

## REVIEW

**Regarding:** Dissertation for awarding the Educational and Scientific Degree of "Doctor" in the professional field 3.8. *Economics*, Doctoral Programme *Economics and Management (Construction and Real Estate)* at the University of Economics - Varna.

### 1. General Information

**Reviewer:** Prof. Dr Rumen Nikolaev Kalchev, University of Economics - Varna, Department *Business, Investment, Real Estate*, professional field 3.8. *Economics*, scientific specialty *Economics and Management (Human Resources in Construction)*.

**Grounds for writing the review:** 1. Participation in the scientific examining jury for the defense of the dissertation, pursuant to Order RD No 06-188/03.11.2022 by the Vice-Rector for RDS of University of Economics-Varna, appointing a scientific examining jury for opening a procedure for the defense of the dissertation; 2. The decisions of the scientific examining jury from the meeting of 04.11.2022 for the election of a Chairperson and reviewers; 3. Letter of notification from the Department of *Research and Doctoral Studies* with the University of Economics – Varna of 07.11.2022;

**Author of dissertation:** Krasimira Hristova Hristova-Bocheva

**Dissertation topic:** "Market, prices and pricing in construction"

### 2. Information about the dissertation defender

Doctoral student Krasimira Hristova-Bocheva completed her secondary education in 2008 at the Vocational High School of Construction, Architecture and Geodesy "Vasil Levski", the town of Varna, with the specialty *Construction and Architecture*. In 2011 she completed her higher education, EQD "Bachelor", and in 2012 EQD "Master"

at the University of Economics - Varna, with the specialty *Economics of Construction*. Pursuant to an order by the Rector of UE-Varna No RD 17-3620/02.10.2013 she was enrolled in part-time doctoral studies, state quota, in the doctoral programme "Economics and Management (Construction and Real Estate)" with the Department "Economics and Management of Construction", with scientific supervisor Assoc. Prof. Dr Petko Genchev Monev. She was disenrolled with the right of defense for a period of 5 years by order No 17-3021/04.10.2017.

The employment history of the doctoral student is connected invariably with the sector of "Construction", in particular with prices and pricing, which helps her conduct high-quality research work and analyses needed in connection with her dissertation. From 2011 to 2013 Krasimira Hristova-Bocheva worked at *Denev Engineering OOD*, Varna as a technical contractor - bidder. From 2013 to 2014 she held the position of Office Manager at *QB Engineering OOD*, the town of Varna, and from 2014 till the present moment she has worked at *BRİK EOOD*, the town of Varna, as a technical manager, performing mainly activities on: studying draft statements of costs and drawing up price quotes for the construction sites of the enterprise; doing market research into the prices of primary and specific building materials and CFW; development of the plans, strategies and time schedules needed for the enterprise, etc.

During the period 2013–2020 the doctoral student has led seminars/tutorials as a part-time assistant professor with the *Department of EMC* (currently *BIRE*) in the following subjects: "Pricing in Construction", "Pricing in the Real Estate Business", "Municipal Economy and Urbanization", "Economics of the Enterprise", "Management of the Construction Enterprise", "Local Self-government and Business", "Investment and the Investment Process", "Economic Principles of Real Estate", "Business Valuation". She also took part in a national scientific project on the following theme: "Concession as a Factor for the Development of Sector 'Water Supply and Sewerage' in Republic of Bulgaria", with a leading institution-project promoter the University of Economics - Varna, in 2016.

During the period of her studies doctoral student Krasimira Hristova - Bocheva performed the tasks laid down in the individual study plan and successfully passed her doctoral examinations, as follows:

- *Property Development* - passed on 21.11.2013, grade: Excellent 5.75;
- *Economics of the Enterprise* - passed on 28.01.2014, grade: Excellent 5.50;
- *Methodology and Methods of Research* - passed on 11.06.2014, grade: Excellent 6.00;
- *English language* - passed on 24.06.2014, grade: Very good 4.75.

The above goes to show that she has a wealth of administrative and organizational experience. She also possesses good social and organizational skills and competences.

### **3. General description of the dissertation**

The dissertation submitted for reviewing is 202 pages long and includes the following: title page; contents (2 pgs); introduction (4 pgs); body text, consisting of three chapters (161 pgs); conclusion (2 pgs); appendices (21 pgs); list of sources used - 136 in number, of which 25 Internet pages (11 pgs). In the body there are placed tables - 24 in number, and figures - 22 in number, which correspond to its contents. Included separately in the submitted documents is a declaration of originality.

My overall impression of the size and the contents of the dissertation is positive. The length meets the requirements for a doctoral dissertation, and the contents include all the needed elements. For the purposes of the study the author has used a sufficient number of relevant and contemporary sources. This is evidence of the good bibliographical knowledgeability of the author, and in the course of the study she has appropriately manifested her own presence as well.

The dissertation is devoted to an issue that is topical of the construction sector - the price formation of construction output, the formation of such a pricing policy and

strategy that would make construction enterprises more competitive on the market. These issues are the object of research interest, but are still not clarified enough in the theoretical and mainly in the practical and applied aspect. From this viewpoint the study of the author deserves great appreciation.

The main **objective** of the author in the dissertation is "to conduct a theoretical as well as practical and applied study of prices and pricing in the context of the functioning of the construction market and on that basis to propose guidelines and possibilities for their improvement in the construction enterprises in Bulgaria". The objective is clearly and aptly formulated. The achievement of that objective is carried out through four specific research **tasks**, which are well-defined and successfully solved further on in the body.

The **object** of study are construction enterprises in Bulgaria, whereas the **subject** are the market, prices and pricing at the first stage - creation of exploratory and project/design output and the second stage - creation of construction output of intermediate and final consumption.

The **principal proposition in the dissertation** is that despite the trend of an ever-increasing number of enterprises from the sector of "Construction" passing over from cost-based pricing to market and value-based pricing, they experience difficulties in applying that approach and concept, which gives the author the reason to outline guidelines for developing and applying a competitive pricing strategy on the part of construction enterprises, based on the value of construction output.

My impression of the objective, the tasks, the object, the subject and the proposition is that those are well-formulated and correspond to the theme of the dissertation.

The main **research methods** which have been used in order to achieve the specified objective and tasks, consistent with the topic of the present dissertation, are as follows: the method of induction and deduction, the method of analysis and synthesis,

the systematic method, the method of comparison, the representative method and the survey method (computer-assisted web interview).

The methodology used, as well as the tools, can be defined as contemporary, adequate to the purposes of the study.

#### **4. Assessment of the structure and contents of the dissertation as well as the correctness of the summary**

Doctoral student Kr. Hristova-Bocheva has chosen a standard structure for her dissertation: introduction, three chapters, conclusion, appendices and list of works cited. Chapter One is of a theoretical nature, in Chapter Two there is performed an analysis, and in Chapter Three are proposed possibilities for improvement. I think that such an approach can be determined as appropriate.

In the **introduction** there is presented and justified the relevance of the topic of the dissertation, the subject and the object of research. Formulated are the objective, the scientific tasks and the research proposition. Specified are the used research methods, as well as the scope and the constraints of the analysis.

**Chapter One** (Theoretical foundations of the market, prices and pricing in construction) constitutes the theoretical part of the dissertation. In it there is studied the nature and are refined certain principal concepts in the area of pricing, including that in construction. Discussed is the nature of the market, prices and pricing as a part of the system of economic categories. Clarified and refined are the nature and the specific character of prices and pricing in construction. Adopted is a contemporary concept of prices in construction, based upon the value of construction output. Presented are the factors affecting prices and pricing in construction and is put forward an improved classification of the factors influencing those. In this chapter the doctoral student shows that she possesses profound theoretical knowledge in this area and solves the first research task.

In **Chapter Two** of the dissertation (Study of the market, prices and pricing in construction at the macro and microeconomic level) there is examined and analyzed the Bulgarian construction market in the context of the functioning of the European construction market. Presented and analyzed is the normative base of prices and pricing in construction at the stage of the investment study and design in Bulgaria and other developed countries. Provided are ways for price discovery and pricing at the stages of creation and realization of construction output in the context of the use of software products. Through Chapter Two there is performed the second research task. In it the author shows her abilities to conduct independent research.

In **Chapter Three of the dissertation** (Possibilities for improving prices and pricing in construction) there is presented a set of methodological tools, on the basis of which there is conducted a survey aimed at a practical study of prices, pricing and the price strategy in construction enterprises. Proposed is an improved model of pricing of construction output. Presented are additional possibilities for the improvement of pricing in construction enterprises based on a price strategy in a dynamic economic environment. Through Chapter Three there are solved the third and fourth research tasks.

In the **conclusion** there are summarised the main results of the dissertation. There is described the connection of the results of the dissertation with the set objective and tasks, there is an emphasis on the contributions, which are claimed in the dissertation.

My general impression on **the structure and the contents** of the dissertation is positive. The structure is logically sound, and the content covers the issues laid down in order to be studied. This gives me reason to make the assessment that **the objective and the tasks set in the dissertation have been achieved.**

The thorough examination of the dissertation submitted to me for reviewing allows me to make the following more important observations:

1. The issues under study are current, topical and still poorly resolved in the practical and applied aspect. This indisputably confirms the thesizable character of the chosen topic.

2. The chosen structure is classical and academically up to standard, which allows for the proper solution of the set objective and tasks.

3. The author has used a great number of contemporary literary sources, which allows her to demonstrate knowledge of the issues under study, draw the right conclusions and propose the correct solutions.

4. In the dissertation there are used major research approaches and contemporary research techniques, by means of which the analyzed information is adequately interpreted.

5. The style and expression of the doctoral student are at the required research level.

**The summary** is 42 pages long. In terms of form and content it meets the necessary requirements. It corresponds to the dissertation and presents authoritatively, in synthesized form the scope and the results of the study.

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

The dissertation of doctoral student Kr. Hristova-Bocheva constitutes an independent, complete, applied research study, containing a thorough examination, theoretical generalizations and critical analysis of major literary sources and of the practice, on the basis of which there is advanced an improved model of pricing of construction output and possibilities for improving the pricing in construction enterprises, based on price strategy. In it there are observed a number of scientific and applied research contributions, which are the personal creation of the candidate for the degree of "Doctor". The more substantial of those are as follows:

1. Clarified is the nature and the specific character of prices and pricing in construction and are refined these concepts. In the dissertation there is developed the concept of prices in construction, based on the value of construction output.

2. Outlined are the specific peculiarities and characteristics of prices and pricing in construction and on that basis there is proposed an improved classification of the factors influencing them.

3. Based on a study of the construction market in Bulgaria and other leading - in terms of economics- countries, and by using the method of the survey (following a methodology developed by the author) in a wide range of economic operators in construction, there is analysed the state of this market, the prices and pricing in those operators, incl. the use of software products in this sphere.

4. Developed is an improved pricing model, based on the market approach in pricing in construction enterprises and the value of construction output and on that basis are formulated guidelines for improving the price strategy in construction enterprises.

I think that the pointed out contributions on the part of the author are an expression of her potential to conduct independent research and correctly interpret the obtained results. They truthfully reflect the contents of the dissertation, whereas the applied research contributions (3 and 4) may be beneficial in the practice of pricing in construction enterprises.

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

Under the dissertation there are presented a total of 3 publications – an article and two papers, which present highlights from the work. In terms of quantity they represent a sufficient number. The article is published in an electronic scientific journal *Varna: Knowledge and Business*, whereas the papers are presented at scientific and practical conferences "Property Development and Real Estate" in the University of Economics - Varna, i.e. the doctoral student has done the minimum needed for



spreading the obtained results among the scientific community and the specialists in the practice.

As has been pointed out, the doctoral student is disenrolled with the right of defense. According to the presented reference-statement she meets the minimum national requirements for awarding the educational and scientific degree of "Doctor". On its meeting of 30.09.2022 the Department of "Business, Investments, Real Estate" at the UE-Varna adopted a decision for opening a procedure on the defense of the dissertation of Krasimira Hristova-Bocheva (Record No 3/30.09.2022)

#### **7. Ascertained or unascertained plagiarism in the dissertation and the summary**

I have not established any plagiarism in the dissertation and the summary.

#### **8. Critical remarks and recommendations**

Doctoral student Kr. Hristova-Bocheva has conducted her research accurately and I think that there cannot be made any significant critical remarks with regard to the dissertation in terms of subject-matter. My remarks and recommendations to her are as follows:

1. In my opinion paragraph 3.1 belongs in Chapter Two, in view of its research character.
2. I believe the title of paragraph 3.3 should not include dynamic economic environment - the latter is always like that.

#### **9. Questions to the dissertation defender**

1. Which one of the proposed improvements of the model on p. 148 do you consider to be most significant?
2. On p.158 it is stated that pricing in construction is still mainly oriented towards cost-based methods of pricing and much less towards market-based ones. Doesn't this

statement contradict the analysis on p.162, where it is shown that when choosing a price strategy construction enterprises take into consideration in the utmost degree the economic situation, the business environment and the inflation?

The specified critical remarks and the questions posed do not diminish the scientific worth of the work and do not affect the overall positive evaluation of the dissertation.

## 10. Conclusion

The dissertation of doctoral student KrasimiraHristovaHristova-Bocheva on the topic of "Market, Prices and Pricing in Construction" constitutes a complete and thorough research work with an appropriate structure, topicality and significance. It has indisputable scientific value and meets the requirements of the LDASRB, the RALDASRB and the *Regulations on the Development of the Academic Staff at the University of Economics - Varna*.

**The above gives me reason to rate positively the dissertation and - with complete conviction - to propose to the members of the esteemed jury that KrasimiraHristovaHristova-Bocheva be awarded the educational and scientific degree "Doctor" in the professional field 3.8. *Economics, doctoral programme Economics and Management (Construction and Real Estate)*.**

28 November 2022

Varna

Reviewer: ..

(Prof. Dr Rumen Kalchev)

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



**REVIEW**

Вх. № PA20-1494/13.12.2022г.

Reviewer: assoc. prof. Georgi Shinkov Zabunov, PhD, Department of Real Estate, University of National and World Economy (UNWE), Sofia, professional field 3.8. Economics, scientific specialty "Economics and management (Real estate)"

Regarding: Dissertation work for awarding the educational and scientific degree of "doctor" in doctoral program "Economics and Management (Construction and real estate)" at the University of Economics – Varna.

Author of the Dissertation Work: Krasimira Hristova – Bocheva

Title of the Dissertation Work: Market, prices and pricing in construction

**1. General information**

Review prepared by: assoc. prof. Georgi Shinkov Zabunov, PhD, Department of Real Estate, University of National and World Economy (UNWE).

Reason for review preparation: participation in the scientific jury for the defense of a dissertation work under Order № RD-06-188/ 03.11.2022 pursuant to Art. 9 of the Law on the Development of the Academic Staff in the Republic of Bulgaria, Art. 31 of its Implementing Regulations, Art. 36, para. 3 of the Regulations for the Development of the Academic Staff at the University of Economics – Varna, Order № RD-14-141/ 13.10.2021 and a decision of the Faculty Council of the Faculty of Economics (Minutes № 33 of 27.10.2022).

**2. Information about the dissertation student**

The dissertation student was trained in a doctoral program at the Department of Construction Economics and Management (later renamed to Department of Business, Investment and Real Estate), Faculty of Economics of the University of Economics – Varna in the scientific specialty "Economics and Management (Construction and real estate)" according to Order of the Rector of the University of Economics – Varna No. RD-17-3620/ 02.10.2013. The training was carried out in part-time form, subsidized by the state.



Krasimira Hristova – Bocheva received a bachelor's degree in “Construction Economics” in 2011 and a master's degree in the same scientific specialty in 2012 from University of Economics – Varna. During the period from 2013 to 2027, she is a doctoral student in the specialty “Economics and Management (Construction and real estate)” at the Department of Construction Economics and Management, Faculty of Economics of the University of Economics – Varna. Considering that Krasimira Hristova – Bocheva graduated in 2008 at the Vasil Levski Vocational High School of Construction, Architecture and Geodesy, Varna, we can summarize that all her training is in the field of construction and real estate.

Under Order № RD-17-3021/ 04.10.2017 of the Rector of the University of Economics - Varna Krasimira Hristova - Bocheva is deducted from training in the doctoral program with the right to defence a doctoral dissertation within five years after the date of deduction. As can be seen from the submitted documents, the doctoral student has fulfilled all the necessary conditions for admission to public defence of the dissertation. Like the education and training of Krasimira Hristova - Bocheva, her professional realization is closely related to construction and real estate.

### 3. General characteristics of the presented dissertation work

The dissertation presented meets the requirements of Art. 27, para. 2 of the Implementing Regulations of the Academic Staff Development Act in the Republic of Bulgaria. The work, with a volume of 202 pages, contains an introduction, three chapters, a conclusion, a list of applications (7 items as one of them contains an additional nine tables and two figures) and references. The work itself is richly illustrated with twenty -two figures and twenty -four tables. It examines a current, significant, complex and poorly researched and solved problem of doing a theoretical, practical and applied study of prices and pricing in the context of the operation of the construction market and, on this basis, offering guidelines and opportunities for their improvement in construction enterprises in Bulgaria. The author claims that although there is a tendency that more and more companies in the Construction sector are moving from a cost pricing to market and value -based pricing, they have difficulty in applying this approach and concept. The focus of the study is on improving the management of pricing in construction enterprises through relevant instruments. Such tools are the implementation of a concept for the value of construction production, improving the pricing model, using software products and developing a competitive price strategy.



The author uses a research methodology that corresponds to the goal set and the tasks formulated. The following research methods were used: method of induction and deduction, method of analysis and synthesis, systemic approach, comparison method, representative method and method of survey (electronically based survey/ Computer Assisted Web Interview). A number of restrictions have been adopted in the dissertation. They arise from the current legislation and from the statistics available. Some of the restrictions are related to the perception of pricing information as a company secret by construction enterprises. The defined objectives, object and subject of the dissertation also determine its scope, which is limited to the problems related to the pricing process.

#### 4. Structure and content of the dissertation work

The structure and content of the dissertation work meet the requirements of Art. 34, para. 2 and para. 3 of the Regulations for the Development of the Academic Staff at the University of Economics – Varna. The introduction contains the research plan of the dissertation. The first chapter of the study systematized its general theoretical aspects. The following scientific and scientific-and-applied results of the study can be indicated here: A classification of the factors for pricing in construction is proposed, which supports the systematization and examination of these factors; The developed classification supports the practical activity for the pricing of construction production by facilitating the process of collection of useful information; The proposed classification of pricing factors assists the managers of construction enterprises and pricing specialists to choose and implement a successful pricing policy and strategy of the construction enterprise. The second chapter of the dissertation looks at important methodological aspects. There are also scientific and scientific-and-applied results here. First, the Bulgarian construction market was analysed as an integral part of the European construction market. Next, a clear distinction is made between the pricing regulatory framework in the stages of study and design and in the stages of the creation and sale of construction production. On this basis, the functional characteristics of Bulgarian and foreign pricing software products have been analysed and compared. Significant differences are observed. Bulgarian products are less likely to use cloud technologies and do not allow effective communication with suppliers, end customers and designers. The most perfect Bulgarian software products are cloud based ERP systems. They provide good opportunities to manage the supply chain and to manage customer relationships at the same time. In the



third chapter of the dissertation work a practical study of pricing in construction companies in Bulgaria was conducted. On the basis of the analyses made in the previous stages an advanced model of pricing of construction production was proposed. Opportunities are formulated to improve pricing in a dynamic economic environment. The author's abstract of the research work is perfectly formed and synthetically and correctly presents the content, the achieved results and contributions of the completed author's research. The author's style is engaging, accessible and easy to read.

#### 5. Scientific and scientific – and - applied contributions in the dissertation work

I accept that the author's claims are well-founded. They reflect adequately achieved contribution results of the research work. I believe that the contributions achieved are a significant addition to the publicly available information on the researched problem. I accept the contributions indicated by the PhD candidate Krasimira Hristova – Bocheva (in total amount of 4 presented on pages 40 and 41) in the synopsis. In my personal opinion, the dissertation contains other contributing points that are not explicitly stated by the author. A striking example in this regard is the exposition on page 91 (at the end of the first paragraph of the second chapter) of the dissertation work. Here, on the basis of a synthesis of the final results of the analysis of the main trends in the development of the construction business in Europe and in our country during the researched period, leading guidelines for increasing the competitive potential of construction companies are presented. These are the development of construction technologies, with the aim of improving the efficiency of work processes; prefabricated construction; building information modelling (BIM); investments in infrastructure; software for managing construction processes and in particular for pricing; better equipment to ensure health and safety conditions of labor; "Green" construction, etc.

All this gives me reason to assert that the contributions are genuine, they objectively reflect the primary achievements in the overall research, and they are consistent with the requirements for awarding the ESD of "doctor".

#### 6. Evaluation of dissertation publications

The publications presented by the PhD candidate correspond to the quantitative requirements under Art. 35, para. 1, items 1-4 of the Regulations for the Development of the Academic Staff at the University of Economics – Varna. In the period from 2014 to 2022,



three independent publications in Bulgarian and English were made on the dissertation work. Two of them are reports from international scientific conferences of University of Economics – Varna. The first examines the factors that influence prices and pricing in construction. The second one analyses quality as value in the price of research and project output. The third publication is an article in a scientific journal in English. It examines formation and realization of a competitive pricing strategy of construction companies in a dynamic economic environment.

I appreciate the subject matter and content of the publications, which present the main points of the dissertation work and give the wide national audience the opportunity to get to know and appreciate the important aspects of construction product pricing.

#### 7. Opinion on the presence or absence of plagiarism

It is my deep personal conviction that the dissertation work as a whole, as well as the contributions achieved, are the result of the personal research of the PhD candidate and have an original character.

#### 8. Criticisms and recommendations

Except for some small remarks of a stylistic nature, I have no serious critical remarks about the dissertation work. Based on the results achieved so far, I recommend the author to deepen her research in the field of construction product marketing. She demonstrates very good economic and marketing analysis skills and can use them to study the competitiveness potential of construction companies in our country.

#### 9. Questions for the PhD candidate

After my extensive familiarization with the dissertation work, I would like to ask the PhD candidate the following question:

What is the theoretical relationship between the generally accepted marketing understanding of value and the author's concept of value of construction production?

#### 10. Conclusion

In general, the scientific work is dedicated to a current problem for the country's construction business. Uses a clear and logical presentation style and well-reasoned results



and contributions with research novelty. With it, the author shows the ability to analyse and propose methodical solutions to complex problems of the construction product pricing. The obtained results correspond to the requirements of the Law on the Development of the Academic Staff and the Regulations for its Application, which gives me the reason to propose to the Honorable Scientific Jury of the University of Economics – Varna to grant the educational and scientific degree "doctor" to Krasimira Hristova – Bocheva in a scientific direction 3.8 Economics, doctoral program "Economics and Management (Construction and real estate)".

December 13, 2022/ Sofia

Signature:

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ЗЗЛД и регламент (ЕС) 2016/ 679

/Assoc. Prof. Georgi Zabunov/