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# COVID-19 EFFECTS ON TAX GAPS<sup>1</sup>

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**Lyudmil Naydenov<sup>1</sup>**

**Dimitar Tsenov<sup>2</sup>**

<sup>1</sup> *University of Economics - Varna, Bulgaria*

<sup>2</sup> *RD of NRA – Plovdiv, Bulgaria*

**E-mail:** <sup>1</sup>*lnaydenov@ue-varna.bg*; <sup>2</sup>*dimitar\_tsenov@mail.bg*

## **Abstract**

The paper examines the issues related to the impact of COVID-19 on tax gaps in Bulgaria. The authors define the various tax gaps in terms of their theoretical, practical and technical grounds as well as unique characteristics. The authors have analysed the dynamics of the gap between the tax and social insurance revenues in the Consolidated Fiscal Program (CFP) as they “should be” collected and as they “are” collected and prove that it was affected directly by the global COVID-19 pandemic. They justify the need for an innovative approach that would take into account the changed realities and the important role of CFP components for improving the public welfare and the sustainability of our economy. The research subject are tax gaps and its object is the impact of COVID-19 on the difference between the volume of collected and planned revenues from direct taxes, indirect taxes, social security and health insurance contributions in Bulgaria. The general conclusion is that the pandemic, which has lasted for already over a year, has slowed down the economy and hence has a negative affect on tax gaps in our country.

**Key words:** consolidated fiscal programme, tax gaps, COVID-19, fiscal revenue.

This article shall be **cited** as follows: **Naydenov, L., Tsenov, D.** (2021). COVID-19 Effects on Tax Gaps. *Economic Archive*, (1), pp. 15-27.

**URL:** [www2.uni-svishtov.bg/NSArhiv](http://www2.uni-svishtov.bg/NSArhiv)

**JEL:** H12, H61, H68.

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<sup>1</sup> Authors' contribution to the paper: Assoc. Prof. Lyudmil Naydenov, PhD - Abstract, Introduction, Conclusion, and Section 2; Dimitar Tsenov, PhD - Section 1.

## Introduction

It goes without saying that the global COVID-19 pandemic has a number of negative effects on the society and the economy in general as well as on the components of the Consolidated Fiscal Program, including the amount of revenues, grants and transfers in general and tax revenues in particular. This paper examines the effects of the global pandemic on the gap between collected and planned (estimated) tax revenues. An in-depth analysis of the outlined dependence is a prerequisite for identifying specific solutions in order to overcome or reduce the severe social and economic problems arising from the pandemic. From this point of view, the general objective of the paper is to examine the impact of COVID-19 on tax gaps defined as differences between the collected and planned tax revenues. Its specific objectives are:

- to propose an accurate definition of the term “tax gap” from theoretical, practical and technical point of view;
- to define the trends in tax revenue dynamics;
- to analyse the dynamics of tax gaps in the period 2018 - 2020;
- to define the causes for these trends and the possible solutions for mitigating the negative effects of the COVID crisis in Bulgaria.

### 1. Tax gap definition and characteristics

The term “tax gap” is less prominent in the scientific literature and the public domain than other popular terms, such as “tax” and “fiscal system.” However, it should be noted that shadow economy issues, such as tax avoidance, fraud, and evasion are of scientific interest and have long been discussed in economic theory. These issues are in the root and are even to some extent conceptually identical with tax gap as the main subject of this study.

The inability or failure of the government to collect the planned tax revenues results in budget deficits which are covered by increasing either the tax rates or the sovereign debt in the short run, which always requires an increase of the tax rates in the long run – an economic effect which was substantiated in theory and confirmed in practice. At the heart of these and other similar considerations is the "shadow economy".<sup>2</sup> The plethora of terms and concepts refers to a part of a country's economic activity which is not accounted for in official statistics in terms of incomes and expenditures and which reduces

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<sup>2</sup> The number of terms used to describe this economic phenomenon is really impressive: “grey”, “black”, “informal”, “irregular”, “underground”, “covert”, “unregistered”, “double”, “illegal”, “unannounced”, “criminal”, and so on and so forth.

the fiscal revenues to the state budget. Moreover, tax and social security contributions fraud further increases the budget expenditures by through unjustified tax redemptions and social benefit payments.

For example, V. Tanzi's analysis of the shadow economy regards its development as a consequence of two main groups of factors. The first group of factors is associated with the desire to avoid the taxation of income, property and consumption regulated by the tax laws in force. According to Tanzi, the second group of factors that create an underground economy are associated with taxpayers' propensity to avoid the principal government regulations, ordinances and restrictions (Tanzi, V., 1980, pp. 427-54). At the same time, according to J. Cullis and P. Jones, without taxation the rational distribution of welfare among the economic agents is impossible: "Taxes are a universal tool of the state system of revenue collection, without which the further movement of money in the modern economy is difficult to achieve. Taxes and taxation are phenomena that imply inevitability of payment. Failure to pay taxes means a violation of the tax laws and sanctioning the taxpayer. At the same time, the doubt as to the appropriateness of taxation creates resistance to taxation manifested as tax evasion." (Cullis, J and Jones, P., 1992, p.217)

A. Lewis' research sheds additional light on the analysed concepts: "Deviation from taxation can be defined as tax evasion or as tax avoidance. Tax evasion can result from misreporting or omissions, both of which can be done intentionally or unintentionally. Tax avoidance implies the use of loopholes in the law or by making unjustified expenditures that are tax-deductible pursuant to the government's fiscal policy" (Lewis, A, 1982).

All the opinions presented, as well as the views of many other authors, can be best summarized with Andrey Zahariev's statement that "There are various definitions of taxpayers' behaviour aiming to evade the payment of taxes, which vary according to the legislation of each country. In general, however, there is a consensus that tax evasion is an illegal activity or lack thereof where a person or entity intentionally conceals certain facts and/or circumstances for the purpose of non-payment or reduction of payment of legally due taxes. That is why tax evasion reduces the tax revenues to the state budget." (Brusarski, R., Zahariev, A., Manliev, G., 2015, p. 308)

Therefore, tax gaps on the one hand are subject of research, analysis and discussion in the scientific literature mainly in terms of tax evasion and/or tax fraud. On the other hand, they have important practical significance for the revenue and tax administrations of the EU member states including the Republic of Bulgaria, which gives us a reason, from a practical point of view *to define a tax gap as the difference between the taxes that taxpayers would have to pay under applicable tax law and the taxes that they actually pay within a certain period of time, usually a year.*

Apart from theoretical and practical point of view, tax gaps can also be considered from a technical point of view as the difference between the actual tax revenues and their expected volume forecast (estimated) at the beginning of the analysed period.

Subjecting this concept to a content analysis, we should point out that a tax gap is by definition the difference between two components: the amount of taxes the taxpayers are expected to pay under certain conditions for a certain period (the minuend) and the amount of taxes they actually pay, under the same conditions and for the same time period (the subtrahend). We shall discuss each component in turn.

*The first component (the minuend)* is the amount of taxes the taxpayers must or are expected to pay. Therefore, it is a value derived from a forecast analysis conducted by expert from the revenue administration. This analysis provides an estimate for the future but it is based on data from the past. In addition to the historical data, analyses are made regarding the number, type and structure of taxpayers, their behaviour in the past and expected behaviour for the next reporting period. Moreover, the experts analyse the legislation in force, certain relationships and macroeconomic factors and their microeconomic effects. Therefore, the forecast of the amount of taxes that taxpayers will have to pay is a result of a multifaceted and multifactorial analysis. In general, a whole complex of analytical processes is performed, a kind of cybernetic system of functionally interconnected analyses: database, behavioural analysis, macroeconomic and legal analyses, financial and accounting analyses, etc. This complex, multifaceted and complex analysis is always difficult, but not always accurate. In other words, the risk of insufficient reliability is identified as its intrinsic feature. However, it is not difficult to see that both the administration (experts) and the government (politicians) need such analytical forecasting in order to plan their expectations for the state budget revenues, and hence for the implementation of certain fiscal and economic policies.

*The second component (the subtrahend)* is the amount of taxes that are actually collected. In fact this element of the “tax gap” concept is easier to determine by processing the data on taxes paid for a certain reporting period (e.g. during the fiscal year). Therefore, it is calculated using actual numbers rather than estimates or forecasts.

In practice, there is always a difference, or a “gap”, between the two components that represent the expected and actually paid taxes. It can be due to many reasons - technical and fundamental, objective and subjective, insignificant and significant, relatively easy to overcome and difficult to overcome. Therefore, there is no practical way to achieve a situation in which the taxes collected by a government for a certain period are exactly equal to the planned or forecast fiscal revenue.

The above considerations lead to the following conclusions:

*First.* The term “tax gap”, which is fundamental in this paper, is considered in the financial literature in the context of the underground economy, tax avoidance and tax evasion.

*Second.* For the purposes of this study, the tax gap is interpreted as a concept mainly in technical, expert and practical-applied aspect.

*Third.* Tax gaps can be caused by ignorance of laws and regulations, tax avoidance (aggressive tax planning), and tax evasion and fraud.

*Fourth.* The COVID crisis, which affected the economic activity and impaired all socio-economic indicators of our national economy, resulted in wider tax gaps as well.

## **2. A comparative analysis of tax gaps in the period 2018 – 2020**

The total revenue under the Consolidated Fiscal Program (CFP), as the sum of tax revenue, non-tax revenue and grants and donations, depends directly on the state of the national economy in terms of GDP and growth rate. From the experience gained from the global financial and economic crisis in the period 2008 – 2011, some analysts believe that the economic growth rates observed prior to the COVID crisis will not be reached soon.<sup>3</sup> The crisis has affected both the tax and social security revenues as components of the CFP and the tax gaps, i.e. the difference between the actual and the planned tax and social security revenues. When the actually collected tax revenue is greater than the estimated (planned) revenue, the tax gap is positive. When it is smaller than the forecast value, the gap is negative. One of the factors affecting the tax gap in the second case is the global pandemic that has lasted for more than a year. The degree of impact of COVID-19 on the 2018 tax gaps is shown in Table 1 below.

The analysis of the data in the table shows that in 2018 the actual amount of revenues, grants and donations under the CFP was BGN 39,650.9 million compared to revenues of BGN 38,213.9 million planned at the beginning of the year, i.e. the actually collected total revenue and grants was 103.8% compared to the planned estimates. In the same year, the revenue from direct and indirect taxes and social and health insurance contributions (referred to as “tax revenue”

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<sup>3</sup> For more details, see: Zahariev, A., Prodanov, S., Radulova, A., Zaharieva, G., Pavlova-Banova, M., Angelov, P., Ismailov, T., Aleksandrova, A., Marinova, K. (2020). The Bank Insolvency: from Lehman Brothers to Covid-19 (International Remarks and National Peculiarities). *Economic and Social Developments* (58), pp. 44-59. <https://www.bit.ly/30CGFLz>

for convenience hereunder) amounted to BGN 32,235.5 million, or a relative share of 81.3% in the structure of the total revenue under the CFP.

Table 1

*Data on the Consolidated Fiscal Program for 2018*

ITEM	Actual 2017 (BGN mln.)	Budget for 2018 (BGN mln.)	Actual 2018 (BGN mln.)	Variance from 2017 (%)	Current variance (%)
<b>Total revenue and grants</b>	<b>35 316.6</b>	<b>38 213.9</b>	<b>39 650.9</b>	<b>112.3%</b>	<b>103.8%</b>
Tax revenue	29 581.3	31 142.3	32 235.5	109.0%	103.5%
<i>Direct taxes</i>	5 644.3	5 756.6	6 132.5	108.6%	106.5%
<i>Indirect taxes</i>	14 532.5	15 156.4	15 531.0	106.9%	102.5%
<i>Social and health insurance contributions</i>	8 365.2	9 131.3	9 458.3	113.1%	103.6%
<i>Other taxes</i>	1 039.3	1 098.0	1 113.8	107.2%	101.4%
Non-tax revenues	4 214.7	4 703.4	5 302.3	125.8%	112.7%
Grants and donations	1 520.6	2 368.2	2 113.0	139.0%	89.2%

Source: MF.

The analysis also shows that the percentage of the actual tax revenue collected in 2018 (BGN 32,235.5 mln.) compared to the planned revenue of BGN 31,142.3 mln. is 103.5%. The actual absolute amount of direct taxes is BGN 6,132.5 mln. and compared to the estimates planned at the beginning of the year (BGN 5,756.6 mln.) increases by 6.5%. The collected indirect taxes as of the end of 2018 compared to the revenue planned at the beginning of the year was 102.5%, as the absolute amount of actual revenue from indirect taxes amounts to BGN 15,531.0 mln. compared to a planned revenue of BGN 15,156.4 mln. The actual revenue from social security and health insurance contributions as of the end of 2018 was BGN 9,458.3 mln. which is a variance of 103.6% compared to the amount of contributions (BGN 9,131.3 mln.) planned at the beginning of the year.

The trend of increase of the actual revenues, grants and donations under the CFP in general, and of the tax revenue in particular, compared to the planned estimates, was maintained in 2019 as well (see Table 2). The absolute amount of revenues, grants and donations as of 31 Dec. 2019 was BGN

44,048.6 mln. and is less than 1% higher than the planned estimates made at the beginning of the year (the absolute amount of planned revenues, grants and donations was BGN 43,857.0 mln.) The actual tax and social security revenues at the end of 2019 were BGN 35,280.6 million while as the planned amount of these revenues at the beginning of the year was BGN 34,546.1 million, i.e. the actual tax and social security revenues are 2.1% higher than planned. In the structure of total revenues, grants and donations under the CFP the relative share of tax revenues is 80.1%. Compared to 2018, they increased by BGN 3,045.1 million, i.e. with 9.4%. The actually collected direct taxes compared to their planned amount was 102.4% (the absolute amount of the direct tax revenue as of 31 Dec. 2019 was BGN 6,714.9 million, and as of 01 Jan. 2019 was BGN 6,559.9 million.) The collected indirect taxes as of the end of 2019 compared to their planned amount was 102.5% (the absolute amount of indirect taxes at the end of 2019 was BGN 16,847.7 million and as of 01 Jan. 2019 it was BGN 16,437.3 million). The actual revenues from social security and health insurance contributions at the end of 2019 amounted to BGN 10,546.9 million and represented 101.6% of the planned BGN 10,379.2 million at the beginning of the year.

Table 2

*Data on the Consolidated Fiscal Program for 2019*

ITEM	Actual 2018 (BGN mln.)	Budget for 2019 (BGN mln.)	Actual 2019 (BGN mln.)	Variance from 2018 (%)	Current variance (%)
<b>Total revenue and grants</b>	<b>39 650.9</b>	<b>43 857.0</b>	<b>44 048.6</b>	<b>111.1%</b>	<b>100.4%</b>
Tax revenue	32 235.5	34 546.1	35 280.6	109.4%	102.1%
<i>Direct taxes</i>	6 132.5	6 559.9	6 714.9	109.5%	102.4%
<i>Indirect taxes</i>	15 531.0	16 437.3	16 847.7	108.5%	102.5%
<i>Social and health insurance contributions</i>	9 458.3	10 379.2	10 546.9	111.5%	101.6%
<i>Other taxes</i>	1 113.8	1 169.6	1 171.0	105.1%	100.1%
Non-tax revenues	5 302.3	6 627.6	6 303.3	118.9%	95.1%
Grants and donations	2 113.0	2 683.3	2 464.7	116.6%	91.9%

Source: MF.

The analysis of the tax revenues under the CFP for 2018 and 2019 shows that their actual amount is higher than the planned estimates. This conclusion applies both to the absolute amount of tax revenues as a whole and to the elements included in the structure of the tax revenue, i.e. the direct and indirect taxes, as well as the social security and health insurance contributions. The growth of the tax revenue and its components is logical and corresponds to the real growth of GDP of 3.9% for the two years (in 2018 it amounted to BGN 105,609 million, and in 2019 - 112,134). million). It is also important to note that the growth of GDP and hence the tax revenue is a consequence of the positive trend in two main factors – gross fixed capital formation and consumption.

Table 3

*Data on the Consolidated Fiscal Program as of 30 June 2020 (BGN mln.)*

ITEM	Actual H1 2019	Plan 2020	Actual H1 2020			Act. H1 2020	Act. H1 2020
		CFP	CFP	National budget	European funds	to act. H1 2019	to act. 2020
<b>TOTAL REVENUE AND GRANTS</b>	<b>22 285.8</b>	<b>44 392.7</b>	<b>21 431.6</b>	<b>19 896.4</b>	<b>1 535.2</b>	<b>96.2%</b>	<b>48.3%</b>
Tax revenue	17 686.3	34 915.9	17 057.3	17 057.3		96.4%	48.9%
<i>Direct taxes</i>	3 333.1	6 581.2	3 169.6	3 169.6		95.1%	48.2%
<i>Indirect taxes</i>	8 533.9	16 322.0	7 879.9	7 879.9		92.3%	48.3%
<i>Social and health insurance contributions</i>	5 111.2	10 803.2	5 313.6	5 313.6		104.0%	49.2%
<i>Other taxes</i>	708.1	1 209.5	694.1	694.1		98.0%	57.4%
Non-tax revenue	3 448.4	6 782.7	2 804.2	2 792.6	11.6	81.3%	41.3%
Grants and donations	1 151.1	2 694.2	1 570.2	46.6	1 523.6	136.4%	58.3%

Source: MF

In 2020, however, the values of macroeconomic indicators deteriorated significantly, which has an impact on the parameters of the consolidated fiscal program as a whole and on the difference between actual and planned revenues in particular (see Table 3). The main reason for the new trends should be sought in the negative effects of COVID-19.<sup>4</sup> With a forecast GDP growth of 3.3% as of January 1, 2020, in the second half of the year the expectations are for a decline of 3%. The forecasts are that the gross fixed capital formation will also have a negative sign (-2.5%). Exports of goods and services are also declining,

<sup>4</sup> The analysis of the relationship between fiscal sustainability and fiscal risk in the EU during the Covid-19 crisis is presented in 16. Zahariev, A., Radulova, A., Aleksandrova, A., Petrova, M. (2021). Fiscal sustainability and fiscal risk in the EU: forecasts and challenges in terms of COVID-19, *Entrepreneurship and Sustainability Issues* 8(3): pp. 618-632. March. [https://doi.org/10.9770/jesi.2021.8.3\(39\)](https://doi.org/10.9770/jesi.2021.8.3(39))



as expectations for 2020 are for a negative trend - a decrease in exports of about 16%. The measures taken against the spread of the coronavirus in Bulgaria also have a negative impact on final consumption, gross value added, the labour market, i.e. practically on all spheres of socio-economic development.

The strict quarantine measures and restrictions led to an amendment of the State Budget of Bulgaria Act. The latter was enforced on 09 Apr. 2020 and provides for a decrease of the amount of tax revenue under the CFP by BGN 2,443.8 million. According to the updated forecast, direct taxes as of the beginning of April compared to the beginning of January 2020 decreased by BGN 611.7 million, and indirect taxes - by BGN 1,385.2 million, respectively.

The imposed COVID-19 measures had a negative effect on the parameters of the Consolidated Fiscal Program for the first half of 2020, as can be seen from the data in Table 3, which shows that the actual absolute amount of revenues, grants and donations for the first half of 2020 was BGN 21,431.6 million, which was 48.3% of the annual budget estimate. The actual absolute amount of tax and insurance revenues for the first half of 2020 was BGN 17,057.3 million and represents 48.9% of the annual tax revenue updated at the beginning of April and 79.6% of the total amount of revenues, grants and donations. The actual collected direct and indirect taxes for the first half of the analyzed year compared to the planned annual estimates were 48.2% and 48.3%, respectively (the absolute amount of direct and indirect taxes as of 30 June 2020 was BGN 3,169.6 million respectively and BGN 7,879.9 million, and the updated annual estimates for the two main elements of tax revenues were BGN 6,581.2 million and BGN 16,322.0 million respectively). The revenue from social and health insurance contributions as of 30 June 2020 was BGN 5,313.6 million and their actual amount compared to the updated annual planned amount (BGN 10,803.2 million) was 49.2%. Given that the planned estimates for the analyzed year are consistent with the update of the CFP parameters, it can be concluded that the volume of the total tax revenue and its constituent components for the first half of 2020 was below their updated estimated amounts.

The analysis of gap between the actual and the planned tax revenue for the period 2018–2020 in terms of collected and planned revenue from direct and indirect taxes and social and health insurance contributions leads to the following conclusions:

*First.* In 2018 and 2019, the actual net amount of revenues, grants and donations, on the one hand, and tax revenues on the other, was higher than the planned estimates at the beginning of the financial year and, therefore, the collection rate of these CFP parameters for 2018 and 2019 exceeds 100%.

*Second.* In 2020, the total revenue, grants and donations under the CFP, as well as the tax revenues as a major component of the total revenue will decrease both nominally and as a percentage of the planned estimates.

*Third.* The main reason for the trends observed for the analyzed period is the reduced economic activity (resulting in a decline in GDP), as a consequence of the COVID crisis, which means that COVID-19 had a negative effect on the tax gap. "The direct effects are associated with disruption of global supply chains, decline of the consumer demand for goods and services, decline in tourism (especially internationally) and business travel, restrictions in some industries, falling employment rates and personal income" ( MF, 2020, p. 8.)

*Fourth.* Budget planning is important for the gap between actual and planned amounts of revenues, grants and donations in general, and of tax revenues in particular. For example, the forecast for the amount of budget revenues is based on a multifaceted and multifactorial analysis. However, in COVID-19 conditions, the latter is not always accurate and precise. In other words, when planning budget revenues, there is always a risk that the actually collected amounts will be below or above the estimates for the financial year, i.e. there is an objective possibility for a gap between the size of the estimated revenues and the amount of the actual ones. The growing importance of annual planning and the medium-term budget forecast is just one of the possibilities for accurate and economically sound budget forecasts. Another possibility is to adjust the planned annual estimates with the implementation of the budget for the current year rather than for previous years. When planning the budget for the next financial year, the Ministry of Finance has information on the actual implementation of the main CFP parameters for the first nine months of the current year and on the estimated implementation of the CFP parameters for the remaining quarter of the same year. In this respect, an adjustment of the planned annual estimates with the implementation of the budget for the current rather than previous years, is a more reliable mean for mitigating the tax gaps.

*Fifth.* Tax collection rate is another factor that directly affects the gap between the amount of actual and planned tax revenues at the beginning of the period. Its improvement depends on the compliance with the tax legislation, the control functions of the revenue administrations, the implementation of electronic services and on hence the reduction of the administrative burden.

## Conclusion

The analysis of the tax gap effects of COVID-19 leads to the following general conclusions:

**First.** Defined as the difference between the planned and the actual amount of tax revenues, a tax gap can be analysed from theoretical, practical and technical points of view. Depending on the point of view of the analysis, we can find various causes for a gap between the estimated (forecast) and reported (actual) values of tax revenues, one of which is related to the negative effects of the COVID crisis on economic activity, declining demand and supply, income reduction, etc.

**Second.** The tax gap effects of COVID-19 can manifest as: reduction of the absolute amount of revenues, grants and donations at the end of the period compared to the estimates and a lower ratio of actual to planned budget revenues; reduction of the actual nominal amount of tax revenues compared to the estimates at the beginning of the analyzed period and a lower ratio of actual to planned budget revenues. The outlined trends apply to both direct and indirect taxes, as well as to social security and health insurance contributions. Therefore (and expectedly), COVID-19 has a negative impact on the collection of revenues, grants and donations in general and on tax revenues in particular.

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**Lyudmil V. Naydenov, PhD** is an Associate Professor at the Department of Finance of the University of Economics - Varna, Bulgaria. **Research interests:** fiscal federalism; fiscal rules and financial stability; sovereign debt management.

**ORCID ID:** 0000-0002-9357-1827

**Dimitar Tsenov, PhD** is Chief Revenue Inspector in the Department of Control, the Audits Unit at the TD of NRA in Plovdiv. **Research interests:** fiscal policy; taxes; tax legislation.

**ORCID ID:** 0000-0002-6575-4327

ISSN 0323-9004

# Economic Archive

Svishtov, Year LXXIV, Issue 1 - 2021

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**Editorial address:**

2, Emanuil Chakarov street, Svishtov 5250  
Prof. Andrey Zahariev, PhD – Editor-in-Chief  
☎ (+359) 889 882 298  
Deyana Vesselinova – technical secretary  
☎ (+359) 631 66 309, e-mail: nsarhiv@uni-svishtov.bg  
Blagovesta Borisova – computer graphic design  
☎ (+359) 882 552 516, e-mail: b.borisova@uni-svishtov.bg

*In 2021, the journal will be printed using a financial grant from the Scientific Research Fund – Agreement № KP-06-PP2-0045 from Bulgarska Nauchna Periodika – 2021 competition.*

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