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EVALUATION STATEMENT

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Scientific specialty "Statistics and Demography", Professional Field 3.8
"Economics"

Author of the dissertation: **Tsvetozaria Dimitrova Gateva**PhD student at the Department of Mathematics and Statistics,
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Dissertation topic: Improving the Organizational Structure of the NSI –
Problems and Prospects"
Dissertation for the award of PhD in Professional Field 3.8 "Economics",
Scientific specialty "Statistics and Demography"

1. General presentation of the thesis.

The submitted dissertation is of total length of 234 pages, including 202 pages of main text. It consists of an introduction, three chapters, a conclusion, a list of 135 references (of which 111 specialised sources and normative documents in Bulgarian) and appendices. The work contains 42 tables and 26 figures, and a declaration of originality of the content of the thesis is included.

The organizational structure of the National Statistical Institute, including the constituent elements of the organization and the system of interactions between the central government and the territorial structures, is indicated as the object of the work. Changes in this organizational structure are chosen as the subject of the study, together with the evaluation of the human resource provision of the NSI's staff. The temporal scope of the analysis covers the period from 2004 to 2023. The defined subject and object of the dissertation directly correspond to its main objective, namely to analyse and evaluate the changes in the organisational structure of the NSI together with the resourcing of its activities with staff, including the identification of patterns and the analysis of structural changes in the staff population by education and age. The main methodology of the study encompasses statistical methods for the analysis of dynamics and forecasting as well as methods for the analysis of structures and structural change. To achieve the objective, five research tasks are formulated and the necessary evidence is established in the paper.

According to the main research thesis, the generation of timely, reliable and trustworthy statistical information requires the governmental statistical office to maintain an organizational structure adequate to the times and with the potential to flexibly adapt to changes brought about by the rapid development of information and communication technologies. The formulation of the thesis is argumented by the fact that in addition to producing statistical information through the application of traditional approaches and technologies, the NSI should inevitably expand the scope of its activities by incorporating and

validating data obtained from alternative sources, including administrative registers, online streams of Big Data nature, etc.

2. Assessment of dissertation format and content.

2.1. Assessment of the relevance and elaboration of the scientific problem investigated in the dissertation.

Undoubtedly, the topics of the researched problem arises from the intensive growth of the needs for statistical information with a certain quality, meeting a number of modern requirements. The external pressure on state statistical office is combined with urgent organizational changes to reflect the current development of information and communication technologies and the need to improve structures, functions, the efficient allocation of resources (financial, material, information, human), etc. Key aspects in this regard are the implementation of modern standards for the functioning of official statistics (as far as Bulgaria should apply EU standards for statistical study methodologies).

The content of the dissertation undoubtedly shows that the author focused her scientific interest on a complex study of the state and development of the organizational structure of the National Statistical Institute as the main body of official statistics. I believe that such a study provides data users, and in particular socio-economic analysts, with important information on key aspects of data generation, which are a kind of "input" to the analytical operations, being an "output" of the organizational function of official statistics. In this connection, a considerable range of relevant domestic and foreign specialized literature sources have been studied.

2.2 Opinion on the language, scope and instrumentation of the thesis.

The overall impression of the thesis is very good, a clear style of exposition, correct terminology, and adequate conceptual apparatus are used. The volume of the dissertation exceeds to some extent the usual requirements for a PhD thesis. The statistical tools chosen for the analysis provide the possibility of estimating patterns of secular trends and measuring structural changes. The content of the thesis undoubtedly provides evidence of the knowledge and skills acquired by the PhD student to conduct independent applied research and obtain useful analytical results.

2.3 Opinion on the abstract and publications to the dissertation.

The presented abstract is of optimal length and structure, reflecting the main aspects of the thesis to the required extent, as well as the results obtained in it. Five independent scientific publications are associated to the thesis, including two articles in specialized journals and three papers in conference proceedings. These publications substantially reflect the achievements of the dissertation, meeting the National Minimum Scientific Requirements for a dissertation in Scientific Field 3 "Social, economic and legal sciences".

3. Scientific and applied contributions in the dissertation.

I would distinguish the following main scientific and applied contributions achieved in the dissertation:

- implementing a comparative analysis of the normative sources governing the structural characteristics of the NSI for the period 2003-2023, an assessment of the administrative capacity of the organizational structure of the state statistical office according to the standards and requirements imposed to the public state bodies has been derived;
- on the basis of an empirical analysis, objective patterns and trends in the dynamics of key indicators concerning the staffing of the NSI's activities have been established, including estimates of the intensity of changes in the educational and age structure of the organisation's human resources;
- as a result of a systematic study and analysis of the characteristics and processes that are the focus of the dissertation work, generalizations are drawn and recommendations for improving the organizational structure of the NSI are substantiated, focusing mainly on targeted digitalization and systematic implementation of modern ICT solutions for the development of statistical information systems and their integration with similar systems in other institutions.

4. Notes and questions on the dissertation

The presentation shows that the PhD student is well informed about the development of the organisational structure of the NSI and the trends in the dynamics and structural changes in the available human resources. The thesis would be even more informative if relevant information on the average level of remuneration, overall and by selected categories of staff, could also be presented, together with a possible analysis of its correlation with the changes in the number and/or structure of staff by certain characteristics - level of qualification, age, territorial location, etc. I have the following question to the author: which of the trend models presented in Table 25 provide coefficients having the character of average annual absolute change and average annual growth rate of the number of personnel for the specified period by the three types of educational qualification levels, and what are the specific results for each of them?

5. Summary evaluation of the thesis and conclusion

I give a positive evaluation of the dissertation work and propose the Scientific Jury to award **Tsvetozaria Dimitrova Gateva** the degree of PhD in Professional Field 3.8 "Economics", Scientific specialty "Statistics and Demography".

21.02.2025	Signed:
Sofia	/ Prof. Dr. Venelin Boshnakov