



**A review written by a member of a scientific jury,
for the acquisition of an educational and scientific degree "doctor"
in "D. A. Tsenov" Academy of Economics - Svishtov**

The review was prepared by associate professor Plamen Ivanov Petkov, PhD

Author of the dissertation: Tsvetozaria Dimitrova Gateva

Dissertation Topic: Improvement of the organizational structure of NSI - problems and perspectives

Reason for writing the review: Order №1320/17.12.2024 of the Rector of the "D. A. Tsenov" Academy of Economics - Svishtov and the decision of the first meeting of the scientific jury held on 14.01.2024.

I. General presentation of the dissertation

The presented dissertation on "Improvement of the Organizational Structure of the National Statistical Institute - Problems and Perspectives" by Tsvetozaria Dimitrova Gateva is 233 pages long, including 195 pages of pure text, 7 pages of bibliographic reference and 24 pages of appendices in which archival documents related to the historical development and functioning of the National Statistical Institute (NSI) and primary data used in the empirical analysis are presented. Structurally, the dissertation consists of a table of contents, an introduction, three chapters, a conclusion, a list of references used, and appendices. A total of 135 references are included in the bibliography. There are 111 works in Cyrillic and 24 works in English. Correct use of others' opinions and comments is demonstrated. The main text includes 42 tables, 26 figures and a declaration of originality and reliability of the content of the thesis.

II. Assessment of the form and content of the thesis

1. Relevance of the research and formulated object, subject, aim and objectives

The topicality of the studied problem is undeniable and is related to the need for a comprehensive study of the state and development of the organizational structure of the NSI. The paper focuses on the importance of the changes taking place in the statistical institution in recent years and its alignment with modern standards to facilitate access to statistical data by introducing the achievements of information and communication technologies, reducing the workload of respondents, improving the quality of statistical data and user satisfaction.

The **object** of the study is the organizational structure of the NSI, including the changes in the subordination of the institution, the constituent elements and the interaction

between the central administration and the territorial structures of the NSI, and the **subject** - analysis of the changes in the organizational structure and evaluation of the resource provision of the NSI using key performance indicators. The defined subject and object of the dissertation directly correspond to its main **objective**, namely to assess the changes in the organizational structure of the NSI and to analyze the patterns and structural changes in the resource provision by education and age of the staff. In order to concretize the objective, five **research tasks** of theoretical-methodological, organizational-managerial and practical-applied nature are set. The tasks with theoretical and methodological orientation are related to the clarification of the elements of the organizational structure of management, a retrospective review of the establishment and functioning of the state statistical authority of Bulgaria and the characterization of the place and role of the NSI in the national and European statistical system. The organisational and managerial task is related to clarifying the nature of the organisational structure of the NSI and tracing the changes that have occurred in the period from 2003 to 2024. The practical-applied tasks are related to modelling the trends in NSI staff changes by main demographic characteristics and to studying the structural changes and differences that have occurred. According to the **research thesis**, the production of high quality, reliable and trustworthy statistical information by the NSI is achieved on the basis of a time-appropriate and adapted to changes organizational structure, combining the traditional means of statistical information production with modern ones such as Big data, smart statistics and others.

The first chapter discusses the nature of the organisational structure and presents the structural determinants. A review of the scientific literature on the subject is conducted. The main characteristics of organizational structure are presented - hierarchy, functionality, synchronization and interrelationships between different elements. Emphasis is placed on the leading role of the NSI in the National Statistical System of Bulgaria in the context of national and European strategic goals, priorities, mission, standards and management systems. **The second chapter** is organisational and managerial in nature. It analyses the vision and short-term priorities for the development of the National Statistical System until 2024. The changes in the organisational structure of the NSI during the period 2004-2023 at both national and regional level are traced chronologically. The current systems of indicators for assessing the resourcing of NSI activities are presented. **The third chapter** is methodological and practical in nature. It describes the appropriate statistical methods that can be applied to investigate and identify patterns in the development of the NSI resource endowment indicators under study and to analyse the structural changes and differences that have occurred. The dynamics of the indicators used to measure the resource endowment are investigated using different methods to diagnose the trend and different regression functions to model it. The structural changes that have occurred in the NSI employees in terms of their education and age are tracked. In the end, the main objective of the dissertation is fulfilled - the changes in the organizational structure of the NSI and the staff resourcing activity are analyzed and evaluated by identifying the developmental patterns and analyzing the structural changes in the staff by education and age and proving the research thesis.

2. Scope of the work, degree of elaboration of the studied issues, expression of own opinion and used illustrative material

The dissertation is of sufficient length, has a clear structure and follows the logic of a complex scientific study. There is a balance in the length of the individual chapters. It is

presented in a logical sequence, which is used to develop the research ideas, prove the author's hypotheses and achieve the relevant contributions. A considerable number of Bulgarian and foreign literature sources have been studied and have been appropriately systematized by the author, which shows both a thorough knowledge of contemporary scientific developments and the presentation of his own view of the problems under study. Literature sources are used and cited conscientiously and correctly and technically meet the generally accepted requirements. The charts, tables, graphical representations and appendices with archival documents used are compiled according to the rules in statistical theory. Their number is sufficient and they adequately illustrate the texts, conclusions and interpretations of the results obtained.

3. Style and correctness of the tools used

The dissertation is characterized by a serious thoroughness of the scope of the research, which is observed in theoretical, methodological, organizational and practical-applied aspects. Significant efforts have been made in exploring the problems and prospects of the organizational structure of the NSI by revealing the peculiarities and specific features of the object and subject of study. The main problems related to the effective functioning of the NSI and its role as the main body of statistics in Bulgaria have been identified. In terms of style, the information is presented correctly, in the necessary depth and corresponds to a complete scientific work. To verify the defined research thesis, objective and tasks, a combined approach was used, relying on official statistical information. All this allows the dissertation to correctly fulfill the set objective and specific research tasks. The toolkit used is appropriate and provides an opportunity to model the lasting trend and to analyse the structural changes that have occurred in the NSI resource endowment indicators under study. Classical development modelling methods have been selected which are suitable for short time series analysis. The interpretation of the empirical results is correct as a diagnostic check was also performed beforehand to validate them.

4. Abstract, publications on the topic and compliance with the rules of scientific ethics

The abstract is 44 pages long and accurately reflects the dissertation work, giving a complete picture of the research conducted. It is written in a concise and well-crafted style, demonstrating the PhD student's skill in presenting the main stages and results of the research in a synthesized, balanced and compact manner. The dissertation is accompanied by five independent publications - two articles from participation in the annually organized Scientific Doctoral Sessions at the SA "D. Tsenov" and three papers in national and international scientific conferences. The publications are directly related to the topic, subject, object and main thesis of the dissertation, reflecting to a significant extent the main ideas presented in the dissertation. They exceed the minimum scientific requirements for a dissertation in scientific field 3 "Social, economic and legal sciences". No violations of the usual rules of scientific ethics have been reported. All literature sources are cited correctly in the exposition and included in the bibliographic reference.

III. Scientific and applied contributions of the thesis

The dissertation contains scientific and scientific-applied contributions that build on the theoretical and empirical research in the field of the organization and functioning of the

National Statistical Institute as the main body of statistics in the National Statistical System. They are correctly defined by the PhD student in the abstract and correspond to the achieved results. Their number is reduced to five. The first one is of a general nature and refers to the justification that the organizational structure of management is of determining importance for the adequate functioning of any organization. Three of the contributions are of a theoretical and methodological nature and relate to the periodisation of the main stages through which the establishment of national statistics passes, to the chronological analysis of the organisational structure of the NSI and to the recommendation that the improvement of the organisational structure of the NSI should be realised by encouraging employees to innovate and implement good practices, and by stimulating initiative by means of specific measures for professional development in the system. The last contribution is of a practical and applied nature and refers to the results obtained from the empirical study, which identified the objective regularities and trends in the dynamics of the indicators of the staffing of the NSI activity and assessed the intensity of changes in the educational and age structure of NSI employees.

The results of the scientific research have potential that can be used in making effective management decisions related to the organization and functioning of national statistics. The presentation shows that the PhD student has the necessary knowledge and skills to use appropriate research approaches in studying the problems and challenges in the production of official statistics in Bulgaria.

IV. Critical comments, questions and recommendations on the dissertation

I have no comments or questions for the PhD student, but I would like to make a few recommendations that would be useful for future research work.

1. It would be good to formulate private conclusions after each chapter of such a complex study, which could be summarized in the final part of the thesis. In this way, the quality of the development is enhanced, and its merits are better highlighted.

2. A list of the figures and tables used is included at the beginning, but based on the specific terminology used in the thesis it would be useful to include a list of basic concepts and terms or one with the abbreviations and acronyms used, for example.

3. When preparing the bibliographic reference, it is customary to present the works in Cyrillic first, then those in Latin.

V. Summary conclusion and opinion

Regarding the complete nature of the presented work, considering its merits and positive aspects, I believe that the PhD student has the theoretical knowledge and skills for practical application of appropriate statistical and econometric tools and has demonstrated to the required extent the ability to argue for his own views and to perform a critical analysis of theory and practice. This gives me grounds for a **positive assessment** of the dissertation and I propose to the members of the Scientific Jury to **award** the educational and scientific degree "Doctor" in the Professional Field 3.8. "Economics", Scientific Specialty "Statistics and Demography" to **Tsvetozaria Dimitrova Gateva**.

17.02.2025
Svishtov

Reviewer:
(Assoc. prof. Plamen Petkov, PhD)