

## REVIEW

By Prof. Andrey Zahariev, PhD on a dissertation on the topic:

**„Healthcare financing models: limitations and capabilities“**

with author doctoral student **Ana Borisova Ivanova**, № D020219184

**Form of doctoral study:** Part-time

**Department leading the study:** Department of "Finance and Credit" at the Faculty of Finance", "D. A. Tsenov" Academy of Economics

**Research supervisor:** Associate Professor Anelia Kirilova Radulova, PhD

**Doctoral program:** "Finance, money circulation, credit and insurance"  
(Finance)

### I. General presentation of the dissertation work

Doctoral student Ana Ivanova was enrolled in part-time doctoral studies with order No. 561/02.07.2019. The doctoral study was completed within the term of the individual plan.

The basis for writing the opinion is a decision of the Faculty of Finance (protocol No. 5/January 19, 2023) at the "D. A. Tsenov" Academy of Economics - Svishtov, approved by order of the Rector No. 49/January 20, 2023 and the decision of the first meeting of the scientific jury, held on January 24, 2023. The review of the dissertation was prepared in accordance with the regulatory requirements of the Law for development of the academic staff and is in accordance with the requirements of "D. A. Tsenov" Academy of Economics - Svishtov for composition and structure of the content.

The dissertation submitted for review has been developed following a classic three-chapter research framework. In the introduction, the problem area of research is presented and justified, as follows: topicality, object, problematic area, thesis, goal, tasks and methodology. I evaluate the development as meeting the standards and requirements for a dissertation work in professional direction 3.8 "Economics".

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

The presented dissertation has a volume of 191 pages and includes an Introduction; Chapter One. Models of financing and organization of the health care system; Chapter Two. Conceptual features of healthcare financing in Bulgaria; Chapter Three. Financial management of healthcare organizations in the context of the development of market relations. In the conclusion, the main results of the dissertation work are presented. Key summaries are drawn and directions for future research on the topic are formulated.

A bibliographic reference in APA style with 101 titles is presented to the development. The development includes 7 tables and 50 figures. The publicity of the research is ensured through two studies, one scientific article and one scientific report, with the equivalent of 50 points according to PPZRAS and meets the minimum standard for registration in NACID.

Based on a review with specialized software, full compliance with the requirements for bibliographic citation and bibliographic description is established. There is a very high level of originality with correct referencing of the author's research and publications on the doctoral plan.

Object and subject of the research – The object of the dissertation is the financing models in health care, and its subject - the limitations and opportunities in the models for financing health care in view of its specificity and normative organization on the occasion of their application in the relevant national health system, according to the example of medical institutions for hospital care in Bulgaria.

Purpose of the dissertation - The purpose of the dissertation is to analyze the advantages and disadvantages of the health care financing models, their specifics and applied evidence with a view to overcoming the problems in the budgetary provision of health care in Bulgaria on the example of medical facilities for hospital care.

Research thesis - the adaptation of the financing model of the health care system in Bulgaria to the specific socio-economic indicators of the environment is a necessary condition for overcoming resource instability, a result of the permanent deficit of budgetary resources and determinants of financing, with priority over quantity, at the expense of the quality of health services.

Research methodology – The research conducted is based on sociological methods and documentary method. The obtained results are graphically illustrated.

Research results:

First, on the basis of geographical disparities in the country, inequality is established for the users of health services, to the extent that there is a relative saturation in large cities and a shortage of medical assistance in small settlements.

Secondly, a prerequisite for increasing costs in the health care system is the absence of effective conditioning between the two main sectors - hospital and outpatient care.

Thirdly, the reform of the health care system in the last 20 years has been partial, carried out mostly in individual small sectors and is mainly expressed in an update of the budget of the NHIF, a change in the positive drug list or a change in the valuation of one of the many clinical paths.

Fourth, the effectiveness of the health care system requires a comprehensive reform, in accordance with the main criteria laid down in the National Health Card.

Fifth, for the period analyzed in the dissertation, the average level of healthcare financing in Bulgaria as a percentage of GDP is 4.71% - a level lower than the "optimal minimum values" of 5%.

Sixth, when testing for the significance of a statistical model (based on data for the period 2017-2022) by Fisher's F-criterion with a confidence interval of more than 99%, the significance of the regression dependence of health insurance payments on revenues and transfers to the NHIF from the most -high order.

Seventh, a clear trend is outlined for an extremely high preponderance of health insurance revenues in the total amount of financial resources spent on health

care, with the latter accounting for 98.85% on average for the analyzed period (2010-2020).

Eighth, For the period 2010 - 2020, a clear trend has been established for a catch-up and outpacing rate of growth of costs in the health care system in Bulgaria over revenues.

Ninth, The results of a study of capital formation in selected medical facilities for hospital care in the North-West Planning Region (BG31) clearly illustrate the scale of decapitalization in state regional and municipal hospitals. Contrasted against this background are positive financial results and accumulation (according to balance sheet items) of capital in the private healthcare sector.

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

I consider the contributions presented in the abstract to be protected, authentic and in line with the achievements in the dissertation work. As more significant among them I bring to the fore the following:

First. Through a critical analysis of the health care system in Bulgaria, trends and problems have been identified and substantiated, which confirm the public relevance of the topic of the urgent change in the way of financing health care, reform of the legal status of medical institutions for hospital care, with the aim of achieving the improvement in indicators of the health status of the population in Bulgaria.

Second. In order to establish an effectively functioning health care system in the health care sector in Bulgaria, a survey tool was tested, aimed at the three main groups - managers of medical facilities, doctors and patients, with representative data from the respondents with verbal-graphic models in the part about the medical facilities and for the patients.

Third. Empirical examination of data from financial statements of selected hospitals from the North West planning region confirmed estimates of significant disparities, both in terms of geographic location and ownership, where private hospitals report improved financial performance and state district and municipal -

suffer losses and accumulate debts.

#### IV. Dissertation critical notes, questions and recommendations

Question: Does the widespread practice of co-paying for hospital services by patients comply with the principles of the Hippocratic Oath? In other EU countries, is there similar funding from health insured persons to LZBP, registered as LL according to TK?

#### Conclusion:

There is a successful doctoral course leading to a dissertation research with convincing scientific standing, publications and scientific appearances. The support from the research supervisor, Assoc. Prof. Anelia Radulova. PhD and the department is categorical and effective.

In summary, I form a positive conclusion about the presence of the necessary scientific qualities and vote "FOR" awarding the educational and scientific degree "doctor" to Ana Ivanova, doctoral program "Finance, monetary circulation, credit and insurance" (Finance), according to the procedure of the department " Finance and credit" at "D. A. Tsenov" Academy of Economics with a dissertation under the title "Health care financing models: limitations and opportunities".

**27.02.2023**

**Reviewer: .....**

**(Prof. Dr. Andrey Zahariev)**