REVIEW

written by a member of the scientific jury, for the acquisition of the educational and scientific degree "doctor" according to the procedure announced by the **Academy of Economics "D. A. Tsenov" - Svishtov, Department of "Strategic planning"**

Reviewer: Prof. Jordan Vasilev Jordanov PhD, scientific specialty Finance, Credit, Insurance (Financial Investments)

Author of the dissertation: Vesna Stoyan Korunovska

Dissertation topic: ROLE OF THE FISCAL STRATEGY OF THE REPUBLIC OF NORTH MACEDONIA IN ACHIEVING SUSTAINABLE DEVELOPMENT OF THE NATIONAL ECONOMY"

I. General presentation of the dissertation:

The dissertation is 223 pages long. It consists of 3 chapters, an introduction and a conclusion. The exposition follows a logical sequence of theoretical basis (chapter 1), empirical research (chapter 2) and projections on strategic decisions (chapter 3). The literature used is 95 sources, predominantly English-language, as well as Bulgarian and North Macedonian authors. Over 30 applications, some of which econometric program windows alike are redundant. It is correct to number the appendices as 'Appendix Number' instead of tables and figures.

II. Assessment of the form and content of the dissertation.

Chapter one examines the theoretical foundations of public finance. The functions, fiscal policy, fiscal deficit and automatic stabilizers of public finances etc. are outlined. The theory of fiscal multipliers, as well as the reverse effect of budget expenditures - the "crowding out effect" - were examined. In point 3, an analysis of the literature on the assessment of the effects of fiscal policy on macroeconomic development was carried out. In general, the effects of fiscal policy are found to have short-term positive and long-term negative effects on economic activity.

In the first part, chapter two sheds light on the fiscal position of the Republic of North Macedonia, and in the second, the impact of public consumption on GDP is estimated using the VAR (p) model. The budget revenues and expenses, the budget deficit and the public debt are characterized. The analytical part tests the hypothesis that public consumption affects the gross domestic product in the Republic of North Macedonia and, conversely, that the gross

domestic product affects budget (public) consumption. An ADF test and a cointegration test between GDP growth and public consumption were conducted. As expected, GDP is non-stationary while public consumption is stationary. Subsequently, the necessary techniques of the VAR model are applied to test the causality and mutual influence of the variables, as well as the impulse function of a shock on the order of one standard deviation.

The third chapter examines the fiscal strategy of the Republic of North Macedonia, with special emphasis on the budget deficit and public debt.

The dissertation examines the current issue of the efficient use of public spending by examining the impact of the latter on GDP growth. The problem is relatively well developed in the world literature, but insufficiently on the example of the Republic of North Macedonia. The volume of the dissertation is in accordance with and exceeds the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria.

There is a considerable amount of illustrative material - graphs and tables - but more effort could be made to make it easy to understand. Knowledge of scientific terminology is shown, but additional stylistic editing would improve the presentation. Statistical data and models have been processed correctly, in general the candidate observes scientific ethics, but there are cases when the author does not refer to a specific publication from the literature used, but only to the name of its author. There are cited authors who are absent from the list of the cited literature (see C.F. Bastablea (p. 19, Lerner (p. 23), Hicks (p. 53)), etc.

The dissertation contains scientific or scientific-applied results that represent an original contribution to science. The candidate has in-depth theoretical knowledge of the relevant specialty and abilities for independent scientific research. The dissertation is presented in the form of a monographic manuscript and it contains a scientific and applied solution to a real financial problem. The abstract correctly expresses the main points of the dissertation work.

III. Scientific and scientific-applied contributions of the dissertation work.

- An analysis of the fiscal policy of the Republic of North Macedonia was made for the period 2000-2018, incl. of GDP growth, of the dynamics of general public revenues, of tax revenues, of current expenditures, of the budget deficit, all accompanied with the relevant inferences and conclusions.

- The fiscal position of the Republic of North Macedonia was analyzed in a dynamic aspect for the period.

- The VAR model was applied to assess the causal relationship between public consumption and GDP growth.

- The impulse response of public consumption and GDP to a shock of one standard deviation of GDP and public consumption is estimated.

IV. Critical notes, questions and recommendations on the dissertation work.

Page 13. In the definition of the "Main Hypothesis" it is said that: "The application of vector autoregression models makes it possible to accurately determine the impact of fiscal policy on macroeconomic trends and public debt... ". This cannot be a hypothesis. VAR is a model that is used to estimate the impact of one economic variable on another! A hypothesis is an assumption about the impact of one economic (financial) variable on another and the direction of its impact (positive/negative), which the application of the model accepts/rejects.

Page 13 - A number of the proposed "Ancillary Hypotheses" do not have qualities as such (i.e. they are statements), do not find a quantitative assessment in the proposed work, and their number exceeds the generally accepted for such research.

Difference in the time periods of the presented tables and figures in Ch. 2, 1. Assessment of the fiscal position of the Republic of North Macedonia: fig. 2 (2000-2018), tab. 1 (2006-2018), fig. 3 (1996-2011), tab. 2 (2012-2018), fig. 5 (1996-2016). Such discrepancies do not contribute to a systematic perception of the regularities presented.

Editorial layout: A number of the presented tables and graphs are small and illegible (Figs. 22, 24, 25, 26, etc.). And fig. 17 presents 2 graphs with one caption. There are also terminological discrepancies, such as that in fig. 22, where the text refers to "GDP" and the title refers to GAP.

Terminological deviations - the use of "time series" instead of "dynamic series", "time delays" instead of "lag", although the terms used are acceptable.

Questions:

1. The core of the dissertation is the estimation of the impact of public consumption on GDP using the VAR (p) model. It is not clear from the presentation whether such research has been done anywhere in the world? What is the theoretical basis for the existence of such a relationship and dependence? Furthermore, the international literature examines the relationship between "public expenditure" and "GDP growth", as public consumption is difficult to quantify (e.g. Public Expenditure and Growth, World Bank Policy Research

Working Paper No. 4372, Government Spending and Economic Growth in a Context of Market Imperfections, etc.). Why not use "public consumption expenditure" instead of "public consumption"?

2. On page 99 where the relationship between LNGDP (dependent variable) and LNPUBLIC_CONS (independent variable) is tested, it says: "From the results, we can conclude that 1% growth in GDP will lead to 0.83% growth in public spending. Maybe the opposite is true?

3. The results of VAR testing show high values of intercepts (C). In principle, this is indicative of the presence of other variables not included in the regressions. For example, GDP growth may be influenced by the level of public, private and external investment. Public consumption (expenditure), on the other hand, can be influenced by the applied policies in the state. What is your rationale for looking at the relationship between only 2 variables?

V. Summary Conclusion and Opinion.

The presented dissertation contains scientific and scientific-applied original contributions, meeting all the requirements of The Law on Academic Staff Development (LASD) and the rulebook for the implementation of LASD in Republic of Bulgaria. The dissertation and the abstract fully comply with the specific requirements of The Law on Academic Staff Development (LASD) and the rulebook for the implementation of LASD. Candidate **Vesna Stoyan Korunovska** demonstrates in-depth theoretical and practical knowledge in professional field 3.8. Economics, presents a comprehensive, conscientious, voluminous and examining the problem set from different angles work. In view of the above, despite the critical remarks, I give a positive assessment of the conducted research and the achieved results and contributions, and I propose that the honorable jury award the scientific degree "doctor" to **Vesna Stoyan Korunovska** in the field of Social, economic and legal sciences, Professional direction 3.8 Economics, scientific specialty "Planning".

Date: 6/12/2023   Reviewer's Signature:

                                                  (Prof. Jordan Vasilev Jordanov)