

S U M M A R Y

of the doctoral thesis entitled:

RESEARCH ON THE INSERTION ON THE LABOUR MARKET OF THE AGRONOMIC HIGHER EDUCATION GRADUATES

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Following the signing of the Bologna Declaration in 1999, Romania has committed to align its educational policies with European values and principles. This transformation facilitated the integration of Romanian higher education into a common European framework, promoting a quality educational system as well as structural reforms aimed to improve access to education and support the efficient and sustainable insertion of graduates into the labour market.

Thus, the significant transformations undergone by the agronomic higher education in Romania in the last decades, within the context of integration into the European Higher Education Area, are not restricted to adjusting the curriculum in order to reflect the latest agricultural technology and practices; they also include the implementation of higher education standards, in compliance with the European norms and guidelines in education and research.

At the same time, the agronomic labour market is characterized by permanent innovation demands, adjustment to climate change and the need of sustainable management of natural resources. Hence, the integration on the labour market becomes a complex process, which requires the graduates to have not only solid technical competencies, but also the ability respond rapidly and effectively to the various challenges of the agronomic sector.

Under the circumstances, the responsibility of the specialized education institutions to provide relevant competencies becomes a prerequisite for ensuring employability and quality resources able to support performance.

The doctoral thesis aims to contribute significantly in this respect by evaluating the level of satisfaction of the students and graduates with regard to the competencies acquired and the quality of the learning experience, using USAMV in Bucharest as a case study. As a quality assurance element, the thesis proposes the development of a performance management system with the help the Balance Scorecard tool adjusted to the context of the agronomic higher education. This tool - typical of the business environment – adjusted to the characteristics of the education environment, represents a strategic innovation aimed to improve the relevance of the learning experience and the insertion of the graduates into the labour market.

The theoretical approach of the thesis stands on the analysis of specialized literature, legislation, existing theories and models and capitalizes on the results of relevant studies and research. The extensive documentation – both nationally, and internationally – correlated the business environment with the educational environment thus laying the basis for conducting

the case study at USAMV in Bucharest, with a focus on the labour market insertion of the students and graduates of the university's various programmes.

The research methodology includes a questionnaire-based survey, comparative analysis, SWOT analysis, and synthesis in a step-by-step scientific process from data collection to centralization, processing, and interpretation. Sources of qualitative and quantitative statistical data include official documents, reports from the Ministry of Education and its agencies, the National Institute of Statistics, and USAMV Bucharest.

The practical character of the thesis is secured by the proposed adapted version of the Balanced Scorecard, implemented by means of a personalized application integrating both the theoretical elements studied and the results of the research conducted at USAMV in Bucharest.

The doctoral thesis titled "Research on the Insertion on the Labour Market of Agronomic Higher Education Graduates " is structured into two main parts: a theoretical part and an applied part, based on the author's own research.

The first part, titled "Literature Review", covers the following aspects:

- Chapter I explores current trends in higher education in Romania, including structure, characteristics, university autonomy and financing of the education system.

The Integration into the European Higher Education Area is the main platform that has shaped the tendencies of Romanian Higher Education, having as its main objective the promotion of quality higher education through profound reforms and a unified legal framework. Aligning educational policies with European standards involves updating educational programs and implementing high-quality standards. These reforms aim to increase the competitiveness and compatibility of the Romanian educational system in a European context.

The chapter presents the key stages of the Bologna Process in chronological order. The Bologna Declaration of 1999 marks the beginning of major changes in the higher education system in Romania; then the Prague Declaration (2001) and the Berlin Declaration (2003) emphasized the importance of international cooperation and academic mobility. The Bergen Declaration (2005) and the London Declaration (2007) consolidated the reforms, focusing on quality assurance and the recognition of qualifications at the European level. The Leuven Declaration (2009) and the Budapest Declaration (2010) highlighted the importance of lifelong learning and continuous education. The Bucharest Declaration (2012) and the Yerevan Declaration (2015) promoted innovation and adaptability of educational systems to new labor market requirements. The Paris Declaration (2018) and the Rome Declaration (2020) renewed the commitment to cooperation and social dialogue, adapting educational systems to contemporary global challenges. These reforms have been crucial for adapting the educational system to contemporary requirements and challenges, thus promoting higher education that meets both the needs of students and those of the labor market.

Within the context of European transformations, the analysis of the higher education is conducted in relation to the national legal framework. It focuses on the values promoted, the organizational structure and the dynamics of a network of over 100 universities, over the last 8 years.

University autonomy completes the analysis of the higher education system, incorporating the European perspective through four major dimensions: organizational autonomy, academic autonomy, financial autonomy, and staffing autonomy. These dimensions

highlight the legal framework and responsibilities of the government, the Ministry of Education, and universities, resulting in an average degree of autonomy compared to other European countries.

The first chapter concludes with an analysis of the funding methodology of the higher education system, considering the allocation of public funds and ensuring the stability of the higher education system.

- **Chapter II** analyzes quality assurance in the higher education system, detailing the legislative framework and the implementation of quality management in higher education.

The detailing of the reform process through the analysis of actions planned and implemented at the national level during 2021-2024 period provides a framework for analyzing progress in higher education and benchmarks for analyzing quality assurance in direct correlation with European standards. The analysis in relation to the legislative framework issued by the Ministry of Education, the legislation related to the activities of ARACIS and CNATDCU, as well as the ENQA standards guarantee an integrated perspective on quality assurance. Methodologically, the chapter includes the analysis of principles based on four interconnected processes in quality assurance, providing operational consistency in three main areas: institutional capacity, educational effectiveness, and quality management.

The chapter includes a comprehensive analysis of standards for internal and external quality assurance, as well as of the underlying principles of the quality assurance agencies. This analysis is complemented by the action plan for 2022-2026, which provides elements for future development and consolidates the European approach to the quality assurance system.

- **Chapter III** focuses on educational marketing, including the tools and strategies used in the context of higher education. The analysis is conducted based on fundamental marketing concepts grounded in notions of exchange, transaction, and relationship. The business approach is subsequently applied in the educational context by adapting concepts and identifying characteristics of educational marketing. The analysis adds value to the work by identifying the results that educational marketing can generate: increased university visibility, number of students and revenues. To ensure these effects, the analysis identifies specific educational marketing tools and associated channels - advertising, digital marketing, public relations, direct sales, referral programs, promotions and discounts – and develops a strategy across seven interconnected dimensions. The analysis of opportunities, disadvantages, and associated risks contributes to the adequate foundation of an educational marketing strategy, as an element of promotion and institutional branding of the university.

Part II, titled "Own Research", includes:

- **Chapter IV** comprises qualitative and quantitative research on the perceptions of students and graduates regarding the relevance of acquired competencies in the context of the labor market.

The analysis of the USAMV Bucharest is a preamble of the research, providing information about the graduates' competencies and employability areas. The university's educational offer is also detailed in terms of abilities, knowledge and educational areas, correlating with existing resources that support the educational process.

The chapter includes the research methodology framework, objectives and hypotheses, as well as the tools employed. To assess the perceptions of USAMVB students and graduates regarding the quality of the learning experience and the competencies acquired during

undergraduate studies, a structured questionnaire with three sections was applied. The questionnaire, addressed to a sample of 600 USAMVB students and graduates, received 582 responses.

The first section of the questionnaire includes seven closed questions about respondents' identifying data (age, gender, residence, educational status, faculty studied, study program completed or in progress, current job). The second section contains two main items with sub-items evaluated on a Likert scale from 1 to 5. The first item assesses satisfaction with the quality of the learning experience through factors such as: course content and structure, teaching quality, USAMVB's reputation among employers, practical orientation of courses, level of knowledge and skills acquired, career counseling and guidance services, employment opportunities, quality of university facilities. The second item evaluates acquired competencies such as: field-specific knowledge, ability to work in the field, specific digital competencies, technical creativity and innovation, management, teamwork, foreign language communication, entrepreneurial skills. The final section completes the respondent profile by analyzing their participation in various activities and services offered by USAMVB, such as job fairs, professional training courses, membership in the student association, career counseling and guidance, mobility scholarships, internships, creating a professional CV, using the USAMV Jobs platform.

The analysis of qualitative and quantitative data regarding student satisfaction with the learning experience thus valorizes nine factors whose scores contribute to validating the research hypotheses. Within the design of the research, the learning experience is complemented by the assessment of the competencies acquired by the students to provide a multifactorial analysis of their labor market integration.

- **Chapter V** focuses on the study of agronomic higher education graduates' labor market integration, addressing aspects such as the transition from study to professional life, socio-professional integration, and the adjustment of university education to labor market requirements. It also includes a case study regarding the development of a performance management system based on the Balanced Scorecard at USAMV Bucharest.

The section on the transition from study to professional life in the agronomic field explores the graduates' interaction with the labor market and highlights the diverse opportunities available to them. USAMV Bucharest graduates are prepared to engage in various sectors such as food production, environmental management, research, government services, education, consultancy and expertise, administration and management, veterinary medicine and public health, constructions and environment. They acquire competencies that allow them to manage agricultural units, to take part in research projects, to offer counselling, implement agricultural policies and control the quality of food.

The chapter also highlights merging fields that offer new employment opportunities, such as: precision technology, urban agriculture, genetic editing, sustainable agriculture, robotics and agricultural automation, renewable energy, water and resources management. These areas create new professions, such as: experts in digital agriculture, managers of vertical farms, biotechnology researchers and sustainable agriculture consultants.

The section about the students' insertion into labor market analyzes the complex transition from education to labour market, outlining the importance of investing in

education and social networks. The analysis highlights the value of taking part in social events and extracurricular activities for the development of career skills.

USAMV Bucharest attaches great importance to the organization of activities meant to support the socio-emotional development of the students. The Centre for Career Counselling and Guidance (CCOC) provides courses on the topics like personal development and psychological counselling and organizes social and sports events for a large audience.

The section dedicated to adjusting the education to the requirements of the labour market within the context of modern economy highlights the importance of preparing the students for current and future challenges. USAMV Bucharest meets such requirements by integrating modern educational programmes, focused on digital competencies and emerging fields such as sustainable agriculture, agricultural biotechnology and renewable energy.

Digital technologies play an essential part in modern agriculture, enhancing farm productivity and effectiveness. USAMV Bucharest has integrated precision agriculture and digital technology courses into the curriculum. Over 200 students have attended digital skills courses, while in the past three years the university was certified as a CERTIPORT testing center, which ensures and acknowledges the quality of the diplomas issued by the center.

Sustainable agriculture, agricultural biotechnology and renewable energies have been creating more and more jobs. USAMV Bucharest is adapting its curriculum to include such fields and provide the students with the appropriate skills. Sustainable agricultural practices, the use of renewable resources and the efficient management of water resources are landmarks of the academic strategy. These initiatives not only meet the current requirements of the labour market, but also prepare the future generations of agronomists to contribute to sustainability and innovation in agriculture.

USAMV Bucharest highlights the analysis of the indicators of labour market transition from the perspective of performance management and proposes a BSC version adjusted to the educational environment. The design of the strategic map is the key element, which offers a clear and structured representation of the strategic objectives and of the way they can be reached. The tool includes four central dimensions which operationalized to provide data regarding the profile of each student with regard to the relevant indicators of labour market insertion. Thus, the application proposed becomes a platform which collects and processes such data for each student with the aim to generate future directions of intervention, development and quality assurance from a holistic perspective.

- **Chapter VI** comprises the general conclusions of the research, as well as recommendations for improving the insertion of the agronomic higher education graduates on the labour market.

Balanced Scorecard, as a performance management tool focused on objectives and indicators, allows the measurement and assessment of the USAMV Bucharest students' performance in order to increase their employability on the labour market. Proposed dimensions: academic level, socio-professional, well-being, diversity, civic involvement, self-development which creates a complex and dynamic profile, relevant both for the student and the higher education institution, with the aim to ensure the graduates employability in areas matching their studies.

Thus, the structure of the thesis reflects both a detailed analysis of the theoretical and legal context relevant for higher education in Romania and empirical and applied research, providing a deep understanding of the professional integration of agronomic graduates.