CONSIDERATIONS ON THE EVALUATION AND MONITORING OF STUDENT ENTREPRENEURIAL CENTERS

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ABSTRACT: *This article presents the fundamental mechanisms of monitoring and evaluation processes, highlighting their role in ensuring efficiency and transparency within the Student Entrepreneurship Centers of Romanian Universities. In the first stage, the theoretical considerations that underpin monitoring and evaluation as pillars of good university governance, essential for transforming the student entrepreneurial ecosystem into a sustainable model, are explored. In the second stage, the various evaluation typologies are explored, considered their applicability according to the life cycle of the projects and the objectives pursued. Particular attention is paid to the analysis of the resource requirements (specialized human, digital infrastructure and PNRRR funding). A central element of the research is the analysis of the resource requirements (human, financial and technical) essential for the implementation of a rigorous evaluation system. The conclusions of the study provide recommendations for optimizing the performance of entrepreneurial centers, emphasizing the need for a correlation between the available resources and the long-term development objectives of student entrepreneurs in Romania.*

KEY WORDS: *monitoring, evaluation, Student Entrepreneurial Centers, University entrepreneurship.*

JEL CLASSIFICATIONS: *L26, I23, M13.*

1. INTRODUCTION

In the context of accelerated economic transformations of recent years, Universities in Romania have gone beyond the traditional role of providers of theoretical education, becoming central actors in the innovation ecosystem through Student Entrepreneurial Centers. These structures represent the core of the development of practical skills, providing students with the necessary framework for transforming creative ideas into sustainable business models (Isac, et. al., 2022; Niță,

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2019). However, the success of these centers can no longer be left to chance, they require a rigorous management system that validates the impact of investments and mentoring programs.

The central pillar of any performance-oriented organization is a robust monitoring and evaluation process. In the first part of the paper, the theoretical considerations that define these processes not only as administrative control mechanisms, but as strategic learning tools are analysed. Continuous monitoring and periodic evaluation allow entrepreneurial centers to adjust their strategies in real time, ensuring the alignment of activities with the dynamic needs of the labour market and with European standards of entrepreneurial education (Nițǎ & Isac, 2016; Nițǎ & Fleșer, 2011; Măcriș & Măcriș, 2010).

However, the efficiency of these processes depends on the selection of evaluation typologies appropriate to the university profile. The article explores how process, impact or outcome evaluations can be applied to measure student progress from the initiation phase to the actual launch of a start-up. This methodological approach is essential to differentiate between the simple participation in various workshops and the real, quantifiable success of new businesses created in the academic environment.

Finally, any evaluation system, no matter how well-founded theoretically, remains ineffective in the absence of pragmatic planning. Therefore, the paper includes an analysis of the resource requirements, highlighting the fact that quality monitoring involves specific costs: from human, technical and financing expertise, to digital solutions for tracking the entrepreneurial journey. By corroborating these dimensions, this article aims to provide a methodological guide for center managers, contributing to the professionalization of university entrepreneurship in Romania in the future.

2. MONITORING VERSUS EVALUATION - THEORETICAL APPROACHES

Monitoring and evaluation are important management tools in the planning and implementation of activities, providing relevant information on the efficiency and effectiveness of the efforts made. They also contribute to optimizing activity planning, rational use of resources and ensuring the sustainability of the activities carried out (Ille, 2021; Măcriș & Măcriș, 2011). Monitoring and evaluation analyze and control compliance with established ***objectives and deadlines***, taking into account aspects such as:

- *comparing the results obtained with those planned;*
- *analyzing the degree of achievement of objectives;*
- *evaluating the efficiency of resource use.*

Monitoring is considered a basic managerial tool, used to track and understand the progress recorded in the implementation of activities, for example within a student entrepreneurial center. It focuses on short-term performance, compared to the initial planning, allowing for periodic verification of current activities. The information resulting from the monitoring process is reflected through specific indicators and is collected using tools such as: interim activity reports, expert reports, evaluation reports

(quarterly or annual), final activity reports or final evaluation reports (Nițu-Antonie, et. al., 2023).

On the other hand, any activity within a project subject to implementation must also be analyzed from the perspective of evaluation. The entire project development cycle is oriented towards achieving the established general and specific objectives. Evaluation is a complex and multidimensional process of collecting information, through the use of specific tools, in order to formulate value judgments related to pre-established criteria, completed with assessments that support the decision-making process. Thus, evaluation allows the formulation of conclusions "*on the state of a fact or process, at a certain moment, based on information collected with the help of tools that facilitate measurement in relation to reference standards or norms"* (Popescu, et al., 2016).

In this context, evaluation can be defined as an assessment tool that quantifies the results, objectives and impact of the activities carried out within a project, providing useful information for initiating similar future projects. Therefore, evaluation can be considered as *"the action through which the performance of activities is determined, involving the collection, examination and analysis of information regarding the degree of achievement of the objectives of those activities"* (OECD, 2019; Ogarcă, 2024).

Evaluation contributes to improving the decision-making process, avoiding the repetition of errors and preventing the waste of resources. Following the evaluation process, decisions can be made regarding the continuation, modification or interruption of an activity. Consequently, the evaluation focuses on dimensions such as: the resources invested, the objectives achieved, the results obtained and the impact generated, being intended to provide ***answers to questions*** such as (Măcriș & Ciurea, 2013):

- *To what extent were the proposed objectives achieved and what were the causes of any non-fulfillment?*
- *To what extent were the planned activities carried out?*
- *How efficiently were the available resources used?*
- *What was the impact of the activities and what changes did they generate?*
- *What lessons can be learned from the activities?*
- *How can the experience gained be capitalized on in future activities?*

Once established, the evaluation plan must include information on the methods of collecting data on the progress of activities and the criteria used to assess the degree of achievement of the objectives and expected results. Evaluation cannot be carried out independently, without being preceded by a rigorous monitoring process, which involves the prior establishment of performance indicators and standards. Thus, the main role of evaluation is to contribute to improving the quality of activities, representing one of the fundamental components of project management.

3. APPLICABLE EVALUATION TYPES

The evaluation of activities carried out within student entrepreneurial centers is an essential process for ensuring their quality, efficiency and impact on direct and

indirect beneficiaries. Depending on the time of implementation, the intended purpose, the methods used and the level of analysis, the evaluation can take several **forms**, each having a specific role in the management and development of entrepreneurial centers. Among these are:

➔ ***Initial evaluation (ex-ante).*** It is carried out before the start of the entrepreneurial center's activities and aims to analyze the context, the needs of the target group and the existing opportunities. This contributes to the substantiation of decisions regarding the objectives, the structure of activities and the allocation of resources. Within student entrepreneurial centers, the initial evaluation can target the level of students' entrepreneurial skills, their interest in entrepreneurial initiatives and the institutional capacity of the center.

➔ ***Process evaluation (formative).*** Also called formative evaluation, it is carried out during the implementation of activities and monitors how they are carried out in relation to the initial planning. This allows for the timely identification of dysfunctions, difficulties encountered and aspects that can be improved in real time. In the case of student entrepreneurship centers, process evaluation analyzes, for example, the degree of student participation, the quality of training programs, the efficiency of mentoring and the adequacy of the methods used.

➔ ***Evaluation of results (summative).*** It is carried out at the end of a stage or of the entire program and aims to assess the degree of achievement of the established objectives. It measures the results obtained, such as the development of entrepreneurial skills, the number of business plans developed, entrepreneurial initiatives launched or the level of satisfaction of the beneficiaries. The evaluation of results provides an overview of the center's performance and justifies the efficiency of the intervention.

➔ ***Impact evaluation.*** It tracks the medium and long-term effects of the entrepreneurial center's activities on the beneficiaries and on the socio-economic environment. In the case of student entrepreneurial centers, it can analyze the professional insertion of graduates, the sustainability of the businesses initiated, the contribution to the development of the local entrepreneurial ecosystem or changes in attitudes towards entrepreneurship. This type of evaluation involves complex methods and is usually carried out after the completion of the main activities.

➔ ***Performance evaluation.*** It aims at the ratio between the resources used and the results obtained (efficiency), as well as the extent to which the proposed objectives have been achieved (effectiveness). Applied to student entrepreneurial centers, performance evaluation allows the assessment of how funds, time and human resources have been used to achieve educational and entrepreneurial goals.

➔ ***Quality evaluation.*** This focuses on the operating standards of the entrepreneurial center, analyzing the relevance of educational content, the competence of trainers and mentors, the adequacy of the infrastructure and the satisfaction of beneficiaries. This type of evaluation contributes to the continuous improvement of the services offered and their alignment with good practices in the field of entrepreneurial education.

➔ ***Participatory evaluation.*** It is the one that actively involves direct beneficiaries (students), trainers, mentors and other relevant actors in the evaluation

process. This promotes transparency, ownership of the results and adaptation of activities to the real needs of the target group. Within student entrepreneurial centers, participatory evaluation can include feedback questionnaires, focus groups or interviews with participants

The evaluation of activities carried out within a student entrepreneurial center also involves the use of specific indicators, adapted to the objectives and type of evaluation carried out. These indicators allow the measurement of progress, performance and impact of interventions, providing an objective basis for decision-making and improving future activities. Table 1 presents a summary of the correlation between the type of evaluation - indicators - tools and concrete examples, adapted to the activity of a student entrepreneurial center.

Table 1. Evaluation typologies applicable to student entrepreneurial centers

Type of evaluation	Evaluation indicators	Evaluation tools	Examples from the center's activity
Initial evaluation	▪ Number of interested students; ▪ Initial level of entrepreneurial skills; ▪ Identified training needs; ▪ Institutional capacity.	• Diagnostic questionnaires; • Initial tests; • Document analysis; • Interviews.	Applying a questionnaire upon enrollment to identify the level of entrepreneurial knowledge and to adapt the training program.
Process evaluation	▪ Participation rate; ▪ Number of activities carried out according to plan; ▪ Participant satisfaction level; ▪ Level of involvement.	• Monitoring sheets; • Interim reports; • Feedback questionnaires; • Direct observation.	Monitoring workshop attendance and adjusting duration or teaching method based on feedback.
Results evaluation	▪ Number of students completing the program; ▪ Number of business plans completed; ▪ Increase in skills (pre/post-test); ▪ Final satisfaction level.	• Final tests; • Activity reports; • Business plan evaluation; • Final questionnaires.	Evaluation of business plans by a committee and comparison of the results of initial and final tests.
Impact evaluation	▪ Number of start-ups created; ▪ Business survival rate; ▪ Professional insertion; ▪ Funding attraction.	• Follow-up studies; • Alumni interviews; • Statistical data analysis; • Impact reports.	Conducting a study 12 months after completing the program to analyze the professional path of graduates.
Performance evaluation	▪ Cost per participant; ▪ Degree of achievement of objectives;	• Cost-benefit analysis; • Financial reports; • Analysis of	Reducing the cost per participant by using volunteer mentoring

	▪ Resource-result ratio; ▪ Budget compliance.	performance indicators.	and existing infrastructure.
Quality evaluation	▪ Level of satisfaction with trainers; ▪ Relevance of content; ▪ Quality of materials; ▪ Adequacy of infrastructure.	• Satisfaction surveys; • Internal audit; • Trainer evaluations.	Updating digital marketing modules based on feedback received from students.
Participatory evaluation	▪ Degree of involvement of beneficiaries; ▪ Number of proposals formulated; ▪ Level of ownership of the results.	• Focus groups; • Participatory workshops; • Public consultations.	Organizing feedback sessions with students and mentors to improve future programs

Source: Made by the author

4. RESOURCE NEEDS FOR IMPLEMENTING THE EVALUATION

A detailed analysis of the resources required for the evaluation of Student Entrepreneurial Centers must reflect the new standards of digitalization and integration of the business ecosystem in the academic environment. Therefore, the main **categories of resources** are the following:

➲ ***Human resources.*** The evaluation can no longer be a purely administrative process it requires a hybrid approach regarding:

✓ *external audit* consisting of the formation of mixed committees made up of successful entrepreneurs and investors to assess the commercial viability of the projects supported by these centers;

✓ *data managers* represented by personnel specialized in collecting and validating impact indicators (from the number of enrolled students to the survival rate of startups after 12 months);

✓ *mentors and tutors*, human resources dedicated to continuous monitoring, not just punctual evaluation, to ensure a constant evolution of the center.

➲ ***Technological resources (monitoring infrastructure).*** The evaluation is based on real-time data, not on annual paper reports. These could be represented by:

✓ implementing data visualization solutions that allow the Ministry of Education and University to see progress in real time;

✓ dedicated software to archive students' video presentations and business plans, facilitating their evaluation by remote people (Ciurea, 2020);

✓ using blockchain technology to certify the entrepreneurial skills acquired by students, providing a constant database for the evaluator (Budac & Ilie, 2024).

➲ ***Methodological resources***. Evaluation requires a clear regulatory framework, aligned with European standards, which could be represented by:

✓ *moving from process indicators* (such as: “how many conferences were held”) to outcome indicators (such as: “the volume of funding attracted by students”, “the number of jobs created”);

✓ *adopting standards* similar to those of European higher education rankings to measure how centers contribute to the local economy (Ciurea, 2019);

✓ *updated documentation* that includes case studies from top universities, serving as a reference point for the evaluation.

➲ ***Financial resources:*** The evaluation system itself requires a dedicated budget to be impartial and professional, which could consist of:

✓ budget allocated for contracting consulting firms or independent experts;

✓ budget for training center staff for self-evaluation and alignment with new technical requirements;

✓ financial resources for subscriptions to market analysis platforms essential to assess whether students' ideas are globally innovative (Zamfirache, et.al., 2023).

➲ ***Logistical resources*** that are represented by:

✓ physical or virtual spaces where the evaluated projects can be tested in real market conditions,

✓ access to networks of incubators and accelerators that can provide reference frames and external validation during the evaluation process.

The digital infrastructure in student entrepreneurial centers in Romania is defined by major modernization projects, supported by PNRR funds, other funds and private partnerships. Thus, Universities have moved to implement advanced facilities to support technological startups, others are in advanced stages of implementing digital infrastructure funded by PNRR, which include innovation nodes and startup launch hubs, digitalization laboratories and interaction areas for student entrepreneurs (Heteș, et. al., 2025; OECD, 2022; Dura, et.al., 2025).

Regarding the tools used to evaluate these activities, a narrower range of tools is often applied, such as research on relevant documents, structured interviews or questionnaire-based surveys (Ciurea, 2021). Therefore, the success of the evaluation of the centers depends on the automation of data collection and the direct involvement of the private sector in the validation of academic results. An effective evaluation transforms these centers from an administrative unit into a real engine of economic growth.

Table 2 presents a summary of the resources required to implement the evaluation system of the Entrepreneurial Centers structured by main categories.

Table 2. Resources for implementing the evaluation system

Resource Category	Key Components	Resource Objective
Human	Mixed committees (academic + business), data audit experts, certified mentor.	Ensuring an impartial assessment connected to market reality.
Technological	Cloud solution monitoring platforms, Blockchain certification systems.	Automate reporting and visualize progress in real time.

Methodological	Impact guidelines (results vs. processes), European benchmark standards, digital feedback questionnaires.	Standardization of success criteria at national and European level.
Financial	External audit budget, performance grants, database subscriptions.	Coverage of expertise costs and access to market data for validation.
Logistics	Testing hubs, virtual networking platforms, presentation spaces equipped with hybrid technology.	Facilitating interaction between students, evaluators and potential investors.

Source: Made by the author

For the evaluation process to be effective, these resources must also support the measurement of the following indicators, namely:

• ***conversion rate*** - the percentage of evaluated ideas that become registered startups;

• ***capital attraction*** - the volume of external financing obtained by the centers' projects;

• ***sustainability*** - the survival of the entities created after the first 2 years of activity.

In conclusion, the efficiency of the evaluation process depends on a rigorous monitoring of the entire life cycle of a business idea, from the concept phase to market maturity. By tracking the previously mentioned indicators, the allocated resources not only validate the theoretical potential of the projects, but also guarantee their transformation into viable economic entities, capable of generating real impact and stability after the critical initial period.

5. CONCLUSIONS

This paper has highlighted that the professionalization of Student Entrepreneurial Centers in Romania fundamentally depends on the transition from intuition-based to evidence-based management, through rigorous monitoring and evaluation processes. The theoretical considerations explored demonstrate that monitoring should not be seen as a bureaucratic burden, but as a strategic asset that allows universities to demonstrate the added value they bring to the national economic ecosystem.

From the analysis of the applicable evaluation typologies, it can be concluded that a hybrid model is the most efficient for the university specific. While process evaluation ensures the smooth running of current activities (workshops, business plan

competitions), impact evaluation is the one that validates the long-term success of these centers, by monitoring the survival rate of student start-ups and their ability to attract private investment in the first years after launch.

A defining element of the success of these structures, as emerged from the analysis of the resource requirements, is financial and human sustainability. The implementation of a high-performance evaluation system is no longer possible without an accelerated digitalization of alumni databases and without a dedicated team capable of interpreting the collected data. The lack of specialized resources remains the main barrier to an objective evaluation, which is why a better correlation between funding lines (PNRR) and long-term monitoring objectives is required.

Finally, it can be concluded that the future of student entrepreneurial centers in Romania depends on their ability to internalize the culture of evaluation. The results of the study suggest that transparent monitoring not only improves internal processes, but also increases the degree of trust of business partners, thus facilitating the transition of students from academia to the real entrepreneurial environment.

REFERENCES

[1]. Budac, C., Ilie, L. (2024) *Academic business incubator as a tool in implementing entrepreneurship education - Theorethical appproach*, Studies in Business and Economics, 19(2), pp. 37-48

[2]. Ciurea, M. (2021) *Approaches regarding to the entrepreneurial practices of student in Romania*, In Matec Web of Conferences, 342, p. 08008, EDP Sciences

[3]. Ciurea, M. (2020) *Digitalization in the Romanian higher education in the present digital era, In* Proceedings of the 2nd International Scientific and Practical Conference "Modern Management Trends and the Digital Economy: from Regional Development to Global Economic Growth" (MTDE 2020), Advances in Economics, Business and Management Research, 138, pp.740-746

[4]. Ciurea, M. (2019) *Considerations on the influence of digital technology regarding education in Romania,* In 1st International Scientific Conference" Modern Management Trends and the Digital Economy: from Regional Development to Global Economic Growth"(MTDE), Atlantis Press, 81, pp. 638-642

[5]. Dura, C., Appiah-Kubi, E., Niță, D., Drigă, I., Preda, A., Dobre, A.C. (2025) *Modelling the impact of green operations on SMEs' performance: the role of green transaction and artificial intelligence,* Applied Economics, pp.1-17

[6]. Heteș, R. A., Gligor, D. A. G., Jurcuț, C. N., Predișcan, M., Bucurean, R. N. (2025) *Changes Regarding Entrepreneurial Intent Among Young Romanian Students in the Aftermath of the COVID-19 Pandemic*, Sustainability, 17(10), 4600

[7]. Ille, C. (2021) *Trends and perspectives on entrepreneurial education in Romania and EU*, The Annals of the University of Oradea, Economic Sciences, TOM XXX (2), https://anale.steconomiceuoradea.ro/volume/2021/n2/006.pdf, [Accessed 12 dec. 2025]

[8]. Isac, C., Niță, D., Nimară, C. (2022) *The role of university-business partnerships in increasing students' entrepreneurial skills*, In MATEC Web of Conferences, 373, p. 00075, EDP Sciences

[9]. Măcriș M., Ciurea, V. (2013) *Considerations about the priorities in the field education and training in Europe in the current economic context*, Internal Auditing & Risk Management, 8(3)

[10]. Măcriş, A., Măcriş, M. (2011) *The agents of education market,* Annals of the University of Petroşani. Economics, 11(3), pp.147-154

[11]. Măcriş, A., Măcriş, M. (2010) *Dynamics of the share of education expenditures within Romania's gross domestic product-economic and social effects,* Annals of the University of Petrosani, Economics, 10(4), pp. 181-192

[12]. Nițu-Antonie, R. D., Feder, E.S., Nițu-Antonie, V., György, R.K. (2023) *Predicting Sustainable Entrepreneurial Intentions among Romanian Students: A Mediated and Moderated Application of the Entrepreneurial Event Model*, Sustainability, 15(6), 5204

[13]. Niță, D., Isac, C. (2016) *Labour issues through temporary employment agencies,* Annals of the University of Petroşani, Economics, 16(1), pp.191-198

[14]. Niță, D., Fleșer, A. (2011) *Youngsters - disadvantaged group on the labour market – alternative employment.* Annals of the University of Petroşani. Economics, 11(1), pp. 179-186

[15]. Niță, D. (2019) *The role of universities in promoting education and entrepreneurial innovation*, Annals of the University of Petroşani, Economics, 19(2), pp. 85-98

[16]. Ogarcă, F. R. (2024) *Romanian Student Perceptions of Entrepreneurship*, Revue des Sciences Politiques, 84, pp. 17-33

[17]. Popescu, C. C., Bostan, I., Robu, I.B., Maxim, A., Diaconu, L. (2016) *An Analysis of the Determinants of Entrepreneurial Intentions among Students: A Romanian Case Study*, Sustainability, 8(8), 771

[18]. Zamfirache, A., Suciu, T., Anton, C. E., Albu, R.G., Ivasciuc, I.S. (2023) *The Interest Shown by Potential Young Entrepreneurs in Romania Regarding Feasible Funding Sources, in the Context of a Sustainable Entrepreneurial Education*, Sustainability, 15(6), 4823

[19]. OECD, European Commission (2019) *Supporting Entrepreneurship and Innovation in Higher Education Romania,* https://www.heinnovate.eu/sites/default/files/oecd_ec_supporting_entrepreneurship_and_innovation_in_higher_education_in_romania.pdf, [Accessed 15 nov. 2025]

[20]. OECD (2022) *SME and Entrepreneurship Papers, Advanging the entrepreneurial university: Lessons learned from 13 heinnovate country reviews*, https://www.oecd.org/content/dam/oecd/en/publications/reports/2022/07/advancing-the-entrepreneurial-university_fe701969/d0ef651f-en.pdf, [Accessed 8 dec. 2025]