



## REVIEW

On a dissertation for obtaining an educational and scientific degree of Doctor in:

**Field of higher education:** 3. Social, economic and legal sciences

**Professional field:** 3.8. Economics

**Scientific specialty:** Organization and management (agriculture and sub-sectors)

**Author of the dissertation:** Maria Sasha Dukoska - PhD student in self-study at the Department of Management and Marketing at the Agricultural University - Plovdiv

**Dissertation topic:** Opportunities for sustainable development of viticulture in Northern Macedonia

**Reviewe:** Prof. Dimitar Ivanov Kostov 3. Social, Economic and Legal Sciences, 3.8.Economics, appointed a member of the scientific jury by Order RD - 16.794 of 07.10.2020 of the Rector of the Agricultural University of Plovdiv and a meeting of the Scientific Jury .

### 1. Brief introduction of the candidate

The doctoral student is a citizen of the Republic of Northern Macedonia. He has a bachelor's degree in law and a master's degree in business law. She has worked in Germany and Northern Macedonia on international co-operation and the economy.

### 2. Relevance of the problem

The Republic of Northern Macedonia is located in a favorable geographical area for the development of the wine sector. This allows the production of high quality grapes, wine and wine products.

Viticulture as a sub-branch of perennial crops provides permanent employment of the labor force in the areas where the vineyards are located. This is an important factor for its development.

The production of grapes, wine and wine products is least affected by the economic problems in agriculture, which allows it to be sustainable in its development.

The main factor in this production is the competitiveness in terms of the quality of production, given the consistency of other factors related to soil and climate.

All this shows that the topic is dissertable, and the problem is important for the economy of the Republic of Northern Macedonia.

### **3. Purpose, tasks, hypotheses and research methods**

The goal set in the dissertation is short, precise and clear. It fully corresponds to the title of the study and provides an opportunity to assess the main factors determining the sustainable development of viticulture in the Republic of Northern Macedonia. Fulfilling the set goal provides an opportunity to increase the sustainability of the development of the wine industry and its competitiveness in the future.

To achieve this goal, four main tasks are solved. It is quite right to do so in determining their sequence. By solving the first task, the approach of sustainable development of viticulture is determined and clarified. The second task is related to the methodological and methodological approaches for determining the development of viticulture. The third task is related to the analytical part of the development, and the fourth is entirely dedicated to solving problems and is the project part of the dissertation.

The subject and object of the study are precisely and clearly defined. They are mentioned in the title of the dissertation.

The hypotheses are determined by the research approaches. The methods used in the study are traditional and modern.

### **4. Visualization and presentation of the obtained results**

The dissertation is developed in a classical form: three chapters and appendices. The right conclusions and good suggestions have been made.

The first chapter provides a detailed and analytical review of the literature, which are related to clarifying the sustainable development of agriculture.

The second chapter is entirely dedicated to the sustainable development of viticulture, and the third chapter, which is the project part of the development, includes proposals for the future development of the industry.

The study is well illustrated with 47 figures and appendices. The materials are presented in a form that allows those who get acquainted with them to get a clear idea of the analysis of the problem and how to solve it.

## **5. Discussion of the results and used literature**

The analysis of sustainability is made not only through the application of an integrated methodology, but also through the use of specific factors influencing the activity of the studied system.

The methodology of sustainability research in the sector is based on a holistically integrated approach. The following indicators occupy a special place in the four pillars of sustainability:

- Indicators used by national and international institutions
- Specific characteristics
- Indicators created by the doctoral student

Experts were used for the multi-criteria expert evaluation. Indicators and experts are grouped thematically in panels. They performed the evaluation under eight headings.

The selected indicators are included in a questionnaire used to analyze the activity of 62 vineyards. The evaluation system is the personal work of the doctoral student. The criteria for expert evaluation are related to:

- Distinctive power in time and place
- Analytical value
- Measurability
- Transparency
- Relevance
- Transferability
- Relevance of sustainability

The doctoral student believes that the choice of criteria is the basis of the methodology. This is the contributing moment in the methodological part of the development. The correct selection of the criteria has enabled the author of the dissertation to make a very good study of the problem.

The analysis of the sustainability of viticulture is made according to the defined pillars. In forming the summary economic assessment, seven indicators were used, which cover the overall economic activity of the farm. The average scores from each pillar are presented with a certain number of points.

In this type of analysis it was concluded that almost all analyzed farms experience certain difficulties in their activities. The analysis concluded that the economic risk factors are:

- Low labor productivity
- Weak capitalization of production
- Poor productivity
- Difficulties with the realization of the finished products

In forming the summary assessment of the ecological pillar, seven indicators were used, which cover all dimensions of environmental protection.

The analysis of this pillar shows that all farms included in the analysis comply with the requirements regarding nature protection. Conclusions were made about the environmental sustainability of the industry, which showed that the determining factors are:

- Poor population structure
- The low level of biodiversity

The next part of the analysis is related to the social pillar of sustainability. In forming the summary assessment of this pillar, seven indicators were used, which cover all social dimensions of economic activity. The analysis showed a low level of sustainability of the sector. A group of factors has been identified that have a negative impact on the development of the sector. Yeah, they're like that:

- Low level of production certification
- Gender inequality
- Insignificant use of consulting services
- Lack of association between producers

The analysis of the sector continues with institutional sustainability. In this part of the analysis, four indicators were used, which cover the institutional relationships. High values of the grades were obtained. They show that companies in the industry are adapting well to the requirements of the institutions. Here it has been proven that a small part of the enterprises have problems with their supply of raw materials. These are mainly small farms located in areas with poorly developed infrastructure. It turns out that they do not have much influence on the development of the sector.

In forming the unified value estimate, generalized estimates of the four pillars of sustainability were used.

The overall assessment of the sustainability of the surveyed farms is related to the size of their size. The analysis shows that the differences are not large. The same analysis shows that small farms have much better results. This type of farms rely mainly on direct sales. They minimize costs better and get

much better results. Because they are small farms and have a smaller volume of wine, which they sell most easily.

The next part of the analysis is related to the overall assessment of the sustainability of farms by legal status. When studying the legal form of farms, they are divided into five groups - individuals who are sole traders, limited liability companies, joint stock companies and cooperatives.

This type of analysis shows how different types of law firms deal with sustainability issues. In small farms, resilience is not high. They do not have the opportunity to create new plantations. They do not have enough investment for new equipment as well as for innovations.

Legal entities such as joint stock companies, limited liability companies and cooperatives have a greater opportunity to attract investment.

Based on the analysis, conclusions and proposals are made for the future development of viticulture and winemaking in the Republic of Northern Macedonia.

## **6. Contributions of the dissertation work**

I accept the five contributions proposed by the doctoral student and allow myself to group them as follows:

### **I. Scientific contributions**

1. The nature of sustainable development and the sustainability of agriculture, and in particular viticulture, has been clarified.
2. A conceptual framework for assessing the main factors determining the sustainable development of viticulture in Northern Macedonia has been developed.

### **II. Scientific and applied contributions**

1. The sustainability of the wine sector of its individual components (pillars) is analyzed and evaluated.
2. The needs of vineyards for their sustainable development in the future have been identified.
3. The opportunities for sustainable development of the sector in the future are identified.

## **7. Critical remarks and questions**

There is no table for abbreviations that would make it easier for the person familiar with the dissertation.

### **8. Published articles and citations**

The doctoral student has published three scientific publications that are directly related to the dissertation.

The abstract fully corresponds to the materials included in the dissertation.

### **CONCLUSION**

The dissertation presented by Maria Dukoska is a fully completed research. It has scientific and practical value.

Based on the different research methods learned and applied by the doctoral student, the correctly conducted research, the summaries and conclusions made, I believe that the presented dissertation meets the requirements of ZRASRB and the Rules of AI for its application, which gives me reason to evaluate it POSITIVE.

I allow myself to propose to the esteemed Scientific Jury, also to vote positively and to award Maria Sasha Dukoska ONS "Doctor" in the scientific specialty - Organization and management of production (agriculture and subsectors).

October 28, 2020

REVIEWER:



Prof. Dimitar Kostov

