

## **REVIEW**

in respect to the competition for the position of full professor announced by Burgas Free University

### **1. General information**

This reference review is written by Prof. Zoya Kostova Mladenova, PhD, a full professor at the University of Economics – Varna. The reason for this reference is order № UMO-1123/19.05. 2021 issued by the Rector of Burgas Free University concerning the endorsement of the Scientific Committee as well as a decision of the Scientific Committee at its first meeting conducted on July, 6th, 2021 stating the assignment of references and opinions among its members.

### **2. Information about the competition**

The competition for the position of full professor is within the officially designated academic area 3. Social, economic and legal studies, professional field of 3.8. Economics (Microeconomics, Macroeconomics, Human Capital). The announcement has been published at the State Gazette, issue № 25 of March, 26<sup>th</sup>, 2021. The competition is in compliance with Article 67(1), point 1 of the Labor Code for a full-time professor at the Faculty of Business Studies (FBS) at Burgas Free University (BFU).

### **3. Applicant for the competition**

The only applicant for this competition is Assoc. Prof. Mariya Ivanova Neycheva. Upon her graduation from the School of Mathematics at the city of Burgas she continued her studies at the Technical University of Sofia. In the year 1991 she acquired Master's in Engineering Sciences degree with a major in Automatics and system technics and a minor in Technical-economic systems.

Over the period 1995-1996 she studied at the Center for postgraduate studies at the University of National and World Economy where she acquired a qualification in Management. Over 1996 she received a fellowship for studying Management at Limburg University Centrum – Belgium. This inspired her interest in the science of Economics.

Over the period 1992-2002 Assoc. Prof. M. Neycheva graduated from Burgas Free University with a Master's in Economics degree. In 2007 she defended a PhD degree at the University of Economics – Varna (specialty 05.02.01. Political Economy (General Economic Theory). Her PhD thesis examines the non-linear effects of government spending in the Bulgarian economy.

Since 2003 Mariya Neycheva has been a lecturer in Economics at BFU. She was promoted to Associate Professor in 2013. Currently she is a Vice-Dean of the Faculty of Business Studies at BFU. She has participated in 16 scientific and educational projects. The list of projects comprises four TEMPUS projects, EU's program of Life-long learning, Open Society Foundation projects, EU's OP "Human Resource Development", Erasmus program, and projects sponsored by the Bulgarian Scientific Fund. Nine of the abovementioned projects are funded by international sources. Neycheva was the coordinator of some of these projects. Assoc. Prof. Neycheva has been awarded a number of high honors. In 2014 she received an award from the Ministry of Education for quality accomplishment of the Intensive Program titled "Strategic business decisions in a risky and rapidly changing environment". In the year 2019 she was selected as Teacher of the Year by the Evgeni Mossinov Foundation – Burgas.

#### **4. Quantitative and instructive dimensions of the applicant's scientific works submitted for the competition**

First of all, it should be pointed out that Assoc. Prof. M. Neycheva surpasses the minimum national requirements – as stated in Article 2b of the Act on development of the academic staff in the Republic of Bulgaria for the scientific area of 3. Social, economic and legal studies, professional field of 3.8. Economics for holding the academic position of full professor – which justifies her admission for participation in the abovementioned competition (this is being certified by the corresponding document as part of the applicant's file being submitted). She satisfies both the requirements for holding the position of professor stated in the Regulation for the development of the academic staff of BFU and the additional requirements postulated by the FBS at BFU.

Mariya Neycheva's publication record for the purposes of this competition includes 20 publications which could be classified in the following categories:

- ❖ Monograph for the purposes of the competition – 1
- ❖ Monograph (other) – 1
- ❖ Studia – 5
- ❖ Articles and conference papers – 11
- ❖ Textbooks and study guides - 2

10 of these publications are written in English. This shows that Assoc. Prof. Neycheva has been successfully integrated in the European scientific area community. Four of the publications are co-authored. Three studia and one conference paper are published in scientific issues referenced and indexed in well-known academic research databases. All studia and articles have been published in renowned scientific journals.

Regarding the scope of the applicant’s publication record, the following main thematical fields could be distinguished:

- ❖ Theories (models) of economic growth
- ❖ Human capital and economic growth – theoretical analysis
- ❖ Human capital and economic growth – empirical analysis
- ❖ Multinational corporations in the world economy
- ❖ Applied microeconomics

The key publication – the monograph submitted for the purposes of this competition deserves the greatest recognition. It is titled Human capital, economic growth, labor market (theoretical paradigms vs. empirical evidence), published in 2021. It is 269 pages in length and is divided into an introductory part, six chapters and conclusion. Three appendixes are added to the main text. The reference list comprises 190 titles 180 of which are in English.

The introduction places an emphasis on the role of human capital for the contemporary development. It is pointed out that the book follows a micro- and macro-economic approach. The author’s main goal is defined as follows: “to summarize the main theoretical findings as well as to present and analyze the empirical evidence on the impact of human capital and educational attainment of the

population on the aggregate economic activity and dynamics” (p.6). The limitations of the study are also defined.

Chapters 1 and 2 present the theoretical foundation of the study. The first one of them sheds light on the neoclassical theory of growth. It outlines (in a formal way) the basic model of R. Solow. This is the model which initiated the development of the empirical studies on the sources of growth known as “growth accounting”. The theoretical and empirical drawbacks of Solow’s model provide an incentive for his followers to improve and extend the basic model. Paragraph 2 from chapter 1 introduces the neoclassical model with human capital. Paragraph 3 from chapter 1 traces back the developments of the neoclassical model with human capital by discussing the main models of the leading researchers in this specific field.

A major theoretical drawback of the (basic) neoclassical model of growth is that the main factor for growth – the technological change – is exogenous. This has led to the appearance of the new class of models of growth whose main purpose is to internalize the latter. These models – known as endogenous growth theory – implicitly include human capital. The endogenous growth theory is presented in chapter 2 of the book.

Paragraph 1 of chapter 2 outlines the endogenous growth models (Arrow, Romer, Lucas) as well as the way of inclusion (formalization) of human capital. Paragraph 2 examines the mechanisms through which human capital induces technological development and hence the aggregate economic activity and dynamics in the various models of this type. The comparative analysis of the different models allows for the author to make the important conclusion that “the neoclassical model of growth is a more appropriate instrument for the empirical studies in less developed economies” (p. 81). By comparing real-life empirical data, par. 3 of ch. 2 evaluates the adequacy of the models, having been already analyzed, for the purposes of studying the economic dynamics of the CEE countries (including Bulgaria). The evidence for cohesion across these economies over the last 30 years presented in ch. 3 gives rise to the conclusion that the neoclassical model of growth produces an appropriate analytical framework (The same conclusion was derived in par. 2). This conclusion determines the direction of the research in the rest of the book.

Chapter 3 considers the measurement of human capital at a national level. Three main approaches are discussed. The focus is on the indicators for the

educational attainment of the population (the so called “educational approach”). The chapter illuminates the most popular measures for both the quantity and quality of human capital (the stock as well as the flow of it) according to the educational approach being used in the scientific literature.

On the basis of the educational indicators introduced in ch. 3 the next chapter (ch. 4) tests empirically the impact of human capital on the aggregate economic activity. Par. 1 makes a systematic literature review of the relevant studies on the CEE countries. The author elaborates in detail her grounds for the approach used in the systematic review. Finally, it ends with a review and systematic analysis of 19 publications (p. 113) (containing empirical assessments about the effects of the educational indicators on the aggregate product or its rate of change). Table 4.3 presents a summary of the main conclusions and results. The latter vary according to the model being used but, in general, the conclusion about a positive link between human capital and economic growth prevails.

Par. 2 of chapter 4 evaluates the MRW-model in relation to a set of 11 countries from CEE. In the beginning the author gives an explanation about the choice of the target group. The method of the study follows the original construction of the model but, taking into account the characteristics of the sample, some modifications have been introduced (see, p. 128). The hypothesis being examined is that the increase of the human capital stock stimulates the rate of economic growth. The conclusion is that “The study cannot find evidence for the hypothesis that an increase of the human capital stock leads to an accelerated growth rate. The investments in physical capital are a major source of growth for the target group of countries.” (p. 136). The rest of the book investigates likely explanations for the lack of a positive relation between education and growth.

Par. 3 of ch. 4 makes a systematic review of empirical studies on the link between quality of education and aggregate activity. The author has not neglected some of the drawbacks of the studies introducing education quality in the models of growth (p. 142). The larger part of the studies derives not only a statistically significant relation but also a stronger impact of quality in comparison with the quantity on the rate of long-run growth. At the same time, it is worth noting that the usage of different measures for human capital quality influences the study results. The last paragraph – par. 4 of ch. 4 – contains the results of an author’s study which

relates foreign language competences as one of the aspects of human capital quality to growth.

Chapter 5 reveals the nature of qualification mismatch and distinguishes between its different types. They are grouped into horizontal and vertical ones. The term “overeducation” is defined as well. Additionally, its underlining factors are determined. They are classified into two groups: factors related to the demand and those linked to the supply of a given educational degree. An emphasis on the role of digitalization has been placed. On the basis of the analysis of a significant number of scientific sources a theoretical framework of the channels and mechanisms explaining the role on qualification (mis)match for growth has been developed (par 2, ch. 5).

Chapter 6 continues the developments presented in ch. 5 and focuses on the vertical qualification mismatch. In addition to the summary of the measurement approaches the author elaborates a dynamic map of (mis)matches. The results of an empirical study of their underlining factors in the CEE countries are presented and their impact on growth is analyzed.

The conclusion outlines a number of well-grounded conclusions. The recommendations which the author gives for the national educational policy in the context of the scientific results are valuable.

The monograph of Assoc. Prof. Mariya Neycheva deserves high recognition. This is a novel work focusing on an extremely important problem. The work is well-structured and logically consistent. A good balance between the theoretical and empirical sections has been achieved. One of Assoc. Prof. Neycheva’s aims is to direct attention toward understudied or controversial problems by presenting her point of view using a well thought-out methodology. Assoc. Prof. Neycheva’s monograph is original and contributive. It is a significant contribution to research in the field.

## **5. Scientific contributions**

Three areas of scientific interest could be distinguished in the applicant’s works. The contributions of Assoc. Prof. M. Neycheva are going to be classified according to these three areas.

## Area I: Economic growth and human capital

Thematic areas:

- ❖ Theories (models of economic growth)
- ❖ Human capital and economic growth
- ❖ Educational attainment of the labor force, labor market, economic growth.

In this area I could outline the following theoretical and practically-oriented contributions:

1. A summary, a comparative analysis and a critical assessment of the two main contemporary fields in the theories of growth have been conducted on the basis of a significant volume of original literature. The evolution of the theories of growth from the neoclassical to the endogenous paradigm has been presented in addition to modifications of the neoclassical model (specifically the integration of the human capital in it). The models of growth have been discussed with meticulous precision. A mathematical description of both the equilibrium state and the dynamic path toward equilibrium has been provided. The results of the empirical check of the theoretical models have also been included. This contribution refers to publications 1, 6, 7 and 10.

2. The neoclassical model of growth with human capital developed by Mankiw, Romer and Weil (MRW-model) has been extended in two directions: 1). The impact of the educational levels – secondary and tertiary education was separated, and 2). The role of vertical qualification mismatch vs. qualification match was explored – (cf. publications 1, 6, 7, 8, 11, 14, 15, 16.)

3. The qualification mismatch has been defined and classified. Its underlining factors have been outlined. A theoretical framework of the channels and mechanisms of the impact of qualification mismatch on aggregate output has been built – (cf. publications 1, 3, 4, 5, 9, 15.)

4. The method for evaluation of the vertical qualification mismatch for employees with tertiary education has been developed by combining the static (fixed)

mapping and the statistical approach based on the mean educational level for a given occupation – publications 1, 3, 4, 5, 14.

5. An empirical assessment of both the restricted and unrestricted versions of the neoclassical model of growth with human capital for the new member states from Central and Eastern Europe as well as Iceland has been carried out – publications 1, 11, 12, 13.

6. An empirical assessment of the impact of foreign language learning at secondary school as an indicator for the quality of labor force on the aggregate activity in the European countries has been conducted – publications 1, 13.

7. In the area of normative analysis – recommendations for the educational policy in our country has been discussed. They come from Assoc. Prof. M. Neycheva's empirical study outcomes. In this regard, they are not only justified but also important – publications 1, 8.

Area of scientific interests II: Multinational corporations in the world economy:

8. This point relates to Monograph 2: Economics of multinational corporation – prerequisites, practices, consequences (2018) referred in the publication record as number 2. Despite their enormous importance in the real economy, the problems related to MNC in the Bulgarian scientific literature continue to be underexplored. In this sense the book as a whole brings a contribution and fills in a void in the respective research field. It defines the multinational enterprise, presents theoretical approaches explaining the phenomenon of MNC and analyses some aspects of its activity (selected issues of the so-called Economics of MNC) on the basis of many examples and illustrations.

Area of scientific interests III: Applied microeconomics

9. Development of a methodology for assessment of the necessity, applicability, and effect of technological innovation and its application in two real world organizations – a public institution and a production company – publication number 18.

All the contributions summarized above are original and achieved independently by the applicant. They present her as a dynamic and innovative researcher who has a penchant for investigating the significant issues of our contemporary reality.

## **6. Assessment of the teaching activity**

According to the reference being included in the application package M. Neycheva has worked out a total of 3 233 hours upon completion of her PhD study (whereas the requirement of FBS is at least 2 000 hours).

At BFU Assoc. Prof. M. Neycheva teaches the following subjects:

- ❖ Microeconomics
- ❖ Macroeconomics
- ❖ Managerial Economics
- ❖ Transnational and multinational corporations and banks
- ❖ Economics (for non-economists).

Assoc. Prof. M. Neycheva has published one textbook in Business Economics, issued by BFU, 2021 and a study guide in Managerial Economics, Burgas, 2019. The textbook discusses the firm's behavior in the consumer markets as well as the markets of production inputs. It introduces the fundamental theoretical findings of the microeconomic theory regarding optimal company's decisions at both perfectly competitive markets and markets with imperfect competition. Moreover, the specific features of the markets of production inputs - labor, land and capital are also explored. The methodology requirements for a textbook are satisfied - each topic includes key terms and definitions, problems, test questions. The study guide is designed for students following academic programs at FBS at BFU mainly those enrolled in part-time and distant learning programs. It covers the core part of the lecture notes in this class.

In the context of ongoing digitalization in higher education, Assoc. Prof. M. Neycheva has been actively participating in the development of study materials supporting e-learning. According to the reference being submitted, the following courses in the e-learning platform Moodle of BFU are developed independently by

Assoc. Prof. Neycheva: Microeconomics, Managerial Economics as well as Transnational and multinational corporations and banks. Additionally, she took part in the development of the e-courses in Economics and Macroeconomics.

Assoc. Prof. M. Neycheva is a mature and renowned lecturer. She seeks for continuous improvement of her qualification which is proven by her participation in many national and international educational projects. She has participated in 9 educational projects out of a total of 16 projects. These projects are related to key problems such as upgrade of curricula in higher education, development of distance learning, building the capacity of higher education, etc.

Assoc. Prof. M. Neycheva has teaching activity overseas. She has delivered lectures under EU's programs Erasmus and Erasmus+ in the following universities: Uniminuto, Columbia (2019), University of the West of Scotland, UK (2019), Technological University MARA, Malaysia (2017), Budapest Metropolitan University of Applied Sciences, Hungary (2014), Warsaw Management University, Poland (2013), Istanbul Arel University (2012), Halich University, Istanbul (2009), etc.

In the system of higher education Assoc. Prof. M. Neycheva is recognized and honored. She is a respected lecturer. In 2019 she won a Teacher of the Year Prize awarded by Mossinov Foundation in Burgas.

## **7. Others**

The application package for this competition includes also documents proving citations of Assoc. Prof. M. Neycheva's works. 10 citations are presented, 9 of which are in journals referenced and indexed in world-known scientific databases. There is one citation in a monograph written in Bulgarian.

## **8. Critical Notes**

The critical notes refer to the monograph presented for the purposes of this competition.

1/. A main aspect of analysis presented in the monograph is human capital (this is evident by the content and the title of the book as well). From this point of view, it would be beneficial for the book if the introductory part had included the

concept of human capital at least briefly. On this basis the provision that the book would consider only one aspect of human capital, specifically education of the labor force, should be made.

2/. Throughout the book the following separate parts could be found: Part 1. Human capital in the theoretical models of growth (ch. 1 and 2); Part 2. Human capital, education, and economic growth: empirical studies (ch. 3 and 4); Part 3. Education, qualification mismatch, and economic growth (ch. 5 and 6). But this classification of the material is missing in the description of the book's content. It should also be mentioned in the description of the content.

The abovementioned critical notes do not deprive in any way the work from its values. They could be taken rather as recommendations for potential future issues of the monograph.

## **CONCLUSION**

All said above give me the grounds for concluding that Assoc. Prof. Mariya Neycheva has presented a convincing application for holding the position of full professor at the Faculty of Business Studies at BFU. All requirements given in the Act on development of the academic staff in the Republic of Bulgaria, the Regulations attached to it as well as the internal Rules of BFU and CEMS are fulfilled. Assoc. Prof. Neycheva is an experienced and respected lecturer, knowledgeable and original researcher. I would convincingly vote positively as a member of the Scientific Jury for her to hold the position of full professor and would also invite the other members of the Scientific Jury to make the same decision.

**Reviewer:**

(Prof. Zoya Maldenova, PhD)

Varna

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