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| ИКОНОМИЧЕСКИ УНИВЕРСИТЕТ ВАРНА |
| Вх. № <u>РД 20-380/15.03.22г.</u> |

REVIEW

of the dissertation of Yanko Georgiev Georgiev,

PhD student in a regular form of education at the Department of Economics and Management of Trade and Services at the University of Economics - Varna,

on the topic: "Integrated management of key business processes in an enterprise for production and trade of bread and pasta."

Scientific field: 3. Social, economic and legal sciences Professional field: 3.8. Economics
Specialty: Economics and Management (Trade) Supervisor: Assoc. Prof. Dr Donka Zhelyazkova

Reviewer: Prof. Dr Dancho Yankov Danchev University of Economics – Varna

This review has been developed based on a decision of the scientific jury from 10.03.2022, appointed by order № RD-06-46 from 10.03.2022. of the Vice-Rector for Research at the University of Economics - Varna.

I. General characteristics of the dissertation

The dissertation consists of 274 pages (250 pages of main text plus 24 appendices) and consists of an introduction, three chapters, a conclusion, a list of references and an appendix. The main text presents 38 tables and 29 figures. The overall assessment of the development requires a consistent emphasis on the following essential points:

The dissertation topic has been successfully selected, as it is a significant problem, which is identifiable with the title. The logic of the presentation further supports the correct choice of the topic. The choice of the problem for the development and implementation of ERP systems as a dissertation topic is relevant and appropriate. The issues considered in the dissertation are in the process of continuous development and improvement, which is a good prerequisite for excellence of profound theoretical and applied contributions.

The thesis that specifies the nature and directions of research is that implementing the ERP system will optimise the processes in the analysed and similar enterprises and improve relationships with customers and suppliers.

The aim of the development is based on a summary of the theory and the practice in business information systems to reveal opportunities for increasing the economic indicators of the researched enterprise by implementing an ERP system. The aim of the dissertation is generally achieved by solving the four main tasks mentioned in the introduction.

The object of research in the dissertation is an enterprise for the production and trade of bread and pasta.

The subject of research is the implementation process of ERP systems and their impact on the economic indicators of the object of study.

The research methods are appropriately selected and used. The development used an information base and factual material, which was collected and adapted by the author according to the research topic.

The study's limitations are correctly stated and are mainly related to using a limited set of data about the site and the analysis.

The used literature covers a large number of literary sources (90).

Impressive is the large number of citations, references to many authors and the correct reflection of the main theoretical achievements on the researched problem. Literary sources are sufficient in volume, scope and content for the comprehensive study of the topic of the dissertation. The author knows the literature in the given scientific field correctly interprets and uses it. The main approaches and positions are thoroughly studied, constructively analysed, scientifically considered and successfully adapted for the research. This allows to substantiate the development's thesis consistently and reach practical solutions and reasoned proposals.

Dissertation structure. The separate chapters are logically connected under the set research goal, the approaches for its implementation and the scientific-applied verification of the primary author's thesis.

The *first chapter* clarifies some common problems related to the theoretical foundations of business information systems. This part of the dissertation presents a profound, extensive and in-depth overview of the different points of view on the nature and types of business information systems; the key processes and resources that can be managed through them; the processes of their implementation and the methodology of the dissertation research. Once again, the excellent knowledge of the literature on the problem, its appropriate generalisation, interpretation and adaptation, and the emphasis on critical theoretical aspects should be noted. All issues are considered in an argumentative, thorough and accordance with the latest academic achievements.

The second chapter is devoted to the problem of exploring the possibilities for implementing ERP systems in a particular enterprise: general characteristics and current status, as well as defining key business processes and economic analysis of the activity. It makes an excellent impression to use a lot of information and demonstrate analytical capabilities to draw appropriate conclusions and summaries.

Chapter three discusses some of the possibilities for introducing and implementing the ERP system in the researched enterprise by comparing the economic effects and upgrade options. The author's proposals are substantiated exciting and aim to improve the activities of enterprises in this industry.

II. Main contributing moments of the dissertation.

The contributions contained in the dissertation are expressed in enriching, expanding and supplementing the existing scientific knowledge on the researched problem, as well as supporting the practice.

The main theoretical contribution.

1. Based on in-depth research, theoretical summary and critical analysis of the primary literature sources in business information systems theory, the need to use a methodology for research and practical implementation of ERP systems is justified. Good knowledge of literary references and scientific achievements in this field and the systematic understanding of existing scientific hypotheses allow highlighting unresolved issues.
2. Extending the existing theory in this field by considering and clarifying the specifics of the introduction of ERP system in an enterprise of a particular economic branch. In other words, existing theory and methodology are used to solve a specific problem by formulating appropriate summaries, conclusions and recommendations.
3. Complementing the theory by offering a methodology for studying the possibilities for implementing ERP systems in the business allows to clarify and justify the main problems in the dissertation.

The main science-applicable contribution:

1. A complex and in-depth analysis of the external and internal environment of the object of study was performed with a view to the introduction of an ERP system. The research demonstrates the potential of the doctoral student to conduct independent research and correctly interpret its results.
2. Proposals have been made to open opportunities for implementing and upgrading ERP systems, which other economic entities can use.

III. Fulfilment of other requirements:

1. *Publications related to the dissertation.*

The candidate for obtaining the educational and scientific degree "Doctor" has presented four publications – 3 articles and one report, which is quite enough. They represent essential parts of the dissertation in terms of titles and content.

2. *The abstract* of 36 pages correctly, wholly and accurately reflects the content of the dissertation.

3. *The report on the contributions* of the moment in the dissertation is included in the abstract and is well presented by the doctoral student, who has indicated objectively and without exaggeration the main theoretical and applied achievements.

IV. Questions to the doctoral student

1. What is the return on investment for the enterprise's development and implementation of ERP systems?
2. For which enterprises (by size) are ERP systems appropriate?
3. What are the competitive advantages of implementing ERP systems in enterprises?
4. What are the main challenges in the implementation of ERP systems in enterprises in Bulgaria?
5. Is it possible for the ERP system to display additional indicators (other than those in the accounting documents) to be used for controlling purposes (for example, for fixed and variable costs, direct and indirect costs and CL)

V. Conclusion:

The dissertation meets the requirements - there are theoretical summaries, knowledge and erudition on the problems are demonstrated, research has been conducted with appropriate methods and substantiated conclusions and recommendations have been made.

Given the topic of the dissertation, it is content and completed form and based on the fact that the research thesis is defended, the stated goal is achieved, and the specific tasks are met, as well as due to the theoretical and scientific contributions contained in it. In implementing ERP systems, I believe that the dissertation meets the requirements for obtaining an educational and scientific degree "Doctor" in Economics.

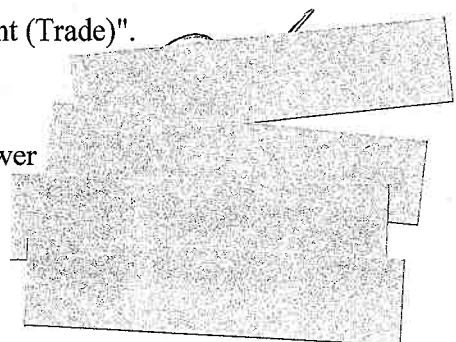
The dissertation contains scientific and applied research results, which represent an original contribution to the researched problem area and are popularised through several publications; the doctoral student has in-depth theoretical knowledge and demonstrates the ability to conduct independent research; the development of the dissertation offers a scientific and practical solution to a real problem of economic and social importance.

As a result of the above arguments, I strongly recommend that the doctoral student Yanko Georgiev be awarded the educational and scientific degree "Doctor" in professional field 3.8. Economics and speciality "Economics and Management (Trade)".

March 2022

Varna

Reviewer



REVIEW

Bx. № PA 20-394 / 18.03.2022r.

of dissertation work

for the establishment of an educational and scientific degree „Doctor“ in the doctoral program „Economics and Management (Trade)“ of the University of Economics - Varna

Author of the review: Assoc. Prof. Simeonka Alexandrova Petrova, PhD, D. A. Tsenov Academy of Economics - Svishtov, Department of Commerce, Scientific Specialty „Economics and Management (Trade)“.

Grounds for writing the review: Participation in the Scientific Jury, determined by Order of the Vice-Rector for Research at the University of Economics - Varna № RD-06-46 / 10.03.2022, under the open procedure for the defence of the dissertation, by professional field 3.8. „Economics“, doctoral program „Economics and Management (Trade)“, and the first meeting of the Scientific Jury, held on March 10, 2022.

Author of the dissertation: Yanko Georgiev Georgiev, a full-time doctoral student at the Department of Economics and Management of Trade and Services at the University of Economics - Varna.

The topic of the dissertation: „Integrated management of key business processes in enterprises for production and trade of bread and pasta“.

I. Information about the doctoral student

PhD student Yanko Georgiev Georgiev is studying in a regular form of doctoral studies in the field of higher education 3. Social, economic and legal sciences, professional field 3.8. Economics, under the doctoral program „Economics and Management (Trade)“ at the Department of „Economics and Management of Trade and Services“ of the University of Economics - Varna. The doctoral studies are in the period 2019-2022. The supervisor is Assoc. Prof. Dr Donka Zhelyazkova. During the training period, the individual doctoral plan is implemented according to the set activities.

In 2014, the doctoral student obtained a master's degree in Corporate Business and Management at the University of Economics - Varna. The autobiography presented by the doctoral student is the basis for understanding that the developed dissertation research is the result of theoretical knowledge and practical professional experience in the field of development and implementation of specialized software, including organization and implementation of ERP systems.

II. General presentation of the dissertation

The manuscript presented for review on the topic „Integrated management of key business processes in enterprises for the production and trade of bread and pasta“ has a total volume of 250 pages, of which 242 pages are body text. It consists of an introduction, three chapters, a conclusion, references and appendixes (24 pages). The main text of the paper contains 38 tables and 29 figures. The author refers to 90 literary sources, the predominant part of which (52) is in English and the remaining part (38) is in Bulgarian. The sources are used and cited in good faith. The rules of scientific ethics are observed in compliance with copyright.

The dissertation of doctoral student Yanko Georgiev Georgiev is presented in a form and volume corresponding to the necessary requirements. The manuscript shows that the dissertation has the ability to conduct independent research.

III. Assessment of the structure and content of the dissertation

The dissertability of the presented work is a consequence of the topicality of the researched issues. The scientific question interpreted by the doctoral student is placed in the focus of one of the fundamental principles of economic thinking and behaviour regarding the scarcity of resources and their efficient consumption. **The relevance of the topic studied by the doctoral student** is in the scientific and practical benefits of researching business information systems and their manifestation and application in the form of ERP systems in the overall management of enterprises. In the dissertation, ERP systems are considered in separate aspects of definition as information systems for identification and planning of all enterprise resources necessary for the implementation of business processes in supply, production and marketing. In a more general sense, the evaluated systems are reduced to a methodology for effective planning and management of the resources of the enterprise carrying out production and trade activities. ERP systems influence the way companies to develop their business, form business models, strategies, activities and operations in order to adapt to the conditions of limited resources. The benefits of ensuring optimal use of enterprise resources by achieving a complex unity between management and the dynamically changing business space are economically indisputable. The arguments presented in this way are the basis for the statement that the dissertation considers a current scientific problem and has the potential to supplement commercial economic knowledge in its theoretical and practical aspects.

The object of the dissertation is an enterprise for the production and trade of bread and pasta, and **the subject** – „... the process of implementing an ERP system and the impact it has on the economic performance of the enterprise.“ Thus defined object and subject correspond to **the main goal**, which is formulated by the doctoral student „... based on a theoretical overview of business information systems applicable in the production and trade enterprise and study of possibilities for implementing ERP systems in the enterprise for production and trade in pasta products, to introduce and implement such a system and to assess the economic effects of its use“.

To achieve this goal, the author defines **four research tasks**: 1) clarifying the theoretical foundations of business information systems applications in manufacturing enterprises and in particular defining the ERP system with all its specific features; 2) defining the key business processes in the enterprise for production and trade in bread and pasta and the possibilities for their optimization with the help of ERP software; 3) study of the process of implementation of ERP system with its main aspects and assessment of its course in an enterprise for production and trade in bread and pasta; 4) study of the economic condition and main indicators of the enterprise for production and trade in bread and pasta after starting to use the software.

The main thesis of the dissertation is appropriately formulated and defended in the presentation. In the process of research, the dissertation introduces **restrictive conditions**, which it correctly highlights in the introductory part. The choice of the studied period - 2012-2020, is motivated by the understanding of the author to study the reporting years in which the company operates before and after the introduction of the ERP system.

The structure of the dissertation is determined by the object, subject, purpose and research thesis defended by the author. **The first chapter** is entitled „Theoretical foundations of business information systems applicable in the production and trade enterprise“. Its presentation focuses on the systematic presentation of leading concepts and theoretical statements about business information systems. The stages in the evolution, change and upgrading of the considered systems from the 60s of the XX century to their modern manifestation are traced. The exhibition outlines key resources - capital, fixed and current assets, human resources, and processes of supply, production and marketing in enterprises managed with the help of business information systems. In this part of the development, one of its accents is brought out - the theoretical foundations and the problems facing the implementation of ERP systems in economic practice. A significant place is given to the key

processes and critical factors for the success in the implementation of ERP systems. In the last paragraph of the first chapter, the author presents a set of methods and economic tools, interpreting their nature and significance in the analysis and evaluation of the effects of implementing an ERP system in particular in the production and trade of bread and pasta (p. 66- 88). In order for this paragraph to be more fully and convincingly included in the first chapter, it is possible for the PhD student to outline a general generalizing methodological framework of the research, including a graphical illustration of the sequence in the adopted organization of research on the specific scientific problem. Each separate paragraph ends with more important conclusions and summaries compiled by the doctoral student.

The second chapter focuses on the study of the possibilities for the introduction of ERP systems in an enterprise for the production and trade of bread and pasta. The exposition in this part begins with a brief description of the enterprise for production and trade in bread and pasta and the environment in which it operates. The emerging market trends in the two segments - bread and pasta - are emerging. Competitive advantages stand out, created on the basis of purchasing an original Italian recipe and registering a trademark to distinguish the pasta produced. Special attention is paid to the geographical distribution of customers, including foreign ones

In the second paragraph, the dissertation presents a sequence of statements for defining and characterizing key business processes in the enterprise, managed through an ERP system. In the next third paragraph, the author carries out an economic analysis of the activities of an enterprise for the production and trade of bread and pasta before the introduction of the ERP system (pp. 142-169). The theoretical and empirical value of the analysis is in the findings and conclusions, built on a sequence of fundamental economic indicators for business and the database used for the object of study. The characteristics of the macroeconomic environment in which the enterprise operates are compared with the indicators and opportunities for individual growth. In this part, a Z-score analysis is performed to establish the degree of stability in the development of the assessed enterprise (pp. 166-168).

The second chapter concludes with arguments in favour of the thesis that the expanded scale of business is an appropriate condition for the implementation of an ERP system that will help organize the activity and contribute to maintaining favourable development trends.

The third chapter focuses on providing opportunities for the introduction and implementation of ERP systems in the enterprise for the production and trade of bread and pasta. The exposition of the dissertation in this part highlights the main stages in the implementation process. Critical factors for business success are determined on the basis of data for the assessed enterprise. The need for defining teams and selecting participants in the research process is presented. The processes for implementation of the ERP system are specified, as well as the post-implementation processes for the implementation of the system in the enterprise.

The second paragraph focuses on the presentation by the author of the results of a comparative analysis of the economic effects of the introduction of ERP system in enterprises for the production and trade of bread and pasta. With the greatest cognitive value in this part of the dissertation are the analyzes, evaluations and reflections of the author on the reported values of key economic indicators and the achieved results of the business activities of the evaluated enterprise (pp. 192-221). At the heart of this paragraph, the dissertation puts evidence in support of the idea that the period of favourable economic results is a consequence of the implementation of the ERP system in the enterprise.

The third paragraph of this chapter traces three interrelated possibilities for upgrading the ERP system in the bread and pasta production and marketing enterprise. The advantages of upgrading an already implemented ERP system and their benefits for enterprise management are outlined.

In the **final part of the dissertation**, the doctoral student systematizes the main conclusions and summaries that he reaches within the research, as well as outlines possible

directions for further research.

The above gives grounds for the **assessment** that the dissertation meets the requirements for structure and content of such work and can be defined as a completed scientific product with sufficient convincing evidence of scientific results.

The **language** and **style** of writing used by PhD student Yanko Georgiev Georgiev correspond to the standards of scientific expression. The literary sources are used by the author in good faith and correctly.

The **abstract** accompanying the dissertation, in a volume of 36 pages, with the necessary completeness and truthfulness reflects the content of the dissertation and the scientific results achieved by the author.

IV. Identification and evaluation of scientific and applied scientific contributions in the dissertation

The presented reference for the contributions in the dissertation work contains five contribution moments, which is in accordance with art. 6, para. 3 of ZRASRB (Development Act for the academic staff in the Republic of Bulgaria). Two of the formulated contributions are theoretical, one - methodological, and two - practical.

Theoretical contributions are related to (1) refining the nature and scope of ERP systems, their evolutionary development and application; (2) reasoned presentation of the sequence of processes for implementation of ERP system with the derivation of emerging difficulties.

The methodological contribution concerns: (4) on the basis of the chosen methodology a comparative study in the change of basic financial and economic indicators characterizing the activity of the enterprise before and after the introduction of the ERP system.

Practically-oriented contributions are found in (3) characterizing the key business processes in a bread and pasta production and marketing enterprise and tracking the integration of an ERP system into them, taking into account the benefits they bring; (5) opening opportunities for upgrading the ERP system in an enterprise for production and trade in bread and pasta related to the use of new technologies, implementation of software as a service and development of a module for managing framework agreements of the enterprise with its customers.

The contributions to the dissertation indicated by the doctoral student can be defined as actual and to a certain extent complementary basic theoretical and practical knowledge on a specific scientific problem.

VI. Publications and participation in scientific forums

The list of publications of doctoral student Yanko Georgiev Georgiev submitted to the documents is the basis for the assessment that it meets the minimum national requirements for acquiring ONS „Doctor“ under the PPZRAS in the Republic of Bulgaria. The doctoral student is the author of 4 independent publications - 3 articles (in English), published in the scientific journal „Bulletin of the Union of Scientists – Varna“, series „Economic Sciences“. The doctoral student participates with 1 independent scientific report in Bulgarian in a jubilee international scientific conference.

The reported publications are in refereed editions and announce more significant results from the dissertation research.

VII. Established or undiagnosed plagiarism in the dissertation and abstract

In the dissertation and the abstract, developed by PhD student Yanko Georgiev Georgiev, I found no signs of plagiarism and incorrect use of foreign texts. When composing the dissertation, the doctoral student adheres to the rules of scientific ethics. The requirements for bibliographic citation and reference are met.

VIII. Critical remarks and recommendations

The dissertation research of doctoral student Yanko Georgiev Georgiev was conducted in good faith. Without questioning the main qualities of the dissertation, some remarks and recommendations can be made on the submitted for review material:

1. On the structure of the dissertation research. The exposition of the dissertation follows a certain structural order, but it is possible to be supplemented. For example, statements and judgments related to key resources and processes in enterprises managed by business information systems can be presented through the prism of "integrated management", which is a basic concept included in the topic of the dissertation. In particular, it is necessary to extend the scope of the second paragraph of Chapter One to the concept of "integrated management", which in essence can achieve a better overlap between the formulated topic of the dissertation research and its structure. Structurally and substantively, further explanation and clarification of the fourth paragraph of the "Research Methodology" of the first chapter can be sought. Emphasis should be placed on its focus on conducting comparative research in the change of key financial and economic indicators characterizing the activities of the enterprise before and after the introduction of the ERP system.
2. According to the category apparatus. It is appropriate to interpret business information systems with a more focused definition of the possibilities for their application in "enterprises for production and trade in bread and pasta". In separate sections of the dissertation, the use of the term "manufacturing enterprise" is allowed, which does not correspond to the required degree to the set research tasks.
3. On the used methodological tools. The research methodology presented in the fourth paragraph of the first chapter can be reduced in a more emphasized and convincing way to a unified generalizing concept, as a structured way of distinguishing the sequence and sequence of specific steps, methods, indicators or economic tools of dissertation research. Appropriate graphical representation can be achieved in this direction.

IX. Questions to the dissertation

Regarding the dissertation, the author's position on the following issues is of interest:

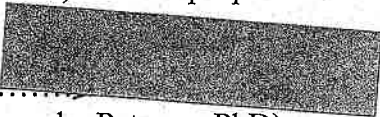
1. In the context of the research thesis defended in the dissertation, and taking into account the geographical distribution of customers, what significant economic effects can be distinguished from the implementation of the process of marketing bread and pasta, managed by an ERP system?
2. Is it reasonable and justified to apply, the adopted methodology for assessing the impact that the implemented ERP system has on the financial and economic results of business activities by enterprises operating in other economic sectors, outside the object of the study?

X. Conclusion

The presented dissertation on „Integrated management of key business processes in enterprises for the production and trade of bread and pasta“ is completed research on a topical and important topic of economic theory and practice. The dissertation is structured according to the academic standards adopted in the country. The scientific work covers the requirements of ZRASRB and the regulations for its implementation.

This gives me reason with full conviction to vote „for“ **the award of Yanko Georgiev Georgiev to the educational and scientific degree „Doctor“** in the professional field 3.8. „Economics“ in the doctoral program „Economics and Management (Trade)“ and to propose to the esteemed Scientific Jury to make a positive decision.

Data: 17 March 2022
Svishtov

Prepared the review: 
(Assoc. Prof. Simeonka Petrova, PhD)