

STATEMENT

for public defence for obtaining PhD degree at the University of Economics - D.A. Tsenov, Svishtov in the scientific specialty "Statistics and Demography"

Prepared by: Assoc. Prof. Ekaterina Alexandrova Tosheva, PhD, University of National and World Economy, Sofia, scientific specialty 05.02.06 "Statistics and Demography," member of the scientific jury, approved by order No. 76/06.02.2024 of the Rector of UE - D.A. Tsenov, Svishtov.

Author of the dissertation: Diana Ivanova Markova

Title of the dissertation: "Statistical Study of Demographic Processes in Bulgaria - Regional Aspects"

I. General Presentation of the Dissertation Work:

The topic of the presented dissertation is important and relevant. The study of demographic processes and regional disproportions in them is of significant importance for making adequate decisions to minimize the negative consequences of negative trends in population numbers as well as in its structure. The object of the study is the demographic processes in Bulgaria in a regional aspect for the period 2000-2021, and the subject is the regional differences and patterns. The goal of the dissertation is formulated correctly, and for the implementation of the goal six research tasks are formulated.

The dissertation meets the requirements of Article 27, paragraph 2 of the Regulation for the Implementation of the Law on the Development of Academic Staff in the Republic of Bulgaria. It has a total volume of 190 pages, logically structured, and contains a comprehensive independent scientific study. It consists of an introduction, three chapters, conclusion, a list of references, and appendices.

The first chapter "Demographic Processes in Bulgaria – Essence, Features, and the Necessity of Their Study" sequentially and comprehensively presents the basic dimensions of demographic processes. A detailed review of demographic studies in Bulgaria is conducted. The main factors influencing demographic processes are described, and methods for studying their dynamics are presented in detail. In the second chapter, "Information Support for Statistical Studies of Demographic Processes in Bulgaria" the main methods of data collection for demographic processes are presented, with an emphasis on the regional aspect of the studies. The third chapter, "Regional Dimensions of Demographic Processes in Bulgaria," contains the results of a comparative descriptive and diagnostic analysis of the dynamics of selected indicators of demographic processes.

The literature used in the dissertation includes 206 titles of scientific publications, textbooks, official European and national documents, etc., including 33 sources in English. The dissertation includes 22 appendices presenting intermediate results of the conducted empirical studies in a tabular form.

II. Evaluation of the Form and Content of the Dissertation Work:

Trends in the primary demographic indicators in Bulgaria have been deeply explored in scientific literature. However, the subject of the dissertation work remains relevant, considering the potential negative consequences of the demographic crisis in Bulgaria in mid and long term. A significant contribution in the research lies in the in-depth examination of the issues from a regional perspective, and the obtained results could be used as the foundation for seeking specific approaches to addressing problems at both national and regional levels.

The dissertation represents a deep and detailed research conducted with a carefully selected methods. The goal has been implemented through a systematic and logically connected achievement of the tasks, appropriately chosen approaches and statistical methods. The presentation is clear and written in a scientific style.

The presented abstract is 39 pages, well-structured, and reflects the most important aspects of the conducted research. It synthesizes the key contributions of the dissertation work. Three articles and one collective study on the dissertation topic have been published. Additionally a scientific report is presented.

III. Scientific and Scientific-Applied Contributions:

The scientific contributions outlined by the author to a certain degree correspond to the formulated research tasks. From my perspective these contributions can be summarized as follows:

1. A thorough and critical review of scientific research on demographic processes in Bulgarian literature has been conducted.
2. Based on empirical studies of demographic processes in the NUTS regions substantial regional differences have been highlighted.
3. Short-term forecasts with a four-year horizon have been developed through the extrapolation of the models of the trends.

IV. Critical Notes, Questions and Recommendations:

Considering the achieved results, I allow myself to address the following notes and questions to the doctoral candidate:

1. In the first chapter are presented fertility and divorce indicators, but they are not the subject of research in the dissertation.
2. It is not necessary to provide detailed explanations of well-known analysis methods such as the Spearman coefficient, autocorrelation coefficient, coefficient of determination, etc.
3. Why does the doctoral candidate state that the state's social policy should restrict immigration (page 50) against shortage of labor force?

4. The doctoral candidate correctly categorizes the factors influencing demographic processes. How can be explained that, despite decreasing unemployment and a decreasing poverty risk indicator in the last 10 years in almost all European countries, there is a decline in birth rates?

5. 5. How can be explained the forecasted low values in the child mortality rate coefficients for 2024 and 2025 for the North Central region and the South Central region, given that for the year 2021, the values for this indicator are higher than the child mortality rate coefficient in the Southwest region?

V. Summary Conclusion:

Based on the above, I believe that the dissertation work "Statistical Study of Demographic Processes in Bulgaria - Regional Aspects" is an independent scientific study with achieved good practical results. This gives me grounds to vote for the awarding of the PhD degree to Diana Ivanova Markova in field of study 3.8. "Economy" with specialty "Statistics and Demography."

27.02.2024

Signature:

(Assoc. Prof. Ekaterina Tosheva, PhD)