

REVIEW

From Prof. Dr. Silvia Trifonova Trifonova-Pramatarova,
University of National and World Economy (UNWE), Sofia
of a dissertation for the award of the scientific degree “Doctor of Sciences”
in Area of Study 3. Social Sciences, Economics and Law
Field of Study 3.8. Economics

Author: Dr. Marek Magniszewski

Title: “Economic aspects of air transport in Poland”

1. General description of the presented materials

By order No. 108 of 01.03.2023 of the Rector of the Higher School of Insurance and Finance (VUZF) Prof. DSc. of Law Boris Velchev, I have been appointed as a member of the scientific jury to ensure a procedure for the defense of a dissertation on the topic "Economic aspects of air transport in Poland" for the award of a scientific degree "Doctor of Sciences" in the Area of Study 3. Social Sciences, Economics and Law, Field of Study 3.8. Economics. The author of the dissertation is Dr. Marek Magniszewski – a candidate for the "Finance" Department of the VUZF.

The materials presented by the VUZF include all the necessary documents for the procedure, namely: CV in English, copy of the diploma for the acquired educational-qualification degree "Doctor", dissertation in Russian, abstract in Russian, abstract in Bulgarian, a list of publications and summaries, a certificate of fulfillment of the national minimum requirements for acquiring a scientific degree "Doctor of Sciences" in a professional direction 3.8. Economics, scientific jury order, presentation by Dr. Marek Magniszewski, reference of contributions in Russian.

According to the abstract, the candidate has submitted a total of 19 publications, including: 1 monograph, 4 publications in SCOPUS, 9 articles in scientific journals, 1 section in a monograph and 4 edited monographs.

According to the list of publications and abstracts, the candidate has submitted a total of 17 publications, including: 1 monograph, 4 sections in a monograph, 2 edited monographs and 9

articles in scientific journals. This list does not specify which publications are in SCOPUS and which are not. Therefore, there is a discrepancy in the candidate's scientific output listed in the two places. This creates problems in the preparation of the review.

2. Brief biographical data about the candidate

Marek Magniszewski is a doctor of technical sciences in the field of mechanical engineering and machine operation. He defended his doctorate at the Faculty of Mechanical Engineering and Aeronautics of the Rzeszów University of Technology, Poland, in 2019.

As far as I can tell from the candidate's CV, he completed a master's degree at the AGH University of Science and Technology in Krakow, Faculty of Mining and Geoengineering in 2005. He also has other post-graduate studies and qualifications, and a bachelor's degree in engineering studies at Rzeszów University of Technology, Poland, in 2002.

Marek Magniszewski has extensive practical experience. From 2015 to 2020, he was the head of the Research and Development Center – head of the Materials Science and Prototyping Laboratory of the Podkarpackie Science Park Technological - RARR. From 2013 to 2017 he was a teacher of professional subjects at the School Complex Food in Rzeszów in the field of port and terminal operations, and from 2012 to 2018 he was a teacher of professional subjects at the Center for Science and Business “yAK ” in the field of techniques for the operation of ports and terminals - Post-secondary Extramural School for adults. In 2018, he worked as an expert at the Foundation for the Development of the Education System "Warsaw 2018", he is an expert at the Center for Research and Development of Professional Education at the Institute for Sustainable Technologies - National Research Institute Radom. In 2018-2019 he also worked at WSB University in Poznań, and in 2020-2021 at the University of Entrepreneurship and Administration in Lublin in the field of transport - unmanned systems, and at WSB University Dębowa Górnica in the field of information provision of logistics processes. As a military man, he held a number of positions in the period 1985-2011, when on December 1, 2011, he was transferred to the reserve. Since 2019, Marek Magniszewski has been a lecturer at the Rzeszów University of Technology, Faculty of Management, and before that at the Faculty of Mechanical Engineering and Aeronautics.

3. Relevance of the topic and appropriateness of the set goals and tasks

The topic of the problem developed in the dissertation work is relevant and interesting from a scientific and scientific-applied point of view. The candidate clarifies the nature of air transport,

presents its functional scope and makes an empirical study of oil prices, air transport in 28 European countries and airports in Europe and Poland.

The 28 European countries examined in the paper are: Austria, Belgium, Bulgaria, Greece, Denmark, Estonia, Ireland, Iceland, Spain, Italy, Cyprus, Luxembourg, Malta, Netherlands, Norway, Germany, Lithuania, Latvia, Poland, Portugal, Romania, Slovakia, Slovenia, Hungary, Finland, France, Czech Republic, Switzerland.

4. Knowing the problem

The author is well acquainted with the problem of scientific research, considering his extensive professional experience.

On page 3 in the abstract of the work it is written that: "The main purpose of the study is to show the economic dimension of air transport in Poland, for which specific tasks have been identified, including in particular showing the essence of air transport, presenting its functional scope and characterization of multidimensional analysis of jet fuel prices, together with multidimensional analysis of air transport in European countries and at airports in Europe and Poland."

On the same page 3 in the abstract it is written that: "The main purpose of this study is to show the economic aspects of air transport in Poland."

It would be good to use a single wording.

5. Research methodology

The work has a theoretical and empirical character. The chosen research methodology in the dissertation work of Dr. Marek Magniszewski includes: analysis, synthesis, comparison, empirical analysis, statistical analysis, critical analysis, etc.

As he writes on page 3 in the abstract: "The work is carried out in accordance with the conceptual and methodological convention of the economic sciences, using literature on the subject, and in the empirical part the author gave an analysis of raw, aggregated data from the statistics of the Central Statistical Office and airports."

6. Characterization and evaluation of the dissertation work

The dissertation work of Dr. Marek Magniszewski has a total volume of 203 pages. It is structured into an introduction, five main sections, subsections and a conclusion. 87 figures, 20

tables and 3 diagrams are presented. The list of information sources includes 47 literary sources and 33 Internet sites.

As I previously indicated, on page 3 of the abstract it is written that: "**The main purpose of the study** is to show the economic dimension of air transport in Poland, for which specific tasks have been identified, including in particular showing the essence of air transport, presenting its functional scope and characterizing the multi-dimensional analysis of jet fuel prices together with the multi-dimensional analysis of air transport in European countries and at airports in Europe and Poland." On the same page 3 in the abstract it is written that: "The main purpose of this study is to show the economic aspects of air transport in Poland." It would be good to use a single wording.

On page 3 of the abstract, **three specific objectives are indicated, which are practically research tasks**, as follows:

- "presentation of the essence of air transport, including a description of the development of aviation, basic concepts of air transport and problems in the functioning of air transport,
- analysis of the air transport sector, including air transport infrastructure, modes of transport and carriers, as well as aircraft and means of air transport,
- multidimensional characteristics and forecasts of aviation fuel oil prices."

7. Contributions and significance of the development for science and practice

The contributions of Dr. Marek Magniszewski's dissertation are indicated in the author's abstract in Bulgarian and in the list of contributions, which is in Russian. After my translation from Russian to Bulgarian of the candidate's contribution reference, I found the following. **In the reference of the contributions, the results of the scientific research**, of a theoretical and a practical-applied nature, are indicated. As this reference says:

"The work is written in the conceptual and methodological convention of economic sciences. The thematic literature was used, and in the empirical part an analysis was made of the initial statistical data of CSO and airports. The dissertation consists of an introduction, five main sections, subsections and a conclusion.

1. The purpose of the study is to show the economic aspects of air transport in Poland. The functional scope of air transport is presented and a multivariate analysis of jet fuel oil prices is

characterized, together with a multivariate analysis of air transport in European countries and an analysis of airports in Poland.

2. The essence of air transport, the main concepts of air transport, as well as individual problems of air transport were presented. Analysis of the air transport sector covers issues such as air transport infrastructure, transport modes and carriers, as well as aircraft and air transport.

3. Multivariate characteristics of oil prices and forecasting of aircraft fuel oil prices. The analysis of air transport in European countries includes a multivariate analysis of both passenger and air cargo traffic in Europe.

4. The analysis of Polish airports was carried out based on the register of Polish airports, the number of passengers handled at the airports and the amount of cargo handled at the Polish airports.

Results with practical and application features

1. Passenger air transport is one of the factors influencing the economic growth of individual countries. The COVID-19 pandemic has led to a long-term collapse of this sector. The study began by constructing a classified time series line graph of the number of passengers carried in 28 European countries. The next stage of the research was the analysis of the dependencies of the dynamic series from 2017 to 2018 in the 28 considered European countries. For this purpose, autocorrelation was performed. Partial autocorrelation confirms the non-stationarity of the data under consideration.

2. For illustrative and statistical purposes, the actual number of passengers carried by air in 28 European countries on a monthly basis from January 2017 to July 2021 is compared with a naive forecast assuming that the number of passengers carried in 2019 will be the same as in 2020 and 2021. This comparison will account for the decline in the number of passengers carried by passenger air transport in Europe due to the pandemic of the infectious disease COVID-19.

The assessment of the study carried out is to find that from January 2020 to July 2021 in the 28 European countries considered, approximately 1,699,045,588 fewer passengers were carried compared to the trend observed in 2019 in the individual 28 considered European countries.“

Based on the above, it is not very clear what the scientific and scientific-applied contributions of the work are. Most of the above are results of scientific research.

In my opinion, the following **contributions to science and practice of the candidate's dissertation** can be highlighted:

1/ Performed multivariate analysis of oil prices and prognostic analysis of oil prices - a major energy carrier in the field of air transport;

2/ Performed multidimensional analysis of passenger and cargo air transport in 28 European countries under consideration;

3/ Analysis made of all existing 15 airports, incl. central, regional and local in Poland, resulting in useful conclusions and generalizations for theory and practice.

8. Assessment of dissertation publications

In the abstract, the candidate has attached a total of 19 publications, including: 1 monograph, 4 publications in SCOPUS, 9 articles in scientific journals, 1 section in a monograph and 4 edited monographs.

In the list of publications and abstracts, the candidate has attached a total of 17 publications, including: 1 monograph, 4 sections in a monograph, 2 edited monographs and 9 articles in scientific journals. This list does not specify which publications are in SCOPUS and which are not.

Most of the publications are related to the topic of his dissertation work. Most of the candidate's publications are co-authored and fewer are independent. The problem is that most of the publications, and more precisely, the monograph, sections in monographs and edits of monographs, are in Polish, and their abstracts are only in Russian. In practice, in the set of materials there is nothing in the Bulgarian language regarding the publications, which made it difficult for me to prepare the review

9. Assessment of compliance with the minimum national requirements

From the presented Reference for the fulfillment of the minimum national requirements for awarding the scientific degree "Doctor of Sciences" in the professional direction 3.8. Economics, which the candidate of Marek Magniszewski has applied, it is evident that there is an over-fulfilment of these requirements.

10. Personal involvement of the candidate

I believe that the dissertation work is the work of the candidate himself, the result of his research on issues that are closely related to his scientific and professional interests.

11. Abstract

The content and quality of the abstract reflects the main results achieved in the dissertation work. But the problem is that the translation of the author's abstract in Bulgarian is not good at all. For example, on page 25 in the abstract it says: "The diploma work presented...". On page 24 in the abstract it says that the presented dissertation is "diverse"! I don't know what is meant by that.

12. Critical remarks and recommendations

I can make the following critical remarks and recommendations to the presented dissertation work of Dr. Marek Magniszewski.

First, my main criticism of the candidate is this:

On page 4 in the author's abstract of the work of Dr. Marek Magniszewski, he writes: **"This study is a kind of summary and at the same time a continuation of a study conducted with the author's participation on the economic aspect of air transport in Poland."**

But according to Art. 12, para. 5 of the Law on the Development of the Academic Staff in the Republic of Bulgaria (ZRASRB) (Previous para. 4 - SG No. 30 of 2018, in force from 04.05.2018): "The dissertation under para. 2 is prepared independently and cannot literally repeat the topic and a significant part of the content of the submitted for the acquisition of the educational and scientific degree "doctor".

[(2) For the acquisition of the scientific degree "Doctor of Sciences", the person under para. 1 must defend a dissertation under the conditions and according to the order of this law.]

On the other hand, in the copy of the diploma for the obtained educational and science degree "Doctor" from Rzeszów University of Technology, Poland, it is written that the topic of the dissertation work of M.Sc. Eng. Marek Magniśewski, is **"Analysis of the torsional strength of machine elements additively manufactured from polymeric materials"**, which is clearly completely different from the topic of his dissertation work for the award of the scientific degree "Doctor of Science". **This difference should have been clearly and categorically pointed out, and not incorrect expressions mentioned in the abstract, such as the above.**

Second, my other criticism of the candidate is related to the submitted publications for the competition. Most of the publications, and more precisely, the monograph, sections in monographs and edits of monographs, are in Polish, and their abstracts are in Russian. In practice, there is nothing in the Bulgarian language regarding the publications in the set of materials, which created serious difficulties for me when preparing the review. Such frivolous attitude of the candidate is unacceptable.

Third, two main research objectives and several specific objectives are stated. Such a practice with so many research objectives does not exist. It is necessary to formulate a development goal and several research tasks.

Fourth, my other criticism is related to the poor translation of the applicant's abstract. Examples of this are the following:

On page 25 in the abstract it says: **“The diploma work presented...”**.

On page 24 in the abstract it says that the presented dissertation is “diverse”!

Fifth, in addition, what is written in point 6 of the abstract entitled "Scientific contribution to the development of scientific knowledge" does not match what is written in the reference of contributions presented in Russian. Earlier, I indicated what the content of the reference of contributions is after its translation by me from Russian to Bulgarian.

Sixth, it is not clear to me what the conceptual and methodological convention of the economic sciences is.

In this regard, **I have a question for the candidate:**

Please, during the defense: 1/ To explain what this Convention of Economic Sciences is? 2/ To clearly formulate the scientific and scientific-applied contributions of his dissertation research.

13. Personal impressions

I do not know the candidate and I have no personal impressions of him.

CONCLUSION

Marek Magniszewski's dissertation contains contributions to science and practice and **meets** the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria

(ZRASRB) and the Regulations for the Implementation of ZRASRB. Due to the above, I give my ***positive assessment*** of the research conducted, presented by the above-reviewed dissertation work, abstract, achieved results and contributions, and ***I propose to the honorable scientific jury to award the scientific degree „Doctor of Sciences“*** to Marek Magniszewski in the Area of Study 3. Social Sciences, Economics and Law, Field of Study 3.8. Economics.

10.04.2023

Reviewer:

(Prof. Dr. Silvia Trifonova-Pramatarova)