



**SCIENTIFIC OPINION**

by Assoc. Prof. Dr. Yana Georgieva Stoencheva

Вх. № 220-1160/02.09.2024

regarding a dissertation for the acquisition of an educational and scientific degree “doctor” in Professional field 3.8 “Economics”, doctoral program "Economics and Management (Construction and Real Estate)" with author Alexander Deyanov Yordanov

**1. General information:**

Prepared the scientific opinion: Assoc. Prof. Dr. Yana Georgieva Stoencheva, PhD., Department "Real Estate" at the University of National and World Economy - Sofia, appointed as a participant in a scientific jury on the basis of order №RD 06-77/05.06.2024 of the Rector of Economic University - Varna.

Grounds for giving an opinion: For a dissertation work developed by Alexander Deyanov Yordanov for the acquisition of the educational and scientific degree "doctor".

Dissertation topic: Development of the residential real estate market in the conditions of a global pandemic.

**2. General presentation of the dissertation:**

The dissertation work has a total volume of 223 pages, of which 178 pages are the main text. Its structure includes: introduction, three chapters, conclusion, appendices and references. A list of abbreviations used is provided. The development used 33 figures and 15 tables, a significant part of which are author's.

**3. Publications and participation in scientific forums:**

One scientific article and three scientific reports with topics related to the dissertation have been presented. They are in a prestigious specialized scientific journal and in prestigious scientific forums and allow the scientific community and all other interested persons and institutions to be informed about the scientific theses, research and creative results of the author on the topic of the dissertation work. The presented publications satisfy the requirements set in the regulatory framework for the defense of the dissertation work.

**4. Assessment of the structure and content of the dissertation:**

The structure of the dissertation is relevant and balanced. In the introduction of the dissertation, the following are convincingly presented: the relevance of the problem, the object, the subject, the purpose and tasks of the research. A main thesis and related working



hypotheses have been formulated, which fully correspond to the essence of the research. The methodological foundations and the time frame of the research are formulated. Impressive was the inclusion in the stated objective of the expected benefits of the study, which focused on both epidemic and post-epidemic settings. The set goal, tasks and main thesis are realistic and achievable and allow to achieve scientific and practical usefulness of the research.

The first chapter is dedicated to clarifying theoretical issues related to the residential real estate market. By referring to numerous literary sources, fundamental and innovative concepts about the nature of the residential real estate market, the relationships between its participants and the factors that significantly influence it are discussed. Graphs have been drawn, contributing to the visualization of the revealed interrelationships and of the groupings carried out in order to focus the research. Valuable conclusions of a methodological nature were made, which show a high level of awareness and creative thinking skills of the doctoral student. It is noteworthy that the author skillfully presents his opinion, justifying each subsequent step in the research.

The second chapter includes an analysis of the regulatory framework relevant to the residential real estate market, as well as an empirical analysis of key market components and factors. Tabular and graphical method as well as other statistical methods of analysis are skilfully used. International comparisons are used as appropriate. Demonstrated ability to work with specialized statistical software and interpret the results obtained.

The third chapter is of particular interest, as it concerns the possibilities for the development of the residential real estate market in a post-epidemic environment. An essential point is the author's revelation that the dynamics of housing prices is logically justified and there are no reasons to assume that a "price bubble" is forming. Through skillful application of the housing affordability indicator, not only in general for the country, but also in terms of economic activities, valuable regularities have been revealed from the economic realities in Bulgaria and, in particular, from the residential real estate market. Variants of dependencies between the affordability ratio and the average market price of housing are skillfully interpreted and show the author's established research abilities. The possible regulatory impacts on the development of the residential real estate market formulated on the basis of the discussed interaction matrices are realistic, competent and justified.

The conclusion is compact and purposefully summarizes the results of the research. Global and local trends are combined, as well as the accumulated experience in pandemic





conditions, which makes the sector much more resilient and prepared to overcome similar challenges in the future.

**5. Identification and evaluation of the scientific and scientific – applied contributions in the dissertation work:**

I fully accept the contributions of the author, formulated in the abstract of the dissertation work.

**6. Has plagiarism been detected in the dissertation and the abstract?**

I have not found any plagiarism in the dissertation and in the reference to it.

**7. Critical notes and recommendations:**

Some imperfections can be noticed in the dissertation, which are mostly of a technical nature and do not affect its significance. I mean the following:

- The sign for % in tables 3, 4 and 5 on pages 106, 107, 108 can be removed in the cells of column 4 and written only in its title line. The same applies to all cells of table 6 on page 114 and to column 5 of table 7 on page 117 and to column 3 in Appendix 1;

- Figures 12 and 13 on page 109 would look better as bar charts, as there is currently insufficient space to clearly write the abscissa labels.

- Fig. 15 on page 120 needs editing to make the inscription on the abscissa axis readable (to gain space on the horizontal, the legend can be positioned below the graphic image);

- Figures 16, 17 and 18 on pages 121, 126 and 127 do not need a legend because only one quantity is depicted in the graphic field;

- The formulas on pages 94 and 156 can be numbered;

- In the text under table 14, there is the following sentence: "In the analyzed model, the indicator of the funds invested in housing construction is a variable value, the CPI is a constant." It is probably an independent and a dependent variable.

- In the appendices, the units of measurement and the scope of the presented quantities are not sufficiently described.

**8. Questions for the dissertation student:**

- In your opinion, is there an element of monopolization of the residential real estate market in large cities by individual large companies that have the ability to significantly influence the price level?

- Can it be argued that joint-stock companies with a special investment purpose working with residential real estate make the market more flexible and resistant to crises?



**9. Conclusion:**

On the basis of the indisputable merits of the presented dissertation work, I propose that, upon successful defense, the respected Scientific Jury should award the dissertation student Alexander Deyanov Yordanov the educational and scientific degree "doctor".

Sofia, 29.08.2024

Заличена информация съгласно  
ЗЗЛД и регламент (ЕС) 2016/ 679

Assoc. Prof. ~~Yana~~ Georgieva Stoencheva



## OPINION

by Assoc. Prof. Dr. Dragomir Zelchev Stefanov

regarding a dissertation for the acquisition of an educational and scientific degree "doctor" in PF 3.8 "Economics", doctoral program "Economics and Management (Construction and Real Estate)" with **author Alexander Deyanov Yordanov**

### 1. General information.

**Prepared by:** Assoc. Prof. Dr. Dragomir Zelchev Stefanov, lecturer in the "Real Estate" department at the Business Faculty of UNWE - Sofia, scientific specialty "Economics and Management".

**Reason for providing the opinion:** Order of the Rector of IU-Varna No. RD-06-77/05.06.2024, Varna for the election of the scientific jury and Decision of the scientific jury dated 10.06.2024 for determining reviewers and expressing opinion.

**Author of the dissertation:** Alexander Deyanov Yordanov, full-time doctoral student in PN 3.8 Economics, doctoral program "Economics and Management (Construction and Real Estate)" at the Department of "Business, Investments and Real Estate", awarded with the right of defense by Order No. RD 17 -52/26.02.2024 of the rector of Varna University of Applied Sciences. Dr. Yordanov has successively completed Bachelor's degree (2019) and Master's degree (2020) in Business Economics at the same department.

**Dissertation topic:** Development of the residential real estate market in the conditions of a global pandemic.

### 2. General framework of the dissertation work.

The dissertation has a total volume of 224 standard pages, incl. 16 pages of bibliography (152 sources) and 16 pages of appendices. The work has a standard approved structure – an introduction, three chapters, each with three paragraphs and a conclusion.

In the introduction, the author has correctly justified the necessity of the topic and relates it to the importance of the residential real estate market for the national economy. The object and subject of the study, the purpose and the research tasks of the work are consistently correctly formulated. The thesis that the author maintains in the dissertation is that the global pandemic of COVID-19 has an impact on the residential real estate market with a short-term impact on its specifics and dynamics, without a particular impact on the established development trend in the researched period.

The first chapter is devoted to the theoretical foundations determining the essence and specifics of the residential real estate market in the context of its functioning in the conditions of a global pandemic. In this connection, the interactions between the market participants, as well as the factors that influence its overall development, are tracked. The classifications made take into account some basic practical situations of the considered primary and secondary real estate markets. The specifics of the real and financial sectors are highlighted in order to differentiate the types of markets, while at the same time is emphasized on the role of the capital



market in the sector. Chapter one ends with a detailed description of the used research methodology.

The second chapter entitled "Analysis of the residential real estate market in the conditions of a global pandemic" is dedicated to comparisons between the legal frameworks in Bulgaria and selected European countries. Quantitative data concerning the housing market are presented, on the basis of which a correlation analysis was performed, determining the interrelationships between selected macroeconomic aggregates and indicators describing development trends in the sector. The dynamics of the housing market in Bulgaria has been studied in a macroeconomic, chronological, territorial and international aspect, and correctly defined conclusions have been drawn from the statistical analysis.

In the third chapter, the prospects for the development of the residential real estate market in the period after the COVID-19 pandemic are outlined through the author's view. The first paragraph examines the world's leading practices for assessing the state of the housing market. The focus is on the post-pandemic period and delineating trends in the short and medium term. In the second paragraph, an author's model for determining market development opportunities is presented. Its construction is based on the affordability factor, which monitors the ability of households to purchase one square meter of living space. By calculating the affordability coefficient on the abscissa and the housing price index on the ordinate, a matrix was created, contributing to the construction of a model through which the state of the residential real estate market can be interpreted in the context of the considered variables. The dynamics of the average salary is also implemented in the matrix, due to the direct proportionality between the indicator and the affordability factor.

In the last paragraph, the focus is on the examination of possible regulatory actions through which the state can influence the development of the housing market, and some proposals for changes in the regulatory framework made.

### **3. Publications and participation in scientific forums.**

Doctoral student Yordanov has submitted a list of four publications on the topic of the dissertation - three reports in scientific conferences and one article in the indexed specialized scientific journal "Real Estate Property and Business". The submitted publications meet the requirements of the law and the regulations for its application.

### **4. Assessment of the structure and content of the dissertation.**

The dissertation submitted for review meets the requirements of Art. 34 of the Regulations for the Development of the Academic Staff at IU-Varna. The work shows the author's good knowledge of authoritative theoretical studies on the subject, as well as his ability to carry out such studies himself. The structure of the dissertation is standard, each chapter and paragraph ends with a short summary and conclusions. The work follows its logical sequence and provides a step-by-step disclosure of main theoretical propositions, problems and potential solutions (recommendations) to improve the functioning of the residential real estate market in periods of crises or external shocks. The style of expression is clear and understandable, the formatting conforms to the standards in the field. Literary sources are correctly cited in the main text of the development and listed at the end. It makes a bad impression that, although the analysis is mainly focused on the Bulgarian residential real estate market, only 12 literary



sources of Bulgarian authors are cited in the work, some of which are essentially unrelated to the topic, and some of the others are not up-to-date.

The abstract meets all generally accepted requirements for volume, structure and content. In it, the dissertation student reflects correctly, both in terms of structure and content, what is presented in the dissertation work. In a total volume of 44 pages, a general description of the work, a reference to the scientific contributions and a list of the author's publications on the subject are presented.

#### **5. Identification and assessment of scientific and scientific-applied contributions in the dissertation work.**

In his abstract, doctoral student Yordanov has formulated four contributing points. I would define two of them (the first and the third one) as purely scientific, and the other two as those with a scientific-applied element. I largely accept the contributory nature of the formulated contributions.

#### **6. Confirmed or unconfirmed plagiarism in the dissertation and the abstract.**

When familiarizing myself with the dissertation work and the author's reference to it, I did not find any plagiarism in the sense of §1, item 7 of the Additional Regulations of LDASRB.

#### **7. Critical notes and recommendations.**

Along with the positive aspects of work, like any human creation, some critical remarks can be made here. Thus, for example, the place of methodological notes is traditionally in the second chapter of the dissertation work, and practical studies based on them are usually in the third chapter. Here, the author has not chosen this approach. Furthermore, on page 122, it is claimed: "The dependence is straight, ....., suggesting that a decrease in the interest rate is followed by a decrease in the number of real estate transactions." This statement is not confirmed either in economic theory or in practice.

The comments and recommendations made in no way detract from the value of the dissertation or change my overall positive opinion of it.

#### **8. Questions for the PhD student.**

I would like to ask the doctoral student the following question: According to some analysts, the COVID 19 pandemic has actually positively affected the housing market for at least three reasons: 1. Fiscal policies by governments and central banks have led to inflation, which has stimulated housing demand as an attempt to preserve of the value of the invested funds; 2. Global uncertainty provokes additional demand for a market that is considered a haven from risk; 3. Households started looking for bigger homes due to increased time spent at home, remote working and learning, etc. How would you comment on these statements in the context of your research and conclusions?

#### **9. Conclusion:**

Taking into account the above mentioned comments and the achieved results, I give a positive assessment of the presented dissertation work. It fully meets the requirements of the LDASRB and the Regulations for its implementation, as well as the Regulations for the

development of the academic staff at UE-Varna. Based on this, **I strongly recommend the respected scientific jury to award the educational and scientific degree "doctor" in PF 3.8. Economics, doctoral program "Economics and Management (Construction and Real Estate) of Alexander Yordanov.**

Sofia, 29.08.2024

Заличена информация съгласно  
ЗЗЛД и регламент (ЕС) 2016/ 679

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(Assoc. Prof. Dr. Dragomir Stefanov)





# ИКОНОМИЧЕСКИ УНИВЕРСИТЕТ - ВАРНА

СЕРТИФИЦИРАНА СИСТЕМА ЗА УПРАВЛЕНИЕ НА КАЧЕСТВОТО ISO 9001:2015

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ИКОНОМИЧЕСКИ УНИВЕРСИТЕТ ВАРНА

Вх. № РД-20-1150/02.09.2024

## OPINION

concerning the award of a PhD degree  
as per a procedure announced by the University of Economics – Varna

### 1. General information

**Opinion prepared by:** Assoc. Prof. Todor Stoyanov Raychev, PhD, Department of "Business, Investments, Real Estate" (BIRE), University of Economics – Varna (UE – Varna), habilitated in professional profile 3.8. Economics, scientific specialty "Economics and Management (Innovation in Construction)"

**Grounds for preparing the opinion:** Order No. RD-06-77/05.06.2024 by the Rector of the UE – Varna – Prof. Evgeni Stanimirov, PhD, concerning the appointment of a scientific jury and a decision taken at the first meeting of the scientific jury dated 10.06.2024.

**Author of the dissertation:** Aleksandar Deyanov Yordanov, doctoral student in professional field 3.8. Economics, doctoral program "Economics and Management (Construction and Real Estate)" at the BIRE Department at UE – Varna, enrolled according to Order No. RD-17-417/02.03.2021 to the Rector of the UE – Varna in full-time doctoral studies with a three-year period of study for the period from 01.03.2021 to 01.03.2024 and awarded with the right of defense for a period of 5 years, starting from 01.03.2024 according to Order No. RD-17-52/26.02.2024 by the Rector of the UE – Varna.

**Dissertation topic:** Development of the residential real estate market under the conditions of a global pandemic.

A decision was taken by the Departmental Council of the BIRE Department to open a procedure for the defense of the dissertation work, according to Protocol No. 12/14.05.2024.

**Research supervisor:** Assoc. Prof. Bozhidar Chaparov, PhD

### 2. General presentation of the dissertation

The dissertation student Aleksandar Deyanov Yordanov has submitted a dissertation work in a volume of 224 pages, containing: introduction – 4 pages, presentation in three chapters – 179 pages in total, conclusion – 5 pages, appendices – 13 pages and a list of used literature – 16 pages. 16 tables and 32 figures are included in the main text. The list of used literature consists of 149 literary, including normative and information sources, respectively 59 in Cyrillic, 78 in Latin, as well as 12 Internet sites. The work also includes 8 applications that enable the doctoral student the opportunity to substantiate his conclusions and recommendations.

The topic of the dissertation is dedicated to the current challenge of searching for opportunities to maintain the stability of the residential real estate market under the conditions of a global pandemic based on the disclosure of possible correlational dependencies between important macroeconomic aggregates, the adaptation of leading world practices for assessing the market condition and the creation of an adequate model for determining the possibilities for its successful development.

The body of the dissertation contains an in-depth study of literature and information sources with relevant analyses and official statistical data, appropriate research methods such



as a systemic approach, statistical methods, the methods of induction and deduction and the normative approach are applied.

The study covers the period 2012 - 2022, with an emphasis on the last three years of it, in which the onset of the global pandemic of COVID-19 is considered, and the effects of the post-pandemic period are also studied.

### **3. Publications and participation in scientific forums**

The dissertation student Aleksandar Yordanov has published 4 independent, scientific publications related to the dissertation research, including 1 article and 3 reports presented at scientific forums, including two international ones, thereby meeting the quantitative requirements under Art. 35, para. 1, items 1-4 of the Regulations for the development of the academic staff at UE – Varna.

### **4. Opinion on the structure and contents of the dissertation**

**The structure** of the dissertation work is logically laid out in a classic structure of three systematically linked chapters with 3 paragraphs each and corresponds to the chosen topic. The dissertation student has successfully managed to develop the set scientific tasks in the work. The dissertation is distinguished by a clearly expressed author's position, with original and creative assertions and conclusions. The dissertation student has accurately formulated the object, subject, purpose and tasks of the research. The stated thesis is convincingly defended in the dissertation. The research methods are indicated and correctly applied in the process of developing the dissertation work. The conclusion of the dissertation summarizes the results of the research and the main scientific and scientific-applied contributions are indicated.

**The content** of the chapters of the dissertation work follows a classic model, which includes theoretical, analytical and practical-applied chapters, which are logically consistent and well balanced in relation to the volume of the work.

Chapter one examines the theoretical foundations of the residential real estate market. Interpretations of a number of terms directly related to real estate and pandemic conditions have been made. It is argued that the nature of the residential real estate market does not change significantly in the context of the COVID-19 pandemic, given the functions and importance that the market has for the economy. However, an event such as the global COVID-19 pandemic is capable of changing the dynamics of the sector as a whole. Relationships and interactions between primary, secondary and capital markets of residential real estate are revealed. Specifics related to the intricacies of the real and capital sectors in residential real estate transactions are brought out. Through the prism of the PESTE model and the results of the studies of numerous foreign researchers, a number of other factors influencing the demand and supply of the residential real estate market in the conditions of a global pandemic are investigated.

Chapter two presents an analysis of the residential real estate market in the context of a global pandemic. Basic laws building the regulatory framework of the real and capital market of residential real estate in the country are studied, as well as tax specifics of the example of the legislation in Italy, France and Germany. The impact of the COVID-19 pandemic on selected macroeconomic indicators and the residential real estate market is specifically examined. Of particular interest for theory and practice are the investigated correlations between the "interest rate" and the "total number of real estate transactions", and the "consumer price index" and the "housing price index".

In chapter three, the possibilities for the development of the residential real estate market in a post-pandemic environment are explored. To assess the state of the residential real estate market in the post-pandemic period, adapting global leading practices is recommended. Based on the examination of two affordability coefficients - one relative to the house price



index and the second according to their average market prices, it is proposed to use an integrated model developed by the author to determine the development opportunities of the residential real estate market. Logically sound characteristics of the matrix quadrants contained in the model are derived according to the dimensions of the accessibility coefficient in its two varieties. The presented models for calculating the affordability coefficient allow to determine in practice how many square meters of living space the average representative of the various sectors in the country can purchase. Based on the developed and tested model, possible normative regulatory actions on the residential real estate market are recommended.

**The abstract** of the dissertation has a volume of 42 pages and reflects correctly and fully the individual parts of the scientific research, the summarized results - conclusions and recommendations of the dissertation student, and outlines correctly articulated contributions and publications related to the dissertation.

We believe that the **lexical and stylistic characteristics** of the dissertation work, the abstract and the attached publications, are distinguished by a modern academic style, written in an understandable scientific language, with accurate and appropriate use of the specific terms related to the residential real estate market, correct citation of literature, including normative and informational sources.

#### **5. Identification and assessment of the scientific and scientific-applied contributions in the dissertation**

We accept the scientific and scientific-applied contributions highlighted by the dissertation (author's abstract, pages 40 and 41): of a theoretical nature (the concept of "residential real estate market" is specified and an advanced classification of real estate types is proposed); methodological nature (an integrated model has been developed to determine the development opportunities of the residential real estate market in the conditions of a global pandemic and in a post-pandemic environment); representing recommendations for the improvement of management practice and normative matter (correlation dependences of the housing market with selected macroeconomic aggregates in the conditions of a health crisis and its impact on the economic situation, in particular on the "Real estate operations" sector; on the basis of the approved model, were investigated for the analysis of the state of the housing market in the conditions of a global pandemic and a post-pandemic environment, pragmatic amendments and additions to the current regulations are proposed, supporting the regulation of the housing market in the country).

#### **6. Detected or undetected plagiarism in the dissertation and abstract**

After checking with the Internet-based system of StrikePlagiarism.com recommended by the Ministry of Education and Science, no plagiarism was found in the dissertation or the abstract. Literary sources, including normative material, have been used in good faith in the exposition of the work. This is also claimed by the signed and attached documentation for the defense procedure declaration of compliance with the copyright requirements by the author with regard to both them and the originality of the dissertation work and the publications to it.

#### **7. Critical notes and recommendations**

During the development of the dissertation, we provided the dissertation student Aleksandar Yordanov, in a timely manner, with a sufficient number of appropriate critical comments and recommendations to achieve a high quality of research, which is why we have no significant comments on further development required on the work.

We recommend that the dissertation student expand his studies on the issues related to the sustainable development of the residential real estate market in the country.

#### **8. Questions to the dissertation student**

The interesting issue provokes the following question for the dissertation:

- As a result of the conducted research, can a statement be made regarding the impact of exactly which factors prove to be the most decisive for ensuring the sustainability of the residential real estate market in a pandemic environment?

### **9. Conclusion**

The developed dissertation has a high value and represents an original, independent study of a scientific-applied nature. The dissertation student demonstrates very good theoretical preparation and mastery of the mathematical and statistical tools used in conducting in-depth research work. We believe that the dissertation work contains significant theoretical and scientific-applied contributions and fully meets the requirements and criteria of Law on the Development of Academic Staff in the Republic of Bulgaria, Rules for Implementation of the Law on the Development of Academic Staff in the Republic of Bulgaria and the specific requirements of UE – Varna for awarding the PhD degree.

On the basis of the above, we give a positive assessment to the dissertation work submitted for defense by Aleksandar Deyanov Yordanov and propose to the other esteemed members of the scientific jury that he be awarded a PhD degree in professional profile 3.8. Economics, PhD program "Economics and Management (Construction and Real Estate)".

26.08.2024

Заличена информация съгласно  
ЗЗЛД и регламент (ЕС) 2016/ 679

Signature:

(Assoc. Prof. Todor Raychev,