

**D. A. TSENOV ACADEMY OF ECONOMICS -
SVISHTOV**

Faculty of Finance

Department of Finance and Credit

Nikolay Kirilov Kalistratov
doctoral student's № D010221242

ABSTRACT

of a dissertation for the award of the educational and scientific degree
'doctor' in the doctoral programme „Finance, Money circulation, Credit and
Insurance (Finance)” on the topic:

**THE INFLUENCE OF THE SHADOW
ECONOMY ON THE TAX REVENUES IN
BULGARIA**

Scientific Advisor:

Prof. Dr. Stoyan Stanimirov Prodanov

Svishtov
2024

The dissertation was discussed and proposed for defence by the Department of Finance and Credit at the Faculty of Finance of D. A. Tsenov Academy of Economics - Svishtov.

Description of the dissertation paper:

Number of pages – 191

Number of figures – 41

Number of references – 140

Number of studies on the topic – 1

Number of participations in scientific conferences – 2

The defence of the dissertation will be held on 13.06.2024 (Thursday) at 10:00 hrs. at the Rectorate Conference Hall of D. A. Tsenov Academy of Economics – Svishtov.

All materials related to the defence shall be available upon request at the Department of Academic Studies and Academic Staff Development.

CONTENTS OF THE ABSTRACT

I. General characteristics of the dissertation	4
<i>1. Relevance of the topic</i>	4
<i>2. Subject and object of research in the dissertation</i>	5
<i>3. Research thesis statement</i>	5
<i>4. Research purpose</i>	5
<i>5. Tasks and methodology of research</i>	6
<i>6. Research scope</i>	7
<i>7. Structure of the dissertation.....</i>	8
<i>8. Applicability of the research findings.....</i>	10
II. Resume of the dissertation paper.....	12
<i>Chapter One: Theoretical Aspects of Tax System, Business Climate, Grey Economy, and Tax Evasion</i>	12
<i>Chapter Two: Approaches and Methods for Investigating the Dimensions and Scale of the Shadow Economy.....</i>	27
<i>Chapter Three. Empirical Investigation of Business and Citizens' Perceptions of the Shadow Economy and Tax Evasion</i>	37
<i>Conclusion.....</i>	43
III. Guidelines for future research on the topic of the dissertation.....	45
IV. List of the scientific and applied contributions of the dissertation paper..	46
V. Publications on the topic of the dissertation paper	47
VI. Reference for the compliance with the national requirements under the Rules for the Implementation of the Law on the Development of Academic Staff in the Republic of Bulgaria	48
VII. Statement of originality of the dissertation paper.....	49

I. General characteristics of the dissertation

1. Relevance of the topic

The topic of the impact of the shadow economy on tax revenues in Bulgaria is of utmost relevance, especially in the context of fiscal policy and management. The shadow economy, often described as "gray," "shadowy," "unregistered," or "informal" economy, refers to that part of economic activity that evades regulations and taxation. This phenomenon is associated with significant revenue losses for the state, which raises questions about the effectiveness of the tax system and the state's ability to finance public goods and services.

The main reasons for the existence of the shadow economy include high taxes and social contributions, corruption, the complexity of the tax system, and excessive regulations, which can motivate economic agents to deviate from the official economy. In Bulgaria, as in other countries with similar economic and social conditions, the informal economy is often seen as a result of the inefficiency of state institutions and insufficient law enforcement.

Theoretical models indicate a link between the size of the shadow economy and tax rates - the higher the taxes, the greater the incentive to defraud revenue. On the other hand, the quality and accessibility of public services also play a role, as insufficient funding and corruption may lead citizens to have fewer moral restraints when it comes to tax evasion.

In light of the above, studying the shadow economy is critical for understanding the fiscal and social consequences of it, as well as for formulating effective policies to curb it. This requires a detailed analysis of the tax system, law enforcement, institutional efficiency, and socio-economic conditions that contribute to this phenomenon. Reflecting on international experience and comparing it with the Bulgarian reality could offer valuable lessons and approaches to improving the situation in the country.

2. Subject and object of research in the dissertation

Based on the thus described relevance of the discussed topic, the object of research can be formulated as follows: the tax revenues in the Republic of Bulgaria.

The subject of the present study is the relationship and the dependence of the tax revenues on the shadow economy. The shadow economy can be defined as a set of legitimate economic activities that are entirely or partially unreported in national statistics, and individuals engaged in them consciously conceal part or all of their revenue. The overall economic activity includes the shadow economy, which can be identified and studied using various indirect methods.

3. Research thesis statement

The central research thesis of the dissertation argues that taxation, corruption, excessive regulations, and ineffective governance are pivotal factors driving the development of the shadow economy as a complex socio-economic phenomenon. Considering the shadow economy as a global issue with profound historical roots implies the need for a more in-depth study of its causes, dimensions, and impacts in order to formulate effective policies to mitigate its negative effects on society.

4. Research purpose

The purpose of the research is, based on the defined object, subject, and thesis, to determine tax revenues as a function of the share of the shadow economy. To test methodology for estimating the scale of the shadow economy, utilizing various indirect methods based on natural and value indicators. Additionally, an assessment of the tax system and a precise analysis of the benefits and risks of changes in tax regulations aimed at reducing the share of the shadow economy will be conducted.

5. Tasks and methodology of research

In view of the above defined purpose, object, subject, and thesis, the following tasks can be formulated to develop a relevant structure for the dissertation:

- To review, analyse, and systematise prior scientific research on the subject of the dissertation;
- To develop a theoretical framework, which includes a historical overview of the tax system in Bulgaria, identification of the positive and the negative characteristics of progressive and flat taxes, and their impact on businesses;
- To examine the business climate in Bulgaria, including opportunities for doing business, methods of financing and taxation, and tax reliefs for various socially beneficial activities;
- To analyse the dimensions of the shadow economy itself, studying the development of the phenomenon and the conditions for its existence;
- To review and compare empirical methods for determining the dimensions of the shadow economy, including studying contemporary international trends and specific methods applied in Bulgaria for assessing the phenomenon, as well as the results thereof.

The development of the dissertation employs methods such as comparative analysis, induction and deduction, analysis and synthesis, statistical methods, and referencing other studies - particularly through citation of relevant sources. The development primarily relies on the principles of qualitative research, combined with classical quantitative methods, involving the collection and analysis of both non-numerical and numerical data for interpreting concepts, opinions, or experiences. While both types of research share the overarching goal of acquiring knowledge, quantitative research is numerical and objective. On the other hand, qualitative research deals with subjective phenomena that cannot be measured numerically. Qualitative research can provide a deep understanding of the relationship between the shadow economy and tax revenues by examining the underlying motivations, behaviours, and contextual factors, which are often hidden and "invisible" in quantitative data.

The purpose of the conducted qualitative empirical study is to investigate how and why individuals and businesses engage in the shadow economy and how this affects compliance with tax legislation and revenues. The survey includes questions that explore the reasons for non-compliance, the perceived fairness of tax policies, and the socio-economic factors driving the shadow economy. Data collection methods involve in-depth interviews with business owners who may be partially or entirely engaged in the shadow economy, as well as with individuals working in such businesses. Participant confidentiality is guaranteed, especially for those who admit to participating in the shadow economy. Informed consent has been obtained from participants regarding the purpose of the study, their role in the qualitative research, and how the data will be used.

Comprehensive descriptions of cases have been developed, including specific instances of activities in the shadow economy and their implications for tax revenues.

The conducted qualitative study has a subjective nature with inherent limitations regarding the possibility of generalization. However, the application of these qualitative research methods helps uncover the complex social, economic, and psychological dimensions of the shadow economy and its impact on tax revenues, providing a richer and more nuanced understanding than quantitative data alone could offer. This rationale is particularly applicable in a situation like that in Bulgaria, characterized by a wide range of estimates for the size of the shadow economy and the presence of methodological and theoretical debates regarding the validity of conducted studies. This could be crucial for developing more effective tax policies.

6. Research scope

The research inquiries in the dissertation, both in their theoretical and empirical components, are limited in scope to specific aspects of the tax system and its issues, their interplay with the business environment and the phenomenon of the "shadow economy," strategies to tackle the shadow economy, and the imperative of adopting a holistic approach in combating it.

The subjective attitudes of businesses and citizens toward the shadow economy and tax avoidance are also explored. Beyond the scope of the dissertation, econometric modelling of the relationship between the shadow economy and tax revenues in Bulgaria remains unaddressed.

7. Structure of the dissertation

The dissertation consists of a total of 191 standard pages, structured into three chapters as follows:

LIST OF ABBREVIATIONS USED.....	2
CHAPTER ONE. Theoretical Aspects of the Tax System, Business Climate, Grey Economy, and Tax Evasion	12
1. Tax obligation.....	12
1.1. Economic aspects.....	12
1.2. Social aspects	17
1.3. Moral aspects	21
2. Issues with tax legislation in Bulgaria.....	31
3. Impact of the tax system on the business climate in Bulgaria.....	42
3.1. Brief overview of the business climate in Bulgaria	42
3.2. Impact of flat taxes on business	46
3.3. Impact of corporate tax on economic growth.....	50
3.4. Dividends, salaries, and taxes	55
4. Dimensions of the shadow economy and its impact on tax revenues in Bulgaria.....	58
4.1. Development of the "grey" economy.....	58
4.2. Shadow economy as tax evasion.....	64
4.2.1. Types of tax evasion.....	64
4.2.2. Dimensions of the tax impact on the shadow economy	67
4.3. The grey economy in the perceptions of the Bulgarian society.....	69
4.4. The moral dilemma with corporate social responsibility and tax avoidance.....	74
CHAPTER TWO. Methods and Approaches for Investigating the Dimensions and the Scale of the Shadow Economy.....	79
1. Relevance of the issue.....	79
2. Subject and object of analysis	80

3. Goals and objectives of analysis.....	81
4. Hypotheses for analysis	81
5. Methods for empirical study of the shadow economy.....	82
5.1. Study of traditions in the field	82
5.2. Study of current European trends	88
5.3. Methods for empirical study of the shadow economy in Bulgaria during the first decades of the 21st Century	95
6. The need for a holistic approach in studying the shadow economy	98
6.1. Strengths and weaknesses of known and applied methods and approaches.....	98
6.2. Characteristics and advantages of the holistic approach in studying the shadow economy	105
7. Opportunities to restrict the negative effects of the shadow economy on tax revenues in Bulgaria	116

CHAPTER THREE. Empirical Study of Business and Citizens' Perceptions of the Shadow Economy and Tax Evasion..... 132

1. Justification for the need to conduct empirical research.....	132
2. Methodology of the study	133
2.1. Method selection	133
2.2. Characteristics of the sample	134
2.4. Ethical dimensions of empirical research	135
3. Graphical presentation of the research results.....	135
4. Commentary on the results	155
5. Conclusions and recommendations based on the results of empirical research.....	159

CONCLUSION..... 167

Bibliography170

Figure Index..... 178

APPENDIX 1. Questionnaire for empirical study of citizens' attitudes to work in the informal sector and tax evasion180

APPENDIX 2. Questionnaire for empirical study of business attitudes to work in the informal sector and tax evasion186

8. Applicability of the research findings

The developed theoretical reasoning and conclusions in the dissertation, as well as the empirical findings from the research, aim to support the understanding that combating the shadow economy requires a profound comprehension of the phenomenon and the implementation of a wide range of measures and policies to effectively reduce its size in Bulgaria.

The substantial dimensions of the shadow economy in Bulgaria pose a significant challenge with deep economic and social consequences, including a reduction in the tax base and the quality of public services, distortion of market competition, and tarnishing the image of institutions, leading to a slowdown in economic growth. It is crucial to find and implement instruments that can efficiently constrain this sector.

Analysing the shadow economy using sophisticated analytical tools allows for a more precise understanding of its determinants and potential overestimation in some studies. The proportionality between the sector's size and the volume of monetary transactions within it is a key factor that increases the estimate of the scale of the shadow economy. The lack of accountability for numerous transactions and opportunities for tax avoidance are serious problems that need addressing.

The dissertation identifies key factors that influence the shadow economy, including the use of non-cash payments, the tax-to-GDP ratio, and institutional and tax culture. The growth in the number of non-cash payments appears to be a measure that is relatively easier to implement compared to others requiring long-term and challenging reforms.

Various regulations and measures implemented in other countries have been examined, including enforcement mechanisms and incentives for consumers and traders. These measures have been analysed with econometric models and simulations, showing significant potential for reducing passive shadow economy activities and increasing government revenues. Forecasts indicate that incentivizing electronic payments can significantly reduce the shadow economy, within the range of 2.2% to 6.7% of GDP in different countries.

Introducing limits on maximum cash payments can be effective at a low threshold which may shift a significant volume of existing cash payments towards non-cash methods. Each regulation should be considered as part of a broader set of regulatory measures, considering specific national conditions, to maximize the benefit of reducing the shadow economy and increasing tax revenues.

II. Resume of the dissertation paper

Chapter One: Theoretical Aspects of Tax System, Business Climate, Grey Economy, and Tax Evasion

The primary focus in Chapter One, corresponding with its title, revolves around the examination of the theoretical underpinnings of the tax system, the assessment of the business climate, and their interrelations with the informal economy. Based on this, the following aspects of the informal economy are investigated in respective paragraphs of the study: Paragraph 1 discusses the role of tax obligation as a primary revenue source in the budget; Paragraph 2 discusses the problems of tax legislation in Bulgaria; Paragraph 3 presents arguments regarding the impact of the tax system on the business climate in Bulgaria, and Paragraph 4 examines the dimensions of the informal economy and its impact on revenues in Bulgaria.

The following results are presented in a summary form:

1. Tax obligation

Tax obligation stands as a cornerstone of a state's fiscal sovereignty, denoting the legal requirement imposed on both individuals and entities to contribute specified sums towards sustaining the state budget. Over 90% of the revenues in the state budget stems from taxation. Tax obligations are non-transferrable and are established by legislation, which categorizes them as non-refundable. Their enforcement is governed by regulatory frameworks, targeting individuals identified by law as debtors.

1.1. Economic aspects

The primary economic objective of the national tax system is to generate revenues to cover the government's expenditures at all levels. Given that public expending tends to grow at least as fast as the national product, taxes, as the primary means of state financing, must yield revenues proportionate to the

expanding economy. Taxes on income, sales, and value-added generally adhere to this principle, while taxes on property and non-essential mass consumption items such as fuels, tobacco products, and alcoholic beverages (excise taxes) may not. With respect to this, preemptive or lagging rates are feasible, depending on the government policy.

In addition to revenue generation, tax policy can serve to promote economic stability. Changes in tax obligations, decoupled from expenditure adjustments, can mitigate cyclical fluctuations in prices, employment, and production. Built-in flexibility arises because obligations for certain taxes, especially income taxes, are highly responsive to changes in economic conditions. Theory supports a more proactive approach requiring adjustments in tax rates or other provisions to enhance the countercyclical effects of tax revenues.

Some economists propose tax policies aimed at fostering economic growth. This approach may involve a fundamental restructuring of the tax system (e.g. replacing consumption taxes with income taxes) or offering targeted tax incentives to stimulate savings, labour mobility, research and development, etc. However, there are limitations on what tax incentives can achieve, especially in terms of promoting economic development in specific industries or regions.

An emphasis on economic growth necessitates avoiding high marginal tax rates and the diversion of resources prompted by taxes toward relatively unproductive activities. The tax system plays a pivotal role in generating revenues necessary for funding various public services and infrastructure. As public expenditures increase, the tax system must ensure revenue growth in line with the national product. Taxes on income, sales, and value-added typically fulfill this requirement, while excise taxes on luxury goods may have varying impacts depending on state policies. Tax policy can also be leveraged to promote economic stability by adjusting tax obligations to mitigate economic cycles.

1.2. Social aspects

Over the past two decades, a plethora of studies have examined taxpayer communication to understand how individuals alter their behavior following interactions with one another (Ashby & Webley, 2008), (Rincke & Traxler, 2009). However valuable some of these findings may be, showing that communication matters for compliance behaviour, they do not provide a clear picture of why decisions on the topic change during interactions with other taxpayers. Hence, authors recognize the need to study the informal communication among taxpayers to gain empirical evidence of what is communicated, how, and with what consequences for tax compliance.

A number of studies view participants in tax communication as passive conductors and receivers of information – i.e., taxpayers may disseminate information on how to evade detection of crimes (Stalans, Kinsey , & Smith, 1991) or on audit levels within a specific professional network (Hashimzade, Myles, Page, & Rablen, 2013). However, deeper analysis reveals a variety of different processes unfolding in taxpayer communication – they actively influence and persuade other taxpayers to comply with tax laws and, in very few cases, not to comply. Many of the interactions under scrutiny represent active attempts at social influence and employ a range of well-known persuasion techniques (Cialdini & Goldstein , 2004).

While recent literature underscores the significant role of social norms and the effect of behaviour of close peers (Hashimzade, Myles, Page, & Rablen, 2013) most analyses following this line of inquiry focus on an individual's compliance decision in the social context of existing norms and practices. However, as emphasized by advances in behavioral economics (Fehr & Fischbacher, 2004), the sustenance and efficacy of social norms depend not only on individuals' decisions to follow them but also on the active social influence of peers. Any conceptualization of the role of social norms in tax compliance must also consider these processes of social influence. There is empirical evidence of active social influence in the context of tax compliance, which reinforces the need for further research and formalization of such social influence. It can be concluded that individuals are indeed influenced by the

opinions of their close peers and their attitude toward the tax "climate" in a given country.

Research on the social aspects of taxation highlights the role of communication among taxpayers. Social norms and the behaviour of other taxpayers significantly influence individual decisions to comply or evade tax obligations. Active discussions can stimulate compliance with laws or, in fewer instances, encourage tax evasion. The importance of media campaigns and educational initiatives is emphasized as means to influence societal attitudes and behaviors regarding taxation.

1.3. Moral aspects

Tax morale, which determines individuals' willingness and readiness to pay their taxes and comply with tax laws, is a complex phenomenon that depends on multiple factors. It involves the interaction of personal attitudes, societal norms, and perceptions of the fairness and efficacy of the tax system. Three main moral-philosophical approaches shape the understanding and assessment of tax obligations.

In the Western world, the share of the economy controlled by the state has exponentially grown over the past century, and pressure on the state is expected to increase as people live longer, meaning that taxes will continue to rise for the vast majority of the population. This, combined with strain on state social provisions in favour of individuals who have never contributed to social security and evaded taxation, may precipitate social upheavals in these societies in the near future.

To answer the question "Why do people today – part of self-determining democratic societies – pay so much in favour of their states?", it is necessary to first clarify how much tax revenue should be collected overall, which aims of taxation are legitimate, and how individuals should behave as taxpayers. These questions will be examined through the lens of political philosophy and the following three ethical approaches:

- Utilitarianism, rooted in the pursuit of collective happiness within the populace. In the realm of economics, "happiness" signifies the fulfillment

of desires and needs of economic actors – thus, utilitarianism is perceived as striving for maximal satisfaction of desires;

- Deontology, which grounds ethics in the concept of duty;
- Virtue ethics, which focuses on the virtues that individuals should possess and on what constitutes a virtuous life. Here, a broad conception of virtues should be employed, including not only virtues such as honesty but also the use of talents and living a fulfilling life.

For a utilitarian, the primary economic objectives are to ensure that goods and services are accessible, allowing everyone to lead a dignified life, and to ensure that these resources are distributed widely enough for everyone or the majority to benefit from them. A true utilitarian would prioritize overall satisfaction rather than equitable distribution. At the same time, taxation embodies the redistribution of resources. If each individual has modest resources, this should generate greater overall satisfaction than if the same total resources are concentrated in the hands of a few. Taxation coupled with government spending is a clear means of achieving redistribution, ensuring that everyone receives something. However, this raises the question of the relationship between the rights and obligations of taxpayers. From a moral standpoint, it is unlikely that some individuals should solely possess rights while others are obligated to provide tax revenues necessary for financing expenditures to uphold those rights. It is also argued that obligations should precede rights in principle, especially in situations where certain individuals lay claim to systematic utilization of public resources without contributing to their accumulation in any way.

Here we observe a certain contradiction - taxation and spending help achieve a broad distribution of resources, yet high tax rates diminish investments and incentives, thereby impeding the future generation of sufficient common resources. Excessive redistribution may imply too small a share to distribute. Therefore, utilitarians must strike a balance. It is not philosophers but economists who advise them on how to achieve this equilibrium of interests to obtain the most productive outcome. This is not surprising. Utilitarianism simply sets a computational rule, and utilitarians rely on experts from other disciplines to perform the calculations for them.

On the contrary, deontology defines absolute obligations, notably the obligation to respect others' property rights. They suggest that there should be no tax at all, as it involves the forced transfer of property from taxpayers. Conversely, the duty to respect property rights can justify the argument that all utilized social resources should be paid for, even if a person has not requested these resources to be provided. Therefore, to avoid being deemed an unlawful user, anyone utilizing public amenities such as hospitals or roads should ensure they contribute towards covering these costs. However, applying this argument in practice proves challenging, especially amidst the recent surge in state populism. Is it realistic to expect people to abstain from using public roads if they refuse to pay a fee or tax for this? In such a scenario, they should theoretically be able to access areas not maintained by the state. However, this is hardly feasible, especially since they already have homes in urbanized zones. Essentially, deontology seems to be a fairly just method for collecting public funds from members of a given society/state, but in the modern world, it rather remains only a theoretical proposition. States, through their administrators, prioritize collecting predictable taxes, which they can then allocate at their discretion rather than for specific expenditures. This renders it impractical for this approach to taxation to find real-world application.

Virtue ethics can offer valuable insights into the fairness of taxation. It suggests that several virtues are more likely to be practiced when tax rates are moderate rather than excessively high. Financial incentives play a significant role in motivating people to utilize their talents, but excessively high taxation diminishes these incentives by reducing household incomes. Charity, encompassing both financial donations and volunteering, is another virtue relevant to taxation. The higher the rewards individuals receive, the more inclined they are to afford charitable contributions; likewise, higher salaries make it easier for individuals to dedicate time away from paid work for philanthropy or civic service. Independence, a fundamental virtue, is preferable as individuals strive to earn what they need rather than relying solely on external assistance. Lower tax rates can facilitate this independence (Baron, 2012). In terms of tax fairness, a flat tax system, regardless of income size, is generally perceived favorably by those who contribute the most to the budget. It is

important to acknowledge that tax collection relies heavily on state coercion, which may not foster positive sentiments among taxpayers. However, if we acknowledge taxes as a necessary aspect of state functioning and seek fairness in their implementation, a flat tax ensures that hard work and the assumption of greater risks, leading to higher incomes, are not disproportionately penalized by higher tax rates.

Practical applications and ethical dilemmas of taxation:

- Expenditures on public goods – Ethical debates often revolve around the fairness of the tax burden, particularly concerning the funding of public goods. How can we ensure that everyone contributes a fair share to financing these goods while considering the economic capacities of different taxpayers?
- Social justice – Assessing tax policies frequently involves evaluating their impact on various social groups. For instance, Rawls' concept of justice argues that tax systems should prioritize benefiting the most vulnerable members of society.
- Moral and ethical norms in the informal economy – The informal economy challenges the legitimacy and moral foundation of economic models that may not fully reflect the social and ethical dimensions of economic activities. Integrating the social context and moral values into economic theories is essential for accurately modeling and comprehending economic behaviors.

2. Issues with tax legislation in Bulgaria

Although the tax legislation in Bulgaria is well-organized, it undergoes frequent changes – sometimes more than once a year. The current tax laws, adopted in 2007, have seen significant amendments over the years, especially in the Value Added Tax Act, which often impacts their structure. This inconsistency makes it challenging for taxpayers to understand and comply with the laws effectively. Consequently, some taxpayers may be inclined to evade paying taxes. Moreover, tax obligations are not always fulfilled diligently, posing a risk that taxes imposed may not be collected in full or on time. To ensure tax collection, the national legislation has defined various types of tax offenses and

tax crimes, which need to be distinguished from each other. The continuous changes in legislation often lead to the misapplication of tax norms by taxpayers, thereby increasing the risk of tax violations and reducing the overall tax revenue collected.

Tax offenses and crimes in Bulgaria are regulated by several main legislative acts, including the Criminal Code (CC), the Tax and Social Insurance Procedure Code (TSIPC), and the Administrative Violations and Sanctions Act (AVSA). Distinguishing between tax offenses (administrative) and tax crimes (punishable under the CC) is crucial for the proper application of sanctions and control measures.

In Bulgaria, tax offences usually involve failure to meet obligations, while tax crimes involve more serious violations such as tax evasion or committing other attempts to interfere with administration of revenue laws. Each of these types of violations can lead to serious financial and legal consequences for the individuals and companies involved.

The frequent amendments to laws and the complexity of regulations present practical challenges for taxpayers, especially for small and medium-sized enterprises. Challenges in interpreting and applying tax laws can lead to unintentional violations, increasing the need for professional tax and legal assistance.

To enhance the efficiency of Bulgaria's tax system, it is imperative to minimize frequent changes in legislation and increase transparency in regulating tax violations and crimes. Clearer and more stable tax laws would enable taxpayers to comply with legislation more effectively and alleviate administrative burdens.

Improvements in tax legislation and practices in Bulgaria should prioritize stabilizing laws, increasing transparency, and predictability in tax requirements, and providing better training and support resources for all taxpayers. These improvements can contribute to a fair and efficient tax system that supports economic growth and fairness.

3. Impact of the Tax System on the Business Climate in Bulgaria

3.1. Brief overview of the business climate in Bulgaria

Bulgaria is an attractive investment destination in the EU, offering low and flat taxes and cheap labour. However, the country suffers from low productivity and demographic decline. The COVID-19 pandemic and subsequent lockdowns in 2021 negatively affected the economy, especially tourism and the automotive sector. Economic recovery in 2022 was supported by increased consumption and public investments. Planned accession to the eurozone and membership in the EU Banking Union are expected to reduce currency risk and improve the investment environment. Bulgaria also anticipates significant EU investments for COVID-19 recovery in green energy, digitalization, and the private sector.

Bulgaria's tax system, known for its low and flat rates, is a key factor in attracting investments. It provides business advantages through low operating costs and easy management of tax obligations. Additionally, membership in international economic organizations and participation in international tax treaties support international trade and investment interactions.

Despite the low rates, frequent changes in tax legislation lead to unpredictability and legal uncertainty for businesses. This may hinder long-term investments and limit economic growth. Issues with rule of law and corruption also negatively impact the investment climate, limiting the effectiveness of the tax system and its enforcement.

While several government coalitions have pledged to prioritize judicial reform and anti-corruption efforts, significant strides remain elusive. Initiatives in investment policy and collaborations with international bodies such as the OECD aim to bolster regulatory transparency and enforcement mechanisms.

The expected accession to the eurozone and further integration into European and international economic structures are anticipated to enhance the investment climate in Bulgaria. This could stabilize the tax system and increase economic predictability, which is crucial for attracting foreign investments and fostering sustainable economic growth.

3.2. Impact of flat taxes on business

The concept of a "flat tax" has sparked considerable debate in tax circles in recent years. As argued by Steve Forbes, Richard Armey, the Kemp Commission, and others, the flat tax provides significant tax advantages for every household, taxing all incomes, including wages, at a single, low rate, ultimately leading to a tangible increase in household income. Proponents of this tax system claim that the flat tax is simpler than other forms of taxation and would generate substantial increases in savings and economic growth. Ultimately, the anticipated impact of this tax system on household savings, and consequently on the national and supranational economic environment, justifies expectations in Bulgaria.

Fundamentally low savings have both personal and national economic consequences. Households that save very little will be ill-prepared for retirement. A nation with a low savings rate has few resources for private investment. Higher savings could help people of retirement age strengthen economic growth and increase the standard of living for all.

Over the past decade, Bulgaria has witnessed a consistent and gradual increase in the size of bank savings held by individuals in Bulgarian banks – as reported by the Bulgarian National Bank (BNB). This trend has roots dating back to the adoption of the 10% tax rate on personal incomes in 2007. Notably, the state expenditures for administering the Personal Income Tax are comparatively lower than those for administering taxes under other tax laws.

Critics argue that the income tax impedes savings. Certain forms of personal savings face double taxation – once upon earning and again when generating investment income. Similarly, corporate income is taxed at the corporate level and again upon distribution to shareholders. Moreover, the income tax fails to adjust capital gains and interest income for inflation.

In this context, the flat tax could increase savings by enhancing the return on savings after taxation and by preserving incomes in households with significant savings. Forecasts indicate that transitioning from a pure income tax to a pure flat tax could increase long-term savings by between 10% and 20%, thereby increasing the savings rate by half a percentage point to 1% of GDP.

However, the actual increase for all countries implementing the flat tax tends to be less significant.

The debate surrounding the flat tax highlights several advantages and criticisms:

The flat tax system is much simpler than the progressive tax, allowing all individuals to fill out their own tax forms. Furthermore, it reduces compliance costs (e.g., payments to tax consultants) and presents a genuine opportunity for significant reduction in bureaucracy.

Secondly, the flat tax system is anticipated to foster a more ethical governance framework. Unlike the progressive tax system with its array of exemptions, deductions, and credits that can be exploited by special interest groups, the flat tax simplifies the tax code, making it harder for any particular group to manipulate it to their advantage. This, in turn, diminishes the influence of lobbyists on legislative changes.

A third advantage lies in the economic stimulus. Eliminating the highest tax rates on incomes will motivate people to work harder, earn more, save more, and invest more, leading to economic growth that benefits everyone. Some flat tax proposals even suggest eliminating taxes on dividends, interest, and other non-labour income to provide an additional economic boost, although these aspects are not inherent to the flat tax system. However, opponents argue that the extent of economic growth resulting from the flat tax remains uncertain.

The main criticism of the flat tax is that it is unfair. Opponents argue that such a system would disproportionately benefit the wealthy while imposing higher tax burdens on the poor and middle class, who may be less equipped to bear them. Proponents counter by asserting that the beneficial effects of the progressive tax system can be maintained through generous personal exemptions.

The second criticism is that the flat tax would cause a deficit in the state budget by reducing taxes paid by the wealthy. Supporters of the flat tax argue that the economic growth resulting from the flat tax will generate additional tax revenues, which will more than compensate for the revenues lost from lower tax rates.

Since the flat tax was introduced in Bulgaria as of January 01, 2007, there have been no negative consequences observed from its implementation. There has been no decrease in tax collections prior to its introduction, and even on the contrary – there has been a constant increase in revenues accruing to the national budget. As mentioned, there is also a permanent trend towards increasing savings by individuals.

3.3. Impact of corporate tax on economic growth

For decades, the effects on economic growth resulting from changes in corporate income taxation have sparked debates in both academic and political circles. Those in favour of reducing corporate tax argue that lower tax rates will stimulate growth. Others express doubts that reducing corporate tax will have a significant impact on growth. Indeed, over the past four decades, a decline in corporate tax rates and an increase in corporate tax bases have been observed worldwide, but to varying degrees in different countries (Devereux, Lockwood, & Redoano, Do countries compete over corporate tax rates?, 2008), (Asen, 2020), (Heimberger, 2021).

Empirical studies have examined the effects of corporate tax on growth across different country groups and time periods, using various datasets and econometric methods. A thorough examination reveals significant variations in reported findings — some studies show substantial and consistent positive effects on growth from corporate tax reductions (Arnold, Brys, Heady, Johansson, & Schweltnus, (2011), (Mertens & Ravn, 2013), while others report distinctly negative, insignificant, or mixed results (Gale, Krupkin, & Rueben, 2015), (Kate & Milionis, 2019). Hence, quantitative evidence regarding the relationship between corporate tax and economic growth may present more of a challenge than facilitate drawing valid conclusions from the literature.

According to the unweighted average of estimates from empirical studies, a one-percentage-point reduction in the corporate tax rate would moderately, but statistically significantly, increase annual GDP growth rates by around 0.02 percentage points. Thus, reducing the corporate tax rate could be considered one of the factors positively affecting economic growth. However, the hypothesis that the effect of corporate taxes on growth is zero remains relevant,

especially when potential endogeneity issues between corporate taxes and growth are considered.

Several factors influence the reported size of the effect, including the measurement of corporate tax rates (statutory versus effective average tax rates) and the variable used for economic growth (per capita or not), the time horizon of the GDP response (short-term versus long-term effects), and the inclusion of other budgetary components (government spending and other taxes). While studies using effective average tax rates more frequently find growth-stimulating effects from reducing the corporate tax, they tend to be outliers compared to other studies that use effective marginal tax rates, shares of corporate tax in GDP, or statutory tax rates. Also, the result is not entirely stable when different meta-regression approaches are used.

Focusing on the short-term horizon of GDP response renders the reduction of corporate taxes even less conducive to growth stimulation. According to theoretical arguments (Aghion, Akcigit, & Fernandez-Villaverde, *Optimal capital versus labor taxation with innovation-led growth*, 2013), when government spending and other taxes remain fixed, increasing the corporate tax has more negative effects on growth. This implies that using additional revenue from corporate taxes, as well as increasing spending or reducing other taxes instead of consolidation, would be more beneficial for growth. An intriguing observation is that recent studies tend to find fewer growth-increasing effects from corporate tax reduction.

Various methods are used to measure the shadow economy, extensively discussed in the dissertation.

Undoubtedly, tax evasion issues are widespread in Bulgaria. Or rather, the government's ability to collect all its taxes is problematic due to inefficient institutions. Informal economic activity is a phenomenon observed not only in developing countries but also in emerging and developed economies. Informal production is widespread in Eastern and Southern Europe and reaches its highest levels in Bulgaria, where it accounted for one-third of officially reported GDP by the end of the 2000s. (Schneider & Medina, 2018).

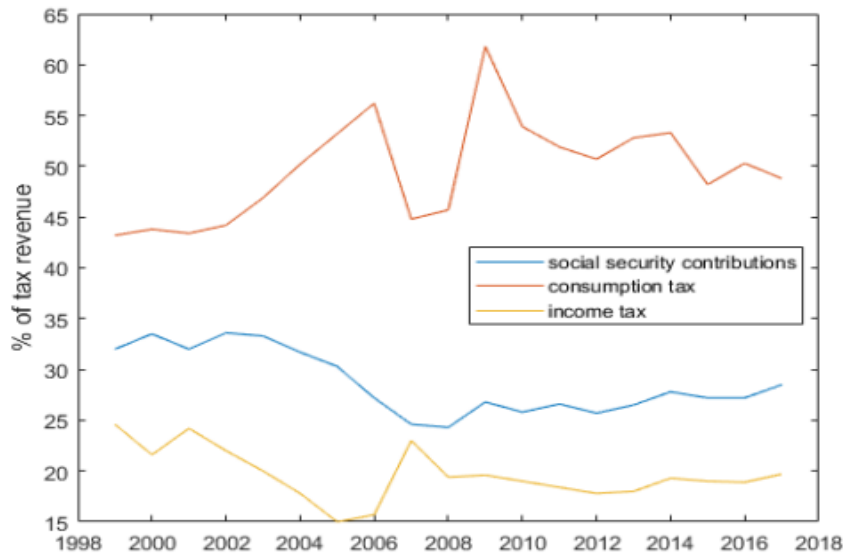


Figure 1. Weight of individual components in government revenue

Di Nola et al., point out that a prevalent form of tax evasion in Europe is through salaries, social contributions, and profits in officially registered enterprises. Here, it is essential to include the evasion of VAT (Value Added Tax) as well.

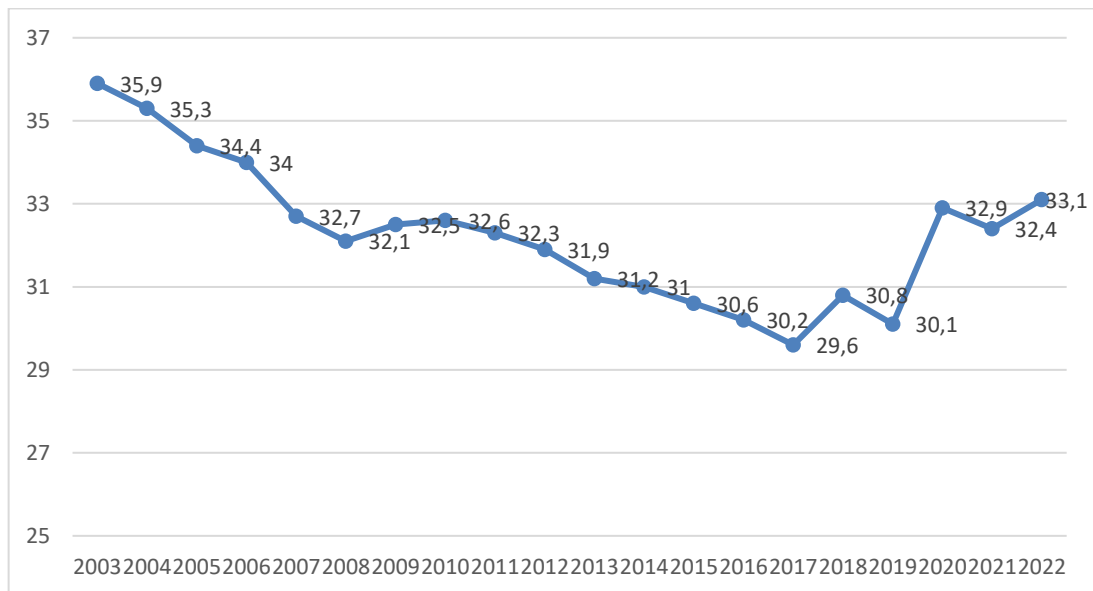


Fig. 2. Size of the informal economy in Bulgaria for the period 2003—2022 (as a % of the official GDP)

Source: (Schneider & Asllani, Taxation of the Informal Economy in the EU, 2022)

It is indisputable that informal economy exists in every country. The practices associated with this phenomenon have various manifestations, and their effects spread across various domains. Most of them are generally negative for economic development, necessitating measures to curb and prevent the informal economy. However, for such measures to be effectively designed and implemented, the phenomenon must be thoroughly investigated, which includes, among other things, assessing its size and dynamics.

Obtaining estimates for the size of the shadow economy in a country is not a straightforward task. The difficulties in this area stem from both the variety of forms and shadowy practices employed and, on the other hand, the simple fact that economic operators engaged in such practices actively seek to keep these activities hidden from official authorities.

In general, the economic literature offers various approaches for obtaining such estimates, and there is no single method that stands out as superior and universally accepted. The primary methods for estimating the shadow economy can be broadly categorized as direct and indirect. Direct methods rely on microeconomic approaches and utilize surveys and samples specifically designed to capture activities in the shadow economy. However, as Schneider and Enste point out, the reliability of the results from such methods depends on the willingness of respondents to candidly share their views and experiences regarding the shadow economy, rendering them unreliable and limited as a source of information (Schneider & Enste, *The Shadow Economy: An International Survey*, 2013).

The latest report commissioned by the European Parliament, titled "Taxation of the Informal Economy in the EU," specifically relies on the studies conducted by Schneider and Enste. The assessment of the size and evolution of the shadow economy is conducted using the MIMIC (Multiple Indicators and Multiple Causes) procedure. However, it is important to note that the MIMIC procedure yields relative values, requiring additional methods such as the currency demand approach or the income discrepancy method to calibrate these values into absolute figures. (Schneider & Asllani, *Taxation of the Informal Economy in the EU*, 2022).

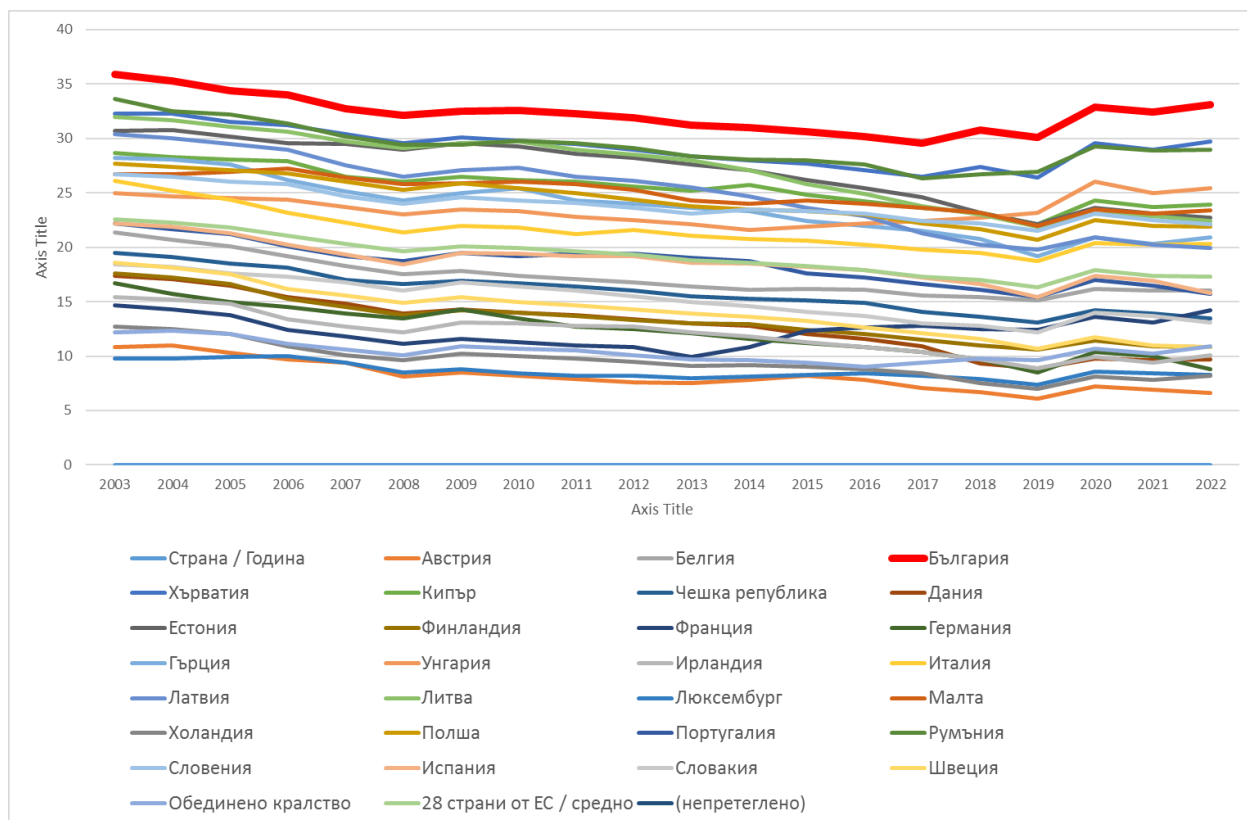


Fig. 3. Size of the shadow economy in the 27 EU member states + United Kingdom (up to 2020) for the period 2003-2022 (as % of official GDP).

Source: (Schneider & Asllani, Taxation of the Informal Economy in the EU, 2022)

Chapter Two: Methods and Approaches for Investigating the Dimensions and the Scale of the Shadow Economy

In the second chapter of the study, detailed discussions delve into the aspects and issues related to the shadow economy, the possible methods for its measurement, as well as the strategies to mitigate its adverse effects on tax revenues in Bulgaria. These discussions are structured into respective paragraphs as follows: Paragraph 1 offers an exposition focused on the relevance of the topic concerning the necessity of measuring the shadow economy. Paragraph 2 specifies the subject and object of analysis. Paragraph 3

outlines the goals and objectives of the analysis. Paragraph 4 presents the hypotheses of the analysis. Paragraph 5 explores the methods for empirically investigating the shadow economy in Bulgaria during the first two decades of the 21st century. Paragraph 6 addresses the question of the need to apply a holistic approach to studying the shadow economy. Paragraph 7 examines the possibilities for mitigating the negative impact of the shadow economy on tax revenues in Bulgaria.

1. Hypotheses for analysis

In Bulgaria, the study of the shadow economy began only after the changes that occurred at the end of 1989, marking the transition from a state-planned to a market economy system. The three decades, with their political and social dynamics, suggest several potential causes for this phenomenon:

Hypothesis 1: In the early 1990s, Bulgarians were not politically, psychologically, and economically prepared for the democratic changes and the abrupt shift from a planned to a market economy. Thus, residual models from the previous regime, where connections and schemes for evasion were prevalent, combined with financial instability, led to the emergence and uncontrolled expansion of the shadow economy.

Hypothesis 2: The attitudes of employers and employees stem from the fact that in Bulgaria, for many years, the progressive tax system was ineffective – many individuals benefited without making meaningful contributions, often complaining about perceived injustices. Meanwhile, those who actually paid higher tax rates did not receive commensurate government services or benefits, fostering a sense of resentment that underpinned the shadow economy.

Hypothesis 3: The flat tax, where everyone pays an equitable percentage of their income in taxes, guarantees better tax compliance both economically, by ensuring that both individuals and businesses can afford their taxes, and psychologically, as it largely resolves issues of resentment and attitudes.

The dissertation examines and presents a series of studies, empirical data, statistical information, and findings from scientific research. Assessing the size

of the informal economy is a challenging and complex task. Three different categories of methods are widely used for measurement:

- Direct approaches

These are microeconomic approaches that either employ well-designed surveys and samples based on voluntary responses or employ tax audits and other compliance methods. Sampling surveys are widely employed for estimating the size of the informal economy. The primary drawbacks of this method are those inherent to all surveys – average precision, and results heavily dependent on the respondents' willingness to cooperate. It is difficult to assess the amount of undeclared labour through a direct questionnaire as most respondents hesitate to admit to fraudulent behavior, rendering the responses unreliable, thus making it challenging to calculate a true estimate (in monetary terms) of the size of undeclared labour. Nonetheless, the main advantage of this method lies in the detailed information it can provide about the structure of the informal economy. However, results from such studies are highly sensitive to how the questionnaire is formulated.

Studies conducted by Feld and Larsen (2005, 2008, 2009), Heigner et al. (2013), and Enste and Schneider (2006) in Germany indicate that direct research methods are employed in northern countries. Similar findings are reported for the United Kingdom by Pedersen (2003), Schneider and Sauka (2016), and other, as well as for the Netherlands by Van Eck (1988) and Kazemeir (2006). The questionnaires used in these studies generally share comparable designs. However, recent attempts by the European Union to provide survey results for all member states encounter significant difficulties regarding comparability (Frankel, Vegh, & Vuletin, 2013). Returning to the definition of the informal economy, this method primarily captures the volume of shadow labour activities within households and rarely within or between enterprises, providing no data on value added. An essential advantage is that it offers detailed information on activities in the informal economy, the structure and composition of these activities, as well as the socio-economic characteristics and motives of those working in the informal economy.

- Indirect approaches

These approaches, also referred to as indicator-based approaches, are predominantly macroeconomic and rely on various economic and other indicators containing information about the evolution of the informal economy over time. By aligning them with the definition of the informal economy, they provide an estimation of the value added. In most cases, transactions in the informal sector involve legally acquired materials—thus, these approaches yield upper-bound estimates, with the risk of double counting due to the inclusion of legally purchased materials. In Europe, five primary indicators are commonly used, offering some insights into the informal economy:

The discrepancy between national expenditure and income statistics. This approach is grounded in disparities between income and expenditure statistics. In national accounts, the income measure of GNP should align with the expenditure measure of GNP. Therefore, if an independent estimate of the expenditure component of national accounts is available, the gap between expenditure measure and the income measure can serve as an indicator of the extent of the informal economy.

The discrepancy between the official and the actual labour force. The decline in labour force participation in the official economy can be viewed as an indication of increased activity in the informal economy. Assuming that the total labour force participation remains constant, a decreasing official participation rate can be regarded as an indicator of growing economic activities in the shadow economy.

The transaction approach. This approach, fully developed by Feige, is based on the assumption that there is a constant relation over time between the volume of transactions and the official GDP, as summarized by the popular quantity equation $M \cdot V = p \cdot T$ (where M is money, V - velocity, p - prices, and T -total transactions), often referred to as Fisher's equation. Assumptions are also to be made about the velocity of money and the relationships between the total value of transactions $p \cdot T$ and the total (official + unofficial) nominal GDP. By relating the total nominal GDP to the total number of transactions, one can calculate the GDP of the informal economy by subtracting the official GDP from the total nominal GDP. However, to derive figures for the informal economy,

one must also assume a base year of no shadow economy and therefore of "normal" ratio of p^*T to total nominal (official = total) GDP that would remain constant over time if there were no shadow economy. To obtain reliable estimates for the informal economy, accurate data on the total volume of transactions must be available. This can be particularly difficult for monetary transactions, as they depend, among other factors, on the durability of banknotes in relation to the quality of the paper on which they are printed. At the same time, it is assumed that all variations in the ratio between the total value of transactions and officially measured GDP are due to the shadow economy. This means that a significant amount of data is needed to eliminate financial transactions from net cross payments, which are legitimate and have nothing to do with the shadow economy.

The currency demand approach. The primary regression equation for currency demand, proposed by Tanzi (1983), is as follows: $\ln (C / M2)_t = \beta_0 + \beta_1 \ln (1 + TW)_t + \beta_2 \ln (WS / Y)_t + \beta_3 \ln R_t + \beta_4 \ln (Y / N)_t + u_t$, $c \beta_1 > 0$, $\beta_2 > 0$, $\beta_3 < 0$, $\beta_4 > 0$, where $C/M2$ is the ratio of currency holdings to current and deposit accounts, TW is the weighted average tax rate (as a proxy for changes in the size of the shadow economy), WS/Y is the ratio of wages and salaries to national income (to capture changing patterns of payment and money holding), R is the interest rate paid on savings deposits (to capture opportunity cost of holding cash), and Y/N is income per capita. Each "excessive" increase in currency or the amount unexplained by conventional or normal factors is then attributed to increasing tax burden and other reasons leading people to work in the informal economy.

The figures for the size and development of the informal economy can be calculated in a first step by comparing the difference between the development of currency when direct and indirect tax burdens and state regulation are kept at their lowest values, and the development of currency with the current (higher) tax burden and state regulation. In a second step, assuming the same income velocity for the currency used in the shadow economy as for legal M1 in the official economy, the size of the shadow economy can be calculated and compared to the official GDP. This is one of the most used approaches.

The method of physical input (electricity consumption). Kaufman and Kaliberda (1996) posit that electricity consumption is considered the single, best physical indicator of overall (or official plus unofficial) economic activity. Empirically, it has been observed that overall economic activity and electricity consumption worldwide move in lockstep with the elasticity of electricity to GDP, typically close to one. This means that the growth of total electricity consumption is an indicator of growth of overall (official and unofficial) GDP. By relying on this proxy measurement for the entire economy and then subtracting estimates of official GDP from this overall measure, Kaufman and Kaliberda derive an estimate of unofficial GDP.

All the methods described so far consider only one indicator to capture all effects of the shadow economy. However, these effects show up simultaneously in production, labour, and money markets. A more important critique is that the causes determining the size of the shadow economy are considered only in some of the monetary approach studies, which typically focus on a single cause, the burden of taxation. The model approach explicitly considers multiple causes of the existence and growth of the shadow economy, as well as the multiple effects of the shadow economy over time (Feige, L. E., 2016).

Everything said so far leads to the conclusion that it is necessary to use empirical methods based on statistical theory of unobserved variables, which considers multiple causes and multiple indicators of the phenomenon to be measured. Since the size of the shadow economy is an unknown (hidden) figure, a latent estimation approach is applied, using the MIMIC procedure (multiple indicators, multiple causes estimation). The statistical idea behind this method is to compare a sample covariance matrix, i.e., a covariance matrix of observable variables, with the parametric structure imposed on this matrix by a hypothesized model. By using covariance information among observed variables, the unobservable variable is first related to observable variables in a factor analytical model, also known as a measurement model. Secondly, the relationships between the unobservable variable and the observable variables are specified through a structural model. Therefore, a MIMIC model is a simultaneous specification of a factor and structural model. In this sense, the MIMIC model tests the consistency of a structural theory through data and is

thus more confirmatory than exploratory. This way, an economic theory is tested by examining the consistency of actual data with hypothetical relationships between the unobservable (latent) variable or factor and the observable (measurable) variables. In general, a confirmatory factor analysis has two goals: to estimate parameters such as coefficients and variances, and to assess the fit of the model. For the analysis of activities in the shadow economy, these two goals mean assessing the relationships between a set of observable variables, divided into causes and indicators, and the activity in the shadow economy (unobserved variable), and checking if the researcher's theory or hypotheses derived from it as a whole fit the data. Compared to regression models, MIMIC models are rarely used by economists, which may be due to underestimation of their potential contribution to economic research (Hassan & Scheider, 2016).

The analysis of the size, prevalence, and implications of the "shadow economy" phenomenon in Bulgaria continues to be a subject of intense public political discourse, even after the country's official integration into the EU in January 2007. Many aspects of this discourse examine the interplay between corruption, the level of transactions, inadequate reporting, and the prospects for economic development within the framework of the EU's common economic area. Despite the private sector's increasing dominance in most Bulgarian industrial sectors in recent years, political analysts maintain that state bureaucracy continues to exert substantial influence over economic activities.

2. The Need for a Holistic Approach in Studying the Shadow Economy

The MIMIC approach estimations "produce" only relative weights. Therefore, another approach is needed to normalize these assessments - their validity depends precisely on the reliability of this second approach. However, it is very difficult to draw statistically confirmed conclusions about causal relationships in the real world, not only from the model constructed from these estimates.

The discussion about approaches and methods for measuring shadow business practices is ongoing and reflects the growing need for information about the state of economic development in Europe and worldwide.

An analytical review of the emergence and establishment of the topic of the informal economy as a research field reveals that shadow practices have permanently become the focus of research interest over the past two decades. This is evidenced by the increasing number of theoretically and empirically oriented studies on various aspects of informal economic activities. The International Labour Organization (ILO), the World Bank, the International Monetary Fund (IMF), and the Organization for Economic Cooperation and Development (OECD) have prioritized conducting research on the informal economy.

It can be said that the most appropriate rational methodological approach to explaining informality is the institutional "key" (North's institutional theory), which views institutions as determinants and constraints on human behaviour and offers real possibilities for operationalizing the concept of the informal economy. One of the key categories of institutional theory is the concept of transaction costs, which explains the mechanisms of emergence and implementation of informal practices in daily business activities. The institutional aspect is further developed in the context of transition societies and provides a conceptual basis for developing methodologies for empirically studying informal economic activities.

The latest trends in measuring and explaining informal economic practices further develop and enrich existing fundamental approaches and methods. However, they also entail significant shifts in how these basic approaches/methods are applied, which can be attributed to evolving knowledge production needs to meet the requirements of public systems management. This does not imply a new trend in generating different quantities of knowledge. Instead, it reflects a transformation of the very structure of required knowledge alongside the refinement of methodological approaches to extract such insights from real-world contexts.

Examining recent European practices, approaches, and methods for measuring shadow economic activity suggests that the evolution of approaches

to studying informal economic activities is intricately linked to the imperative of optimizing the process of gathering and processing comprehensive information on national economic parameters. In this context, the intensified development of statistical methods, which forms the basis for targeted observations and assessments of activities deliberately obscured by economic operators, appears not only logical but imperative. These observations form the basis for crafting assessments, which are later applied to execute corrective procedures in the final computation of GDP. Moreover, they serve as starting points for crafting policies and devising measures to streamline mechanisms for redistribution and foster social solidarity at the national level.

The sociological approach is fundamentally different from other methodologies used in the field. It goes beyond the surface of facts, aiming to unveil the intertwined, empirically verifiable "grains" of truth and reconstruct the underlying regularities, essential features, and enduring patterns of interaction between the subsystems of society. When specifically applied to the study of informal economic practices, this approach demonstrates significant cognitive potential. While quantitative parameters of phenomena are indeed important, here they are interpreted to reveal the nature, causal relationships, and specific functions of informal economic activities within the broader socio-economic system, as well as the incentives that drive social actors to engage in shadow activities and the socio-economic consequences of using such practices. Thus, the sociological approach simultaneously captures the picture of the phenomenon (i.e., the quantitative parameters) and interprets and enriches the ontological elements of the object under study.

Unlike other methodologies that predominantly rely on quantitative data collected by national statistical agencies, the sociological approach draws on the opinions and assessments of participants in economic processes. However, this reliance presents a notable challenge: since sociological research deals with subjective viewpoints and value judgments, there is a risk of inherent bias in the collected information.

Such concerns are not groundless; however, they are justified only when violations regarding the methodological requirements for designing theoretical

research, fieldwork, or subsequent statistical-mathematical processing of aggregated empirical data are allowed.

Analysis of previous measurements and studies of informal/shadow economic activities indicates that for social research in this field to be successful, the researcher's standpoint needs to be precisely defined regarding several key questions:

1. What exactly is being studied? This involves defining the object of study, which concepts to be used, and justifying the choice of these specific concepts. It includes clarifying the content of these concepts and identifying the primary manifestations and metrics of informal activities.

2. Which approaches and methods will be applied? A thoughtful selection of approaches and a detailed description of the methods for collecting empirical data are necessary. Additionally, the statistical and mathematical methods for data processing are to be described in detail.

3. What information will be obtained? This concerns obtaining objective, specific, and measurable indicators of the economic and financial activities of economic agents or information about the structure of social attitudes and evaluations.

4. How will the obtained information be interpreted? The interpretation process should be defined, whether it involves calculating the relative share of the informal economy as a percentage of GDP or determining the relative proportions of shadow economic activities and employers violating regulations.

The effectiveness and validity of such a holistic approach are demonstrated by the methodological practices of a Bulgarian research team that conducted measurements and studies of informal/shadow economic activities from 2010 to 2015. This approach was developed and applied within the project "Restriction and Prevention of the Informal Economy," executed by the BICA in collaboration with the KNSB, with financial support from the Operational Program for Human Resources Development 2007-2013, co-financed by the European Social Fund and the Republic of Bulgaria (Stoeva, 2009).

3. Opportunities to restrict the negative impacts of the shadow economy on tax revenues in Bulgaria

The results of comparing empirical series on the size of the informal sector (2000-2014) and the outcomes of conducted computational experiments indicate that the most significant factor is labour, as indicated by the empirical series, followed by corporate tax. The conclusion drawn is that the progressive nature of income taxation in Bulgaria is not quantitatively relevant to tax evasion.

Therefore, appropriate economic policies should prioritize stimulating labour and optimizing the personal income tax system, rather than focusing on other tax rates, psychological or other attitudes towards taxation.

Chapter Three. Empirical Investigation of Business and Citizens' Perceptions of the Shadow Economy and Tax Evasion

Chapter Three presents the findings of the empirical research conducted in this study. The objective of the applied qualitative empirical investigation is to explore the reasons behind individuals' and businesses' involvement in the shadow economy and how this impacts compliance with tax legislation and government revenues. The survey comprises questions designed to probe into the motives for non-compliance, the perceived fairness of tax policies, and the socio-economic factors influencing participation in the shadow economy. Data collection methods include surveys administered to managers of firms that may be entirely or partially engaged in the shadow economy, as well as surveys distributed to individuals employed in such firms. Participant confidentiality is guaranteed, especially for those who admit involvement in the shadow economy. Informed consent was obtained from all participants regarding the purpose of the study, their role in the qualitative research, and the intended use of the data.

The chosen method deemed most suitable for the investigation is surveying via closed-ended anonymous questionnaires. Two distinct survey instruments were developed - one tailored for citizens in their capacity as

employees and workers, and another for enterprises, to be completed by managers across various organizational levels (primarily from lower to middle management tiers).

The empirical study does not claim to be representative due to the fact that it works with a small, yet conveniently sized sample (50 for each of the groups). However, it aims to be reliable - in this regard, all questions in the questionnaire feature exhaustive answers, with caution taken to ensure that the wording of the questions does not bias towards any of the options. To ensure that each respondent can identify themselves and respond to the questionnaire without skewing the results, where necessary, an additional option "Other (Please specify in free text)" has been included. Some questions also allowed respondents to select more than one answer.

Comprehensive descriptions of cases have been developed, which include specific instances of activities in the shadow economy and their implications for tax revenues.

The qualitative research applied has a subjective nature with inherent limitations regarding generalization. Nevertheless, the application of these qualitative research methods helps uncover the complex social, economic, and psychological dimensions of the shadow economy and its impact on tax revenues, providing a richer and more nuanced understanding than quantitative data alone could offer. This rationale is particularly applicable in a situation like that in Bulgaria, characterized by a wide range of estimates of the size of the shadow economy and the presence of methodological and theoretical disputes about the validity of conducted studies. This could be crucial for the development of more effective tax policies.

As expected, both citizens and business representatives are reluctant to share personal financial and labour-related information, especially in cases of wrongdoing. Only 5-6 individuals comfortably admit to not receiving their full salary. These are typically younger respondents or low-level managers. More interesting are those who opt for the "prefer not to answer" option - there are approximately 10 individuals for sensitive questions about employees and workers and between 12 and 15 individuals for business representatives. Observations suggest that if they have nothing to conceal, neither employees

nor managers hesitate to give a specific answer - therefore, at least some of those unwilling to answer work in the informal sector.

This empirically confirms what was outlined earlier in this dissertation - measuring the informal economy is extremely challenging because participants either cover their tracks very well or do everything possible to do so. Even anonymity as an attempt to create additional security for respondents does not facilitate the disclosure of more details about the characteristics of the shadow sector.

However, when it comes to expressing an opinion on a given issue, both citizens and business representatives willingly participate. On questions that imply sharing an opinion, the option "prefer not to answer" is rarely chosen (with one or two exceptions), instead, the options allowing multiple answers are actively used.

The findings of the study - particularly in the section where citizens are tasked with delineating the boundaries of the shadow sector - reveal that for a significant portion of them, the concept of the informal economy is synonymous with employers evading taxes by providing incomplete salaries. There is a lack of awareness that part of the shadow economy includes those who sell own works or render personal services without the requisite registrations or opt not to issue documents for each transaction. This pertains to instances where activities are conducted in the shadow of the law, even with legally procured materials, and customers receiving goods or services - the products of these activities – are not sensitive enough to act as a necessary corrective. Most of them fail to recognize that they are personally affected by tax evasion in whatever form, even if they have no direct involvement with the entities or individuals operating in the shadows.

It is troubling that neither citizens nor business representatives mention the option "no positives" in response to the question about the benefits of working in the shadow sector. This indicates several things: firstly, it confirms the lack of self-awareness and understanding of the problem posed by the presence of a large-sized shadow economy in our country. Secondly, most commonly, people cite higher living standards, increased disposable income, and fewer undeserved social benefits as the primary positives. Here, we see

echoes of trauma from the socialist era and the times of proportional tax systems when many relied on state-provided, albeit undeserved, basic minimums, while others who significantly contributed to funding these minimums through their labour felt aggrieved and resentful. This, in turn, deteriorates their relationship with the state and institutions in general and shapes the positive image of the shadow sector as a rebellion against injustice.

The negatives of working in the shadows are also widely recognized - decreased chances of obtaining credit, reduced funding for institutions, and a decline in quality of life are the main responses here. However, nobody seems to be concerned about the redistribution of fewer funds for social payments. The explanation is similar to that given above in terms of the perception of reduced funds for redistribution as a positive.

As for business representatives, for many of them, increased liquidity resulting from tax evasion often means escape from bankruptcy. Furthermore, citizens support the availability of more working capital and understand its significance, especially for small businesses. However, this results in a lack of condemnation of the vicious practices associated with working in the shadow sector. Coupled with their already poor understanding of its dimensions, this indicates that the lack of economic culture, combined with insufficiently firm and principled negative attitudes towards shadow activities, deprives civil society of one of its key foundational functions - to act as a corrective both to authorities and to business.

Additionally, there is a unrealistic perception among people about which enterprises are more prone to tax evasion - most respondents point to large companies. However, this is not entirely accurate - practice shows that it is actually multinational conglomerates entering Bulgaria in the last decade that invariably employ their staff full-time and provide numerous social benefits. Conversely, micro-businesses and small enterprises often lack sufficient working capital and struggle to pay all their expenses on a monthly basis. Hence, they decide that not issuing receipts for all sales, ceasing business operations, or self-employment, not rehiring employees, or providing them with a lower salary in the name of avoiding bankruptcy is fully acceptable.

Business representatives are well aware that working in the shadow sector provides some competitive advantages. Tax evasion allows for artificially lowering the prices of goods and services, which, in turn, further disadvantages those businesses that strive to be honest towards their customers and towards the state as a whole. Thus, even they are pushed towards operating in the shadow sector.

It is concerning that mid- and low-level managers feel powerless to push the companies they work for to either increase or decrease their involvement in the shadow sector. Respondents believe that decisions are made exclusively at higher levels, and dialogue with institutions only occurs at those levels. This reflects a dangerous level of passivity - one explanation could be that even mid- and low-level managers are ultimately just employees. However, they possess slightly more information and authority (at least on paper) than some of their colleagues and subordinates, making their actions subject to greater scrutiny and punishment. Consequently, a manager at these levels is more likely to lose their job than an average employee who disagrees with the company's policies.

Reporting shadow activities to relevant authorities is not a priority for managerial staff. Many respondents in such positions, likely due to their sense of fairness, are inclined to leave their jobs if they discover that the company they work for engages in shadow activities. However, very few are willing to report such activities. Bureaucracy plays a significant role here - navigating between institutions, providing repetitive statements, and the lack of timely responses and concrete actions on reported issues all contribute to discouragement.

According to both citizens and business representatives, inspections and audits provide a more secure method for curtailing the size of the shadow sector. A significant majority in both surveys opt for this response, largely disregarding informational campaigns aimed at enhancing citizens' economic literacy. The underestimation of the efficacy of softer measures and the expectation the responsible institutions to necessarily punish, while citizens may contribute but not necessarily with good intentions, as constructive checks on shadowy economic entities, may turn to be among the foremost challenges facing the Bulgarian economy.

Blaming others and always expecting the solution to come from elsewhere, rather than from citizens and business representatives themselves, proves to be a much more serious problem than the implementation of various tax evasion schemes. They are the consequence, but the main reason for it is actually the disappointment with the malfunctioning system of redistributing funds from the treasury in combination with the low economic culture.

The empirical study underscores the urgent need to reduce the shadow economy in Bulgaria and proposes specific measures to achieve this goal. These recommendations are based on best practices from Europe and encompass strategies to address various determinants of the shadow economy, taking into account the difficulty and time required for implementing some of them.

1. Strengthening the rule of law is a critical factor in reducing the shadow economy. Although it requires significant reforms and time, improvements in this area can have a lasting and stabilizing effect.
2. The introduction of a requirement for electronic payment of wages and social benefits – via bank transfer or prepaid cards – will increase the volume of electronic transactions and reduce opportunities for unreported transactions.
3. The introduction of limitations on cash transactions exceeding a specified threshold may encourage the use of non-cash payments and reduce the shadow economy, while simultaneously increasing tax revenues.
4. Linking social benefits to documented work experience and income will encourage legal employment and increase contributions to the social system, which is particularly important in the context of declining population and fiscal challenges.
5. Tax incentives for consumers through special benefits such as discounts, cashback, or reward points which can be redeemed for specific rewards. These methods are widely employed by private financial institutions, and their effectiveness has been confirmed by numerous studies. Similarly, such financial motivation can be provided by the government, for example, through appropriately designed tax incentives to reduce the tax component of retail prices such as VAT, provided that the consumer makes payment with a card at the point of sale. This would lead to a reduction in cash

payments and, consequently, a decrease in the size of the informal economy and, accordingly, an increase in government revenues.

6. Tax incentives for merchants. In many countries, consumers are discouraged from using cards due to a limited number of places where such payments are accepted. In such cases, tax incentives reducing the costs of accepting card payments by merchants can stimulate the growth of electronic payments, thereby leading to a decrease in cash payments and a contraction of the informal economy, subsequently increasing government revenues.
7. Obligation for a wider range of businesses to possess cash registers to record each individual transaction, regardless of the payment method. Modern technologies such as online cash registers offer even greater efficiency by continuously providing data to tax authorities.

The implementation of these recommendations requires clear political will and commitment from the government, as well as cooperation among various agencies and social partners for their effective implementation and oversight. These measures are aimed at improving tax control and reducing the informal economy, while also requiring commitment from merchants and time and effort to adapt to the new regulations to ensure their successful enforcement.

Conclusion

The dissertation presents a comprehensive study structured in the classical format of three parts: theoretical, methodological, and empirical. The substantial size of the informal economy in Bulgaria poses a significant challenge with profound economic and social implications, including diminished tax revenues, reduced quality of public services, distortion of market competition, and erosion of institutional credibility, all contributing to a slowdown in economic growth. It is imperative to identify and implement effective measures to curb this sector.

Examining the informal economy through advanced analytical tools allows for a more nuanced understanding of its determinants and potential overestimations in certain studies. The correlation between the sector's size and

the volume of monetary transactions within it serves as a primary factor amplifying its impact on the informal economy. Addressing issues such as the lack of transparency in numerous transactions and opportunities for tax evasion is crucial.

Key factors influencing the informal economy have been identified, including the prevalence of non-cash transactions, the tax-to-GDP ratio, and institutional and tax compliance attitudes. Among the measures proposed, increasing non-cash transactions appears easier to implement compared to others, which require long-term and challenging reforms.

The conducted research has allowed achieving the objectives of the dissertation: to determine tax revenues as a function of the share of the shadow economy, to validate a methodology for assessing the scale of the shadow economy using various indirect methods based on natural and value indicators, as well as to evaluate the tax system and conduct a precise analysis of the benefits and risks of changes in tax regulation aimed at reducing the share of the shadow economy.

The theoretical, methodological, and especially the empirical parts of the dissertation research confirm the research thesis that taxation, corruption, excessive regulations, and ineffective governance are pivotal factors driving the development of the shadow economy as a complex socio-economic phenomenon. Considering the shadow economy as a global issue with profound historical roots implies the need for a more in-depth study of its causes, dimensions, and impacts in order to formulate effective policies to mitigate its negative effects on society.

III. Guidelines for future research on the topic of the dissertation

Given the main research directions outlined within the scope of the dissertation, the issue regarding the shadow economy and tax revenues remains open for further exploration. The topic continues to be relevant, and the following avenues for future research could be identified:

1. Comparative analysis of the effectiveness of different fiscal instruments against the shadow economy. This study could evaluate and compare various measures and policies implemented in Bulgaria and other countries to limit the shadow economy and their impact on tax revenues. The analysis might encompass measures such as mandatory introduction of POS terminals, changes in tax legislation, and incentives for non-cash transactions.
2. Investigation of the relationship between economic crises and the expansion of the shadow economy. Research could focus on analyzing trends in the shadow economy during economic downturns and upturns in Bulgaria. The objective would be to find out whether economic conditions directly influence the growth of the informal sector and its implications for tax revenues.
3. Long-term analysis of the impact of legislative changes on the size of the shadow economy. Proposing a study to track historical shifts in Bulgarian legislation concerning taxation and labour laws and their impact on the shadow economy. This would involve examining long-term trends and identifying pivotal moments or reforms that have led to significant changes in tax revenues from the informal sector.
4. Assessment of the impact of globalization and digitalization of business on the shadow economy in Bulgaria. This study would explore how global trends such as increased cross-border trade and the widespread adoption of digital technologies in business affect the shadow economy. The aim would be to identify emerging challenges and opportunities for tax authorities in the context of increased global integration and digital economy.

IV. List of the scientific and applied contributions of the dissertation paper

First. The relevance of the issue related to the impact of the shadow economy on tax revenues and the government's capacity to finance public policies is justified.

Second. Tax morality as a determinant of individuals' willingness and readiness to pay their taxes and adhere to tax laws is considered as a complex phenomenon dependent on various factors. Arguments from various ethical perspectives are presented, and the ethical dilemmas of taxation are explored.

Third. The benefit of applying a holistic approach to studying the shadow economy is argued.

Fourth. The problems of tax legislation in Bulgaria are analyzed, and the main methodological challenges facing the redesign of taxation to reduce the shadow economy are defined.

Fifth. An empirical study is conducted, comprising a survey on the effects of the shadow economy and the attitudes of businesses and citizens. The study, based on qualitative methods, is designed to enrich and expand hypotheses in the research process by offering new ideas and increasing the depth of analysis of the obtained results.

Sixth. Recommendations for curbing the shadow economy and effectively reducing its size in Bulgaria are formulated. They are based on best practices from Europe, analysis of empirical research, and cases studied in the dissertation. They include strategies to influence various determinants of the shadow economy, taking into account the difficulties and time required for the implementation of some of them.

V. Publications on the topic of the dissertation paper

Studies:

1. Kalistratov, A. (2021). Metodicheski aspekti na revizionnija akt i otchitane na funkciite i vlijanieto mu vurhu ikonomikata v sjanka v Bulgarija. Godishen almanah. Nauchni izsledvanija na doktoranti na SA D. A. Cenov - Svishtov, 2021g., Broj XIV, AI Cenov, 2021, Kniga 17, str. (ISSN: 1313-6542).

Conference papers:

1. Kalistratov, Nikolaj (2023). Izbjagvane na danuci, korporativna socialna otgovornost i logistichni faktori pri slozhnite danuchni strukturi, Nauchna konferencija „Logistikata i obshtestvenite sistemi“, 16-17 mart 2023 godina, NVU "Vasil Levski", V. Tarnovo, s. 733-743, ISSN 2738-8042.
2. Kallistratov, Nikolay (2023). The impact of the flat tax on budget revenues (Vlijanieto na ploskiJa danuk vurhu prihodite v bjudzheta), International Conference "Management strategies and policies in the contemporary economy" (Nauchna konferencija „Upravleniski strategii i politiki v savremennata ikonomika) 24-25.03.2023g., Kishinev- Moldova /SEP ASEM, 2023, pp. 202-208. ISBN 978-9975-147-99-6/.

VI. Reference for the compliance with the national requirements under the Rules for the Implementation of the Law on the Development of Academic Staff in the Republic of Bulgaria

National requirement for number of points: **30,00**

Number of studies indexed with the National Centre for Information and Documentation (NACID): 1

Number of points from studies indexed with the National Centre for Information and Documentation (NACID): 15

Number of conference papers, studies indexed with the National Centre for Information and Documentation (NACID): 2

Reported by the author number of points from conference papers: 20

Total number of points: **35** > 30,00

VII. Statement of originality of the dissertation paper

The dissertation paper in the volume of 191 pp., titled: "*The Influence of the Shadow Economy on the Tax Revenues in Bulgaria*" is own research work of the author. It presents own ideas, text and graphic presentation in strict compliance with the requirements of the of the Copyright and Related Rights Act, including by properly citing and referencing the sources of information used, including:

1. The results achieved and contributions made in the dissertation are original and have not been borrowed from research and publications in which the author has not participated.
2. The information provided by the author in the form of copies of documents and publications, personally compiled references, etc. corresponds to the objective truth.
3. The scientific results obtained, described and/or published by other authors are duly and extensively cited in the text and in the bibliography.

Date:.....

The signature has been removed based on EU Regulation /EU/2016/679
--

Ph student. Nikolay Kalistratov