hours, safety standards, as well as compliance with certain administrative procedures, such as filling in statistical questionnaires or administrative forms (Friedrich, S., 2010) [3].

Alternative concepts of the shadow economy cover a wide phenomena range. Some definitions focus on hidden exit (Gerxhani, K., 2004) [4], others on hidden employment (Husmanns, R. 2004; Perry, G.E. et al., 2007) [5; 6]. While unregistered firms hide all of their products, registered firms can hide some of their products to reduce their tax liabilities. Schneider and co-authors, define the shadow economy as basically legal economic and production activities which are deliberately hidden from the official authorities and, if registered, make contribute to GDP (except for illegal or criminal activities) (Schneider, F. et al., 2016) [7].

The traditional understanding of the shadow economy essence for any country consists of the following three components:

- 1) criminal or "black" economy, which includes the production and sale of weapons, drugs, counterfeit medicines, prostitution, fraud – all those activities which as a result have criminal liability;
- 2) "gray" economy arising from business activities related to the production of goods and services, partially or completely hidden from taxation;
- 3) "white" or "white-collar economy" – a sector of the economy where nothing is produced, but the redistribution of income received in the form of slush funds and bribes from the previous two sectors is carried out (Baranov, S.O., 2014) [8].

Also, the shadow economy is understood as an economic activity which, for various reasons, is not taken into account in official statistics and, accordingly, is not included in GDP. Considering the phenomenon of the shadow economy, different points of view coexist in the scientific literature regarding the causes of its occurrence.

Awasthi & Engelschalk determine that high levels of tax complexity, weak or ineffective enforcement of tax, and lack of incentives to conduct business and make payments through formal banking channels are some of the factors which contribute to informality. Another important factor is the level of trust of taxpayers in the government. Other factors affecting the level of the shadow economy include the state, the level of participation in the labor market, the quality of services in the public sector, and a "culture of tolerance" (Awasthi, R., 2018) [9].

Kunditsky & Senishin identify the following reasons for the formation of the phenomenon of the shadow economy:

- 1) economic – associated with the economic crisis and its consequences;
- 2) social – social injustice, unfair income distribution, violation of social obligations by the state, degradation of socio-psychological guidelines;

- 3) political – political instability, lack of a purposeful policy to influence specific manifestations of the shadow economy, ineffective law enforcement agencies to fight and counter the shadow economy;
- 4) legal – gaps in legislation that motivate a person to commit shadow activities;
- 5) historical – historically formed features and patterns of a particular society;
- 6) psychological – the ability of society members to use 7) illegal ways to achieve their goals;
- 7) sociocultural – the attitude of society to the shadow economy (Kunditsky, O.O. et al., 2018) [10].

A group of Ukrainian researchers have formed a system of factors that are inherent in the phenomenon of the shadow economy in Ukraine, namely: ineffective functioning of organizational and institutional mechanisms of anti-corruption legislation and regulatory bodies in the field of economic activity; ineffective functioning of the judicial and law enforcement system; mass cultivation of "shadow phenomena", the psychology of permissiveness and the dominance of "shadow" morality in society; purposeful activity of the criminal world, pursuing its specific corporate interests in the economic sphere; unpreparedness of the population and business entities for civilized activities in the conditions of the formation of market relations; continuation of the military conflict in Ukraine; lack of an established institutional economic base (imbalance of state regulatory policy, imperfect budgetary policy, deformation of the employment structure, abuse of a monopoly (dominant) price position, corruption) (Kraus, N.N. et al., 2018) [11].

Thus, the shadow sector is mainly generated by the following interrelated factors: the predominance of cash turnover, lack of transparency in transactions and non-compliance with legislation. At the same time, illegal activities and crimes, including drug trafficking, smuggling, money laundering and embezzlement, are not included in the shadow sector.

In general, a strategy for the elimination of factors that can help to reduce the size of the shadow economy should be comprehensive, involving all stakeholders such as the central bank, banking sector, ministries of finance and economy, and tax administration.

RESULTS

To select a methodological toolkit for estimation of the shadow economy in Ukraine, it is necessary to determine whether there is a connection between the economic growth of the national economy and the level of the shadow sector. It should be noted the ambiguity of the statement that the shadow sector slows down economic growth. If we understand economic growth as one of the basic components of a national economy's development, manifested in the dynamics of qualitative and quantitative indicators, then it is clear that we are talking about official indicators such as GDP, national wealth. The official statistics do not really reflect the output of the shadow sector. Therefore, for an objective assessment of the economic growth of the national economy, it would be advisable to introduce a certain correction for shadow production.

Thus, in the study conducted by G. Hlukha it is proposed to distinguish between the concepts of explicit and implicit economic growth. Explicit economic growth is expressed in the dynamics of official quantitative and qualitative indicators, and implicit – in the dynamics of indicators adjusted for the coefficient of adjustment of economic growth to the level of "shadowing". The author of the scientific study identifies both direct and indirect influences of the shadow economy on explicit economic growth (Hlukha, G.Ya. 2013) [12].

The direct impact is manifested in the official indicators by which economic growth is estimated. If we consider GDP as the main indicator of clear economic growth, then as a result of the direct influence of the shadow sector, the national economy actually receives less income in the form of wages, gross income and tax revenues, with the exception of subsidies for production and imports.

The indirect influence of the shadow economy is manifested in the impact on the effectiveness of the macroeconomic policy, in terms of increasing errors in macroeconomic regulation (fiscal, monetary, foreign-trade regulation). They are associated, as a rule, with the lack of reliable data on the scale, structure and dynamics of a part of productive activity in the legal and illegal sectors.

It should be noted that the shadow economy arises from the desire to avoid measurement, therefore a number of scientists use indirect methods that make it possible to give it a relative assessment. Consider these methods for assessing the shadow economy in Ukraine (Tab. 1).

Table 1. Characteristics of methods for estimating the level of the shadow economy. (Source: own study based on: The official site of Ministry of Economy of Ukraine [13])

Methods	Characteristics
Household expenses – retail sales and services	Revealing the presence of an excess of consumer cash expenditures of households on goods and services over the total volume of sales to households by all business entities in the real sector of the economy.
Electric	Comparison of the growth rate of domestic electricity consumption with the growth of GDP. At the same time, it is assumed that the growth in domestic electricity consumption should correspond to the growth in real GDP. In case of excess, it is recommended to consider that electricity is directed to production in the shadow economy.
Unprofitable enterprises	Determination of the boundary minimum and maximum coefficients of the shadow economy as part of the GDP, within which the shadow economy is located. At the same time, it is assumed that all unprofitable enterprises, according to official statistics, are actually profitable, and in fact, it is recommended to consider an overestimation of the volume of the shadow economy.
Monetary	Determination of trends in the ratio of the volume of cash to bank deposits in the period, which is analyzed, to the base period.

If we return to the monetary method for assessing the level of the shadow economy, namely, the negative factors affecting its level, then we can state that an additional method is needed for assessing shadow foreign exchange transactions.

The basis for the methodology for constructing a model for estimating the latent foreign exchange turnover is the following hypothesis: if during periods of relative social and economic well-being, the official foreign exchange turnover corresponded to the real one, then the difference between the actual and theoretically calculated values of the cash foreign exchange turnover in crisis periods will constitute the shadow foreign exchange turnover. Since it is necessary to build and verify a model that considers more than one independent parameter, it is advisable to implement economic and mathematical modeling using multiple regression analysis. In general, the multivariate linear regression model looks like this:

$$y = \beta_0 + \beta_1 \times x_1 + \beta_2 \times x_2 + \dots + \beta_n \times x_n + \varepsilon \quad (1)$$

where: y – dependent variable; $\beta_0, \beta_1, \beta_2, \dots, \beta_n$ – parameters of independent variables to be estimated; x_1, x_2, \dots, x_n – independent variables, i.e. factors influencing y ; ε – random variable.

Classic multivariate regression analysis burdens such a model with a number of assumptions (Dougherty, K., 1999) [14]:

$$M(\varepsilon_i | x_{1i}, x_{2i}, \dots, x_{pi}) = 0, i = 1, n \quad (2)$$

$$\text{cov}(\varepsilon_i, \varepsilon_j) = 0, i, j \quad (3)$$

$$\text{var}(\varepsilon_i) = \sigma^2 \quad (4)$$

$$\text{cov}(\varepsilon_i, x_{ji}) = 0; i = 1, n; j = 1, p \quad (5)$$

First, it is expedient to define the mathematical expectation of a random variable as zero (2). Secondly, it should be accepted the absence of serial correlation, which in practical terms is explained by the independence of random variables from each other (3). Third, assume that the variance of the model is constant (4). Fourth, it is advisable to determine the zero covariance between the random variable and each of the independent variables (5). Fifth, it is necessary to clearly specify the model by defining all functional relationships explicitly. Sixth, it should be assumed that the random variable obeys the normal distribution law with a mathematical expectation of zero and constant variance. Seventh, the assumption that the factors are independent indicates multicollinearity between the independent variables. The last one, in fact, distinguishes multivariate regression from simple linear regression.

Fulfillment of the above assumptions allows us to consider the estimates obtained by the least squares method not only as linear without deviations but also as the best linear unbiased estimate. Thus, the model will take the form of the following equation:

$$M(y_i | x_{1i}, x_{2i}, \dots, x_{ni}) = \beta_0 + \beta_1 \times x_1 + \beta_2 \times x_2 + \dots + \beta_n \times x_n \quad (6)$$

So, the independent variable is the conditional mathematical expectation yet for the independent variables x_i determined by the equation, corrected for the corresponding parameters β_i . In this case, the general view of the model is as follows:

$$w = \gamma_0 + \gamma_1 \times z_1 + \gamma_2 \times z_2 + \gamma_3 \times z_3 + \gamma_4 \times z_4 + \gamma_5 \times z_5 + \gamma_6 \times z_6 + \gamma_7 \times z_7 + \gamma_8 \times z_8 \quad (7)$$

where: w – the volume of foreign currency savings outside banks; $\gamma_0, \gamma_1, \gamma_2, \dots, \gamma_n$ – coefficients of independent variables and intercept; z_1 – official exchange rate (USD / UAH); z_2 – exchange rate in the interbank market (USD / UAH); z_3 – balance of transactions in the cash foreign exchange market; z_4 – volume of households' deposits in hryvnia; z_5 – volume of households' deposits in foreign currency; z_6 – volume of transfers from abroad; z_7 – cash income of the population; z_8 – consumer inflation (CPI growth).

The subsequent construction of econometric models involves finding the values of the coefficients for the variables and an intercept of the equation, provided that the above constraints of the model are met.

We have supplemented the methodology for assessing the level of the shadow economy based on shadow foreign exchange transactions. Based on the available information capabilities, the quarterly values of the variables in 2006-2013 are used as the initial data. To increase the adequacy of calculations and correct analysis of the residuals, it is advisable to sort the output data by the dependent variable. Application of the analysis toolkit allows obtaining the result of calculating the parametric coefficients and their significance (Tab. 2).

Table 2. The results of calculating the parameters of the independent variables of the multivariate regression model, and their significance. (Source: own study based on the official site of National Bank of Ukraine; the official site of the World Bank. Data (by Country); Dougherty K., 1999 [14-16])

Independent variables	Parameter γ value	p-value	Interpretation
Official exchange rate USD/UAH (z_1)	11.917	0.47	Insignificant parameter ($p > 0.05$)
Exchange rate in the interbank market USD/UAH (z_2)	-11.508	0.47	
Balance of transactions in the cash foreign exchange market (z_3)	-0.611	0.07	
Volume of households' deposits in hryvnia (z_4)	-0.071	0.00	Significant parameter ($p < 0.05$)
Volume of households' deposits in foreign currency (z_5)	0.099	0.00	
Volume of transfers from abroad (z_6)	3.846	0.00	
Cash income of the population (z_7)	17.797	0.00	
Consumer inflation – CPI growth (z_8)	149.213	0.54	Insignificant parameter ($p > 0.05$)
Intercept	-20970.956	0.00	Significant parameter ($p < 0.05$)

In the case when $p > 0.05$, the corresponding coefficient in further econometric actions can be considered as zero, which automatically excludes the variable weighted by it from the number of significant ones. Given in Tab. 3 interpretations of this parameter showed that factors such as the official and interbank exchange rates, the balance of transactions in the cash foreign exchange market, and the increase in prices are insignificant when constructing the model. In practical terms, this can be explained by the low significance of these parameters when an individual makes a decision about unofficial savings (in the case of exchange rates) or the low adequacy of official statistics to real economic reality (in the case of transparent transactions in the cash market and inflation).

The value of p-criterion for other factors is significantly lower than the accepted confidence level of 0.05: in particular, the criterion for the coefficient for the volume of dollar deposits (~ 0.003) is high and the lowest for the intercept ($\sim 0.00005 \times 10^{-5}$) indicating the high significance of these independent variables for the construction of the model.

After eliminating insignificant factors, repeated calculations were executed, which made it possible to present the multivariate linear regression model in the following form:

$$w = -0,07z_4 + 0,102z_5 + 3,713z_6 + 17,629z_7 - 20281,81 \quad (8)$$

The constructed model is distinguished by a high degree of adequacy (the value of Fisher criterion approaches zero) and accuracy ($R^2 = 99.87\%$). For a more thorough assessment, it is advisable to normalize the coefficient R^2 , which makes it possible to adjust the sums of squares by their degrees of freedom, which increase the strength of the relationship between

the variables. Its value for the current model is 99.85%, which corresponds to the strong influence of factors on the results.

Table 3. Positions of Ukraine on indicators of doing business. (Source: own study based on: The official site of World Bank (2021). Index of Doing business [17])

Business environment indicators	2018		2019		2020	
	Index	Rank	Index	Rank	Index	Rank
Registration of enterprises	91.0	52	91.1	56	91.1	61
Obtaining building permits	75.8	35	76.9	30	81.1	20
Electricity connection	58.8	128	59.2	135	62.5	128
Property registration	69.6	64	69.7	63	71.3	61
Access to credit	75.0	29	75.0	32	75.0	37
Protection of investors' rights	55.0	81	58.3	72	68.0	45
Taxation	80.8	43	79.4	54	78.1	65
International trade	64.3	119	77.6	78	80.1	74
Ensuring the implementation of contracts	59.0	82	63.6	54	63.6	63
Liquidation of enterprises	28.2	149	31.7	145	31.4	146

Based on the results of the business environment analysis using international rating index systems, it was found that the legal and political external environment in Ukraine is unfavorable for doing business, there are threats associated with corruption, imperfect legislation in the field of business regulation, insufficient protection of intellectual property and property of economical subjects due to the ineffectiveness of the law enforcement agencies and the judiciary, difficulties in attracting financial resources through an undeveloped stock market, as well as macroeconomic instability, a low level of financial and investment freedom of business.

Political instability provokes income hiding. Corruption is quite common in all spheres of political power; law enforcement agencies and courts are no exception. Corruption has become the driving force behind the shadow economy, in which government officials are involved. Tab. 4 shows the position of Ukraine and a number of neighboring countries in the corruption perception index in 2013-2021, published annually by Transparency International. According to this rating, Ukraine has gradually improved its position in the perception of corruption during 2013-2021, despite the military actions in the East.

In 2021, Ukraine was in 122th place with a score of 32 points out of 100. The assessment of the rating data shows that the value of the index of Ukraine is still significantly high in comparison with the countries of Eastern Europe (even with Belarus) and is at about the same level as Moldova and Romania. This indicates a clear inadequacy of measures taken by the state to overcome corruption and pessimistic sentiments of society regarding the prospects for overcoming it.

Table 4. Positions of Ukraine, Romania, Moldova and Belarus in the Corruption Perception Index in 2013-2021. (Source: own study based on: The official site of Transparency international [18])

States	Rank								
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Ukraine	144	142	130	131	130	149	126	117	122
Romania	69	69	58	57	59	61	70	69	66
Moldova	102	103	102	123	122	117	120	115	105
Belarus	123	119	106	79	68	70	66	63	82

The parallel functioning of the shadow economy, along with the legal one, leads to a significant reduction in the share of tax revenues in the structure of the state budget revenues, endangers the implementation of important government programs (Fig. 1).

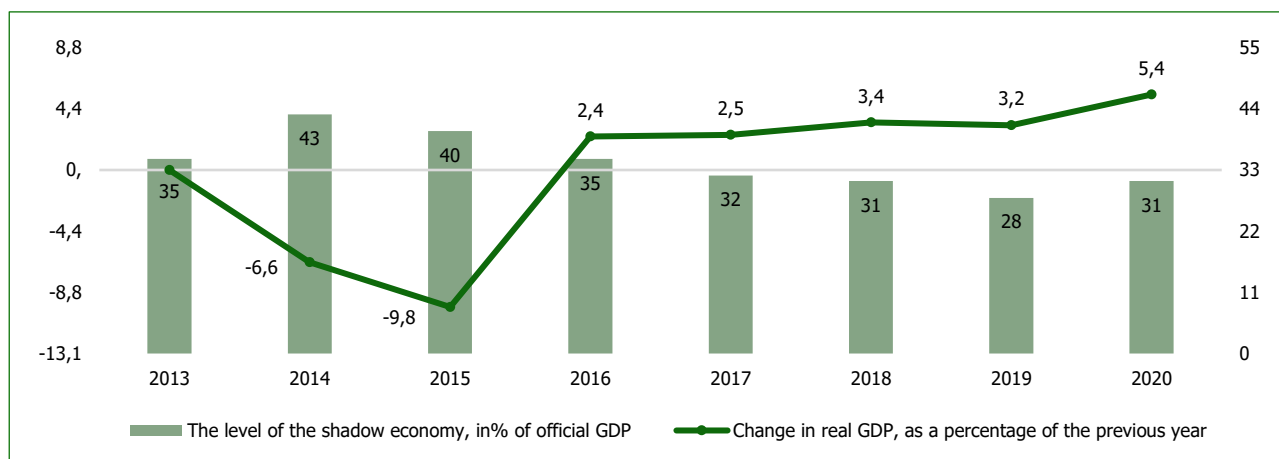


Figure 1. Integral indicator of the shadow economy's level in Ukraine, %. (Source: own study based on the official site of Ministry of Economy of Ukraine. Shadow economy: general trends [13])

In 2020, the level of the shadow economy in Ukraine increased by 3% compared to the same period in 2019. The growth of the shadow economy was expected. The introduction of restrictive measures to protect the population from COVID-19 had consequences in terms of a decrease in business activity (both within the country and abroad) and, accordingly, a significant increase in losses in the economy. At the same time, the growth in the level of the shadow economy following the results of 9 months of 2020 is less than the growth of its level following the results of previous crisis periods (in particular, the crisis of 2014). This testifies, first, about the special nature and character of the "corona-crisis", which is not similar to the crises of previous periods; secondly, about the limited possibilities given the new nature of the crisis (first of all, suppressed public activity) to expand shadow operations.

An analysis of the data on the level of the shadow economy in Ukraine, using different methods of its assessment, is presented in Tab. 5.

Table 5. Dynamics of the shadow economy's level in Ukraine, 2013-2020. (Source: own study based on the official site of Ministry of Economy of Ukraine. Shadow economy: general trends [13])

Methods	Period							
	2013	2014	2015	2016	2017	2018	2019	2020
Household expenses – retail sales and services	31	35	30	25	25	23	24	32
Electric	35	38	39	33	33	28	25	23
Unprofitable enterprises	30	38	35	31	29	27	26	25
Monetary	29	33	33	33	31	32	31	31

As the data show, the level of the shadow economy, calculated using the method of unprofitable enterprises ratio, increased and amounted to 32% of the official GDP at the end of 2020, which is 12% more than the level in the corresponding period of 2019. The reason for this dynamic is a significant increase in the unprofitableness of enterprises, despite even a partial positive effect from their adaptation to activities under conditions of adaptive quarantine and the implementation by the Government of programs to financially support the population and business. Thus, the variability of the situation associated with the spread of COVID-19 both in Ukraine and in the world significantly limits the legal economic activity of enterprises and negatively affects the financial results of their activities.

Estimation of the shadow economy's level using the method of "household expenses – retail sales and services" showed that, compared to the corresponding period of 2019, it decreased by 1% (to 23% of the volume of official GDP), which, most likely, was the result of limited opportunities sales of products in unorganized markets (due to the effect of quarantine restrictions) and the narrowing by the population of the areas of spending money in the mainstream of vital goods and services. It is also a reflection of changes in the consumption activity of the population during the pandemic.

The level of the shadow economy, calculated using the electric method, decreased compared to the corresponding period of 2019 by 1% and amounted to 25% of the volume of official GDP. It should be noted that the dynamics of reducing the level of the shadow economy by this method was formed under the influence of factors that objectively "stimulated" a

decrease in the level of shadow economy which caused a relatively greater reduction in electricity consumption with a smaller reduction in GDP.

The level of the shadow economy, calculated using the monetary method, did not change and amounted to 31% of the official GDP. The preservation of the unchanged trend of the shadow economy according to this method was due to the action of the opposite influencing factors:

- positive: reduction in the cost of financing for businesses and the population due to the reduction of NBU key rate (from 12.06.2020 the rate was reduced to 6% per annum); introduction "credit holidays" by banks for conscientious borrowers (without negative impact on the bank's capital) during a period of severe restrictions; NBU support for Government programs, in particular, "Available loans 5-7-9%";
- negative: further reduction in lending to the economy in the face of uncertainty; the preservation of the dominant influence of panic among the participants in the foreign exchange market on the dynamics of the exchange rate, in terms of growing uncertainty due to the aggravation of the pandemic, it led to the devaluation dynamics of Hryvnia.

So, the presented methods for calculating the level of the shadow economy in Ukraine indicate that now the dynamics of the shadow economy are, rather, a consequence of the difficult situation in which the country found itself during the coronavirus crisis. At the same time, the shadowing of the economy is one of the main criteria for the effectiveness of the implemented reforms and their perception by society.

CONCLUSIONS

Summarizing the research, some reflections should be made on the phenomenon of the shadow economy in Ukraine. First, it should be noted that the phenomenon of the "shadow economy" is inherent in all economies; it is a natural phenomenon, and it is practically impossible to fight against it. Secondly, there is a necessity to transform for the benefit of national economies' development. Thirdly, with regard to Ukraine, there are a number of issues that need to be resolved based on the position of obtaining international support.

Accordingly, the only effective mechanism for shading the country's economy is to create favorable conditions for the activities of market entities in the legal sector due to the improvement of the investment and business climate in the country and the creation of an institutional environment for which the shadow economy would become ineffective.

At the same time, the proper conditions and environment cannot be created until the systemic factors that hinder the processes of shadowing the economy in Ukraine are overcome. The main ones are: a low level of protection of property rights; imperfection of the country's judicial system (the main shortcomings of which experts determine the insufficient efficiency of the branches of the judicial system), as a result, a low level of public and investor confidence in it; high level of corruption in the country; the presence of territories not controlled by the government, formed during the military conflict, and, as a result, the growth of "potential opportunities" for the use of smuggling schemes.

REFERENCES / ЛІТЕРАТУРА

1. Hoinaru, R., Buda, D., Borlea, S.N., Văidean, V.L., Achim, M.V. (2020). The Impact of Corruption and Shadow Economy on the Economic and Sustainable Development. Do They "Sand the Wheels" or "Grease the Wheel". *Sustainability*. Vol. 12. DOI: <https://doi.org/10.3390/su12020481>.
2. Dubynaa, M., Zhavoronok, A., Kudlaieva, K., Lopashchuk, I. (2021). Transformation of Household Credit Behavior in the Conditions of Digitalization of the Financial Services Market. *Journal of Optimization in Industrial Engineering, Special issue*, 195-200. DOI: [10.22094/JOIE.2020.677835/](https://doi.org/10.22094/JOIE.2020.677835/)
3. Friedrich, S., Buen, A., Montenegro, C. (2010). New Estimates for the Shadow Economies All Over the World. *International Economic Journal*, 24, 4, 443-461.
4. Gerxhani, K. (2004). The informal sector in developed and less developed countries: a literature survey. *Public choice*, 120, 3-4, 267-300.
5. Hussmanns, R. (2004). Measuring the informal economy: From employment in the informal sector to informal employment. Policy Integration Department, Bureau of Statistics, International labour Office. Retrieved from https://www.ilo.org/wcmsp5/groups/public/---dgreports/---integration/documents/publication/wcms_079142.pdf
6. Perry, G.E., William, Maloney, W.F., Arias, O.S., Fajnzylber, P., Andrew D. Mason A.D., Saavedra-

- Chanduvi, J. (2007). *Informality: Exit and Exclusion*. World Bank Publications, 6730, June. Retrieved from: <https://openknowledge.worldbank.org/bitstream/handle/10986/6730/400080Informal101OFFICIAL0USE0ONLY1.pdf>.
7. Schneider, F., Buehn, A. (2016). Estimating the Size of the Shadow Economy: Methods. *Problems and Open Questions. Discussion*, Paper No. 9820. Retrieved from <http://ftp.iza.org/dp9820.pdf>.
8. Baranov, S.O. (2014). Tenevaya ekonomika v mire: tendentsii i regional'nyye osobennosti. [Shadow economy in the world: trends and regional features]. *Ekonomika i gosudarstvo –Economy and state*, 8, 131–134. [in Ukrainian].
9. Awasthi, R., Engelschalk, M. (2018). Taxation and the Shadow Economy: How the Tax System Can Stimulate and Enforce the Formalization of Business Activities. *Policy Research Working Paper*, 18. No. 8391. World Bank. Retrieved from <https://openknowledge.worldbank.org/handle/10986/29603>.
10. Kunditsky, O.O., Senyshyn, O.S. (2018). Tin'ova ekonomika: sutnist', prychny ta naslidky isnuvannya [Shadow economy: essence, causes and consequences of existence]. *Modern Economics*, 10, 70-75. DOI: [https://doi.org/10.31521/modecon.V10\(2018\)-12](https://doi.org/10.31521/modecon.V10(2018)-12).
11. Kraus, N.M., Kraus, K.M., Shevchuk, V.S., Panchenko, A.O. (2020). in'ova ekonomika v Ukrayini: prychny ta naslidky rozvytku [Shadow economy in Ukraine: causes and consequences of development]. *European Scientific Journal of Economic and Financial Innovation*, 1 (5), 77-83. [in Ukrainian].
12. Hlukha, G.Ya. (2013). Tin'ova ekonomika: upovil'nennya ekonomichnoho zrostantnya abo spotvorennya real'nykh rezul'tativ. [Shadow economy: slowing down economic growth or distorting real results]. *Yevropeys'kyy vektor ekonomichnoho rozvytku - European vector of economic development*, 2 (15), 82-91. [in Ukrainian].
13. Official site of the Ministry of Economy of Ukraine (2021). Shadow economy: general trends Офіційний сайт Міністерства економіки України. Тіньова економіка: загальні тенденції. Retrieved from <https://www.me.gov.ua/>. [in Ukrainian].
14. Dougherty K. (1999). Introduction to econometrics. Moscow, INFRA-M, 402 p.
15. National Bank of Ukraine (2021). Monetary statistics. Retrieved from https://bank.gov.ua/control/uk/publish/article?art_id=27843415&cat_id=44578#1. [in Ukrainian].
16. The World Bank (2021). Data (by Country). Retrieved from <http://data.worldbank.org/>.
17. The World Bank (2021). Index of Doing business. Retrieved from <https://www.doingbusiness.org>.
18. Transparency international (2022). Corruption Perceptions Index. Retrieved from <https://www.transparency.org/en/cpi/2021>.

Коваленко В. В., Слатвінська М. О., Варналій З. С., Шелудько С. А., Валігура Т. В.

ФЕНОМЕН ТІНЬОВОЇ ЕКОНОМІКИ ТА ЇЇ ВПЛИВ НА РОЗВИТОК КОРПОРАТИВНОГО БІЗНЕСУ ТА ДОМАШНІХ ГОСПОДАРСТВ В УКРАЇНІ

Тіньова економіка разом із макроекономічними дисбалансами й обмеженими ресурсами стане ключовим глобальним ризиком на наступне десятиліття. Вилучення грошових потоків із тіньового сектора та спрямування їх у легальну економіку вирішує численні політичні, соціальні й економічні проблеми країни. Тому оцінка рівня тіньової економіки, вирішення проблем легалізації грошових потоків у будь-якій країні має теоретичне та практичне значення. Метою даного дослідження є оцінка рівня тіньової економіки в Україні, виявлення проблем, які її породжують у контексті нових викликів кризових явищ і в Україні, і в усьому світі. У роботі представлено комплексне дослідження явища тіньової економіки, досліджено першопричини його виникнення. Специфіка дослідження полягає в оцінці рівня тіньової економіки в Україні за існуючими методиками, а саме в контексті показника: збитковість підприємств «витрати домогосподарств – роздрібна торгівля та послуги», електротехніка та грошово-кредитна сфера. Згідно з оглядом наукових праць, необхідно використовувати комплексний показник оцінки тіньової економіки. Тож значна увага приділяється поглибленню методологічних аспектів оцінки тіньової економіки на основі багатокритеріальних методів. Результатом дослідження є розрахунок рівня тіньової економіки з урахуванням тіньового валютного обороту, виходячи з того, що Україна є залежною від долара. Значна частка виведення капіталу в тіньовий обіг пов'язана саме з валютним шахрайством. Отримані результати підтверджують, що легалізація готівкового валютного обороту має бути обов'язковою в процесі трансформації валютного регулювання в Україні. Досягнення цієї мети пов'язане з дерегуляцією валютного ринку та банківського сектора на основі помірної лібералізації, застереженням економіки країни від розгортання кредитних бумів, удосконаленням інституційного забезпечення фінансового посередництва,

розвитком повноцінного ринку похідних інструментів, узгодженням національного законодавства з найкращим світовим досвідом і міжнародними стандартами регулювання, нагляду та звітності, постійним моніторингом громадської думки щодо дій органів грошово-кредитної влади та наслідків цих дій для добробуту й економічної стабільності корпоративного бізнесу та населення.

Ключові слова: тіньова економіка, корпоративний бізнес, домогосподарства, реальний сектор, методи оцінки, корупція

JEL Класифікація: C43, F02, F63, O11