

Declarative vs. operational in the orientation of the non-reimbursable financing programs of investments towards sustainability

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Abstract

Sustainability is one of the topics with undeniable relevance both in research and in global society. The objectives of the research aim to determine the proportions of the economic, social and environmental criteria within the project selection process, to segment the selected projects according to the sustainable approach dimensions and to highlight the sustainable and unsustainable investments made with European funds. The research methodology is mixed, quantitative and qualitative. For our research we have adapted an instrument developed by UNOPS, called Sustainability Marker, by using three of the four proposed major groups: social, environmental and economic. The results of the study support the main research hypothesis, namely an orientation towards sustainability at the programmatic level, but with relatively small proportions of the environmental and social objectives within the selection criteria, the implementation of the selected projects and the functioning of the investment objectives.

Keywords: sustainability, project, project management

Introduction

Studies and research that focus on sustainability in general, but also on how it is included in project management, have experienced an exponential growth in the last period (Silvius, 2017, p. 1479). For a project, we can highlight an integrated approach of sustainability, related to how the addressed area, the purpose and objectives, activities and target group are compatible with the dimensions of sustainability (cumulatively targeting economic, social and environmental aspects), but also we can emphasize a narrow approach, a pragmatic one, related to the project's ability to generate positive effects for 3-5 years from its completion date.

Projects are considered to be tools with a real potential to respond efficiently and effectively to the problems of society, thus being implicitly correlated with the sustainable approach. Through the projects important changes of the different types of organizations are sustained, which aim at the

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diversification of the offer, the improvement of the endowments, the internationalization, the training of the personnel, all of them being oriented towards the increase of the adaptability of the organization to the external environment, the improvement of the competitiveness, with the clear purpose of maintaining the organization within the community. Certain characteristics of the projects (short-term orientation, non-inclusion in a strategic direction, prioritizing the attraction of external funds at the expense of meeting a real need) induce difficulties in ensuring a real sustainability, the criticisms regarding the waste of the European funds having support in multiple examples.

In order to complete the research, we focused our attention on different projects related to the 2007-2013 and 2014-2020 periods and financed through European structural and investment funds (ESI funds) within Regional Operational Programme (ROP), National Rural Development Programme (NRDP) and Joint Operational Programme Romania-Ukraine-Republic of Moldova / Romania-Republic of Moldova (JOP RO-UA-MD / RO-MD).

1. The integration of the sustainability dimensions into the project design

Sustainability is one of the topics with undeniable relevance both in research and in global society. However, the way in which the principles of sustainability are transposed in the economic and social sphere is the subject of some debates on adequacy, optimization and specific regulation.

Although initially the sustainable development was intended to be a solution to the ecological crisis, at present the concept has expanded on the quality of life in its complexity. A sustainable society is considered to be the one that designs its economic and social system so that the natural resources and life support systems are maintained (Brown, 2003). Although the definition of the concept of sustainable development is quite vague, the regulatory systems have been developed and accepted to fulfill the condition of sustainability (Bleischwitz and Henricke, 2005). The European non-reimbursable funding programmes are an essential instrument of the economic development process and within the policies for bridging the gaps between rich and poor regions, a process that follows a unitary and correlated to the present and the future approach, in other words, by taking into account the concept of sustainability and introducing the ecological aspects into the equation of achieving the human welfare (Dasgupta, 2007).

The objectives of the companies are oriented primarily towards the economic field, to achieve profit and to maximize the market value. The other objectives included in the theory of sustainable development, social and environmental ones are considered secondary, being associated with increased costs and reduced competitiveness. If the financing of a company's investment is made from

public and non-reimbursable funds, then the conditioning of these funds to meet certain criteria related to social and environmental spheres is an effective tool for boosting the adoption of sustainability principles in the economy.

The attention to the topic of sustainable development have raised after the publication of the Brundtland Report in 1987 (World Commission on Environment and Development, 1987). This report highlighted that the resource scarcity, tremendous growth of world population and the threat of climate change caused numerous environmental and social problems. In this context, sustainability should be a top priority for the investment projects (Kudratova *et al.*, 2018, pp. 469-471).

In the field of project management, a much more applied definition of sustainability is used, with direct reference to the project, respectively the capacity of the project to generate positive effects after the end of the funding. The term is an imported one and is more difficult to understand directly, without further explanation for those involved in the project. As (partially) synonyms in the documentation specific to the financing programs appear terms such as: sustainability, durability, visibility, exploitation of results, impact, multiplier effect, replication potential.

The analysis of the relevant literature in the field of project management draws a clear conclusion: project sustainability represents a gradually emerging discourse (Aarseth *et al.*, 2017, p. 1074). Starting from the 3 criteria that define a school of thought, it is concluded that the sustainability qualifies as a new school of thought in project management (Silviu, 2017, p. 1491). Analyzing the relationship between the complex concept of sustainability and the criteria that define the success of a project, a model has been highlighted (Silviu and Schipper, 2015, p. 340) that correlates 9 dimensions of sustainability and 6 dimensions that define the success of a project. Through an analysis based on feedback from 21 project governance experts and an international survey of 333 projects, it was established a close connection between the effective project governance and the project success, with a projection on the project's contribution to the implementation of the organizational strategy (Musawir *et al.*, 2017, p. 1668).

For a project, sustainability is measurable, but it is considered difficult to quantify. A specific assessment of the situations of risk or, in certain areas, of uncertainty represents a more advisable approach. Measuring the sustainability of projects includes (Manolescu, 2006, p. 42):

- a financial component - identifying and specifying the possible sources of financing to be used after the completion of the project in order to ensure the functioning of the systems created or the assets acquired, or for the continuation, even at a lower level, of the activities or services carried out during the projects;

- an institutional component - integrating the results of the project into an already existing organization or functioning as a new entity, for which there is a public or private undertaking; the resulting system is perfectly functional from a technical, legal point of view and has a sufficient market demand; the intellectual property of the project results is appropriated;
- at policy level - the structural impact of the project (better legislation, codes of conduct, methods, methodology in various fields, etc.);
- an impact type component – improvement of target group situation, improvement of the managerial and technical capacity of the applicant organization and partners;
- a “multiplier effects” type component - the possibilities of replicating and expanding the project results (how the project could be replicated in other areas, in other fields, strictly correlated with the capacity to inform about the project results, to disseminate the results in relevant context).

From the point of view of the project promoter, we can highlight a few key moments for defining the sustainability of a project:

- outlining the project idea - when sustainability is vaguely specified;
- substantiation - writing the documentation: here, in order to obtain a higher score after the evaluation, there is the tendency to approach sustainability at a declarative level;
- implementation - during this period, the focus of the team is on completing the project activities and obtaining the results according to the contracted indicators; In general, sustainability is given a low importance;
- post-implementation / monitoring - during this period, the regrets for the ambitious levels of the project results configured in the financing request (number of employees, turnover etc.) appear, the functioning of the systems created by the project being affected by multiple internal and external factors; the non-fulfillment of the indicators assumed in the sustainability period has repercussions on the reimbursement of the funding awarded under the program, including the possibility of full refund of the amounts awarded as non-refundable.

From the point of view of the project managers, according to an analysis carried out on a sample of 143 project managers, the key factors of the sustainability of the projects are represented by 4 complex structures: Sustainable Innovation Business Model, Stakeholders Management, Economic and Competitive Advantage, and Environmental Policies and Resources Saving (Martens and Carvalho, 2017, p. 1094). The sustainability is determined by the approach of the project managers, with a major ethical component; if an increase of the orientation towards sustainability is desired at the organizational level, the process is initiated by identifying and characterizing the set of key competences to be developed at the level of the project managers (Marcelino-Sadaba *et al.*, 2015, p. 12).

The sustainability of the projects can benefit from a favorable context (related to the organizational stability, variety of services / programs - alternative use, extensive partnerships) or from an unfavorable context (lack of / inappropriate strategic approach, numerous internal and external constraints). The situation with the greatest negative impact on the sustainability of the projects is that of the structural changes - characteristic of the emerging economies or of the companies that have changed the political regime. Structural changes refer to profound changes that affect the organization's long-term activity, have implications at the system / institutional level, change the reference model / "game rules" and the external factors of influence change, so that the rigorous planning realized in the project-specific documentation, included at the level of risk analysis, loses (partially) its usefulness. Although there are theoretical recommendations for inclusion of aspects that go beyond the classical framework of the characteristics and tools specific to project management (long-term orientation instead of medium and short-term ones, considering the interests of the stakeholders and not the direct clients of the project, the use of resources taking into account first of all the ecological characteristics and not the cost or economic efficiency) in order to include sustainability in the management of the projects, the implementation of these recommendations is much delayed (Økland, 2015, p. 108).

Barriers to the integration of sustainability are diverse, and can be classified into two broad categories, each with 4 complex dimensions (Stewart *et al.*, 2016, pp. 25-26):

- barriers within company's boundaries: *structural* (as, for example, non-adapted performance measurement and incentive systems, lack of goal translation to functional /department basis, difficulty to define relevant sustainability performance metrics / perform reporting); *political* (difficulty to elaborate business case, conflict, difficulty to manage trade-offs, low priority on agenda, short term priority); *human* (lack of skills/knowledge/training) and *cultural* (skepticism regarding potential benefits, lack of entrepreneurial spirit / room for out-of-the-box thinking);
- barriers beyond company's boundaries: *regulation* (multiple / complex / changing regulation), *market* (lack of understanding / knowledge among customers, low market demand / willingness to pay, lack of competitiveness), *technology & tool* (lack of industry-specific information / benchmark / reference cases, dependency on available technology), *value network* (dependency on current infrastructure / value network setting, lack of trust, reluctance to sharing information / making joint investments, current / future locked-in situation or lack of bargaining power against other players).

2. The evaluation of the sustainability during the project selection process

At the level of the managing authority of the program, the key moments for defining and measuring the sustainability of the projects are:

- the programming stage, when the specific aspects of sustainability are distributed on the horizontal objectives, the specific objectives and the evaluation grid;
- the stage of evaluation and selection of the projects to be financed;
- the post-implementation evaluation stage, when is verified the fulfillment of the specific conditions of sustainability by the project beneficiaries.

Horizontal objectives or themes are direct ways to orient the obtaining of non-reimbursable funds towards the achievement of social and environmental objectives. Thus, for the current programming period, two horizontal themes have been selected to be integrated into the projects financed from the European Structural and Investment Funds: Equal opportunities and equal treatment and sustainable development (Guide on the integration of horizontal themes in the projects financed from the European Structural and Investment Funds 2014-2020, p. 1). In the period 2007-2013, the horizontal objectives that had to be integrated in the projects financed by the European Social Fund were equal opportunities, sustainable development, innovation and ICT, active aging, transnational approach (Sectoral Operational Program Human Resources Development 2007-2013, Applicant's Guide - General Conditions, pp. 41-42).

The selection process of the projects is a prioritization of them in a portfolio based on a benefit cost relationship for each project. Thus, projects will have a higher priority if they record higher benefits, when compared to their costs. In this context, the main challenge is related to finding criteria that can capture outcomes instead of just basic outputs (Vargas *et al.*, 2014, p. 73). Vargas *et al.* (2014) concluded that there is no perfect model that could cover the right criteria to be used for any type of organization when prioritizing and selecting its projects. The criteria to be used by the organization should be based on the values and preferences of its decision makers (p. 73). Projects can only be considered sustainable if they address the impacts on a broader set of stakeholders, including generations not yet born.

In general, the methods of project selection are divided into four subcategories (Jiang and Klein, 1999, p. 63): comparative approaches, scoring models, benefit contribution or economic models, optimization methods. A project selection approach usually includes three major steps (Jiang and Klein, 1999, p. 64):

1. identify and select criteria;

2. weight the criteria and build consensus about their relative importance;
3. evaluate the project proposals using the weighted criteria.

From a sustainable perspective the scientific literature distinguishes between *traditional project selection methods* and *sustainable project selection methods*. Traditional project selection methods used to focus only on net present value without consideration of sustainability. This category of methods can rely on uncertainty theory, on real option analysis (Mohamed and McCowan, 2001), on probability theory or even fuzzy set theory (Kilic and Kaya, 2015). On the other hand, sustainable project selection methods have developed from traditional ones by incorporating the sustainability concept into decision-making process (Silvius *et al.*, 2017, p. 1139). Many researchers (Kaveh *et al.*, 2012; Kaveh and Soheil, 2013) considered social, environmental and economic goals as the three pillars to be incorporated into a sustainable project portfolio selection.

Incorporating sustainability into project selection processes can increase companies' competitiveness and their value. As a good example we brought the study of Tan *et al.* (2015), where researchers analysed the relationship between sustainability performance and business competitiveness and found an inverse U-shape relationship of contractors' performance and international revenue growth.

Vargas *et al.* (2014) presented the selection criteria implemented by the United Nations Office for Project Services (UNOPS) to address social, environmental and economic sustainability in humanitarian and development projects. In order to analyse projects above and beyond the traditional financial criteria so the real impact of the project to meet the sustainable development goals, UNOPS developed a specialized internal tool called Sustainability Marker using a set of twenty-five themes in four major groups:

- *Social* –gender, population, vulnerability and other aspects related to the community where the project is being implemented;
- *Environmental* –air, land, water and biodiversity where the project is being implemented;
- *Economic* – the economic relevance for the community, job generation, equity and livelihood;
- *National Capacity* –the use of local capacity to deploy the project including skills and knowledge, corruption, political and social stability.

A survey conducted among 88 members of the Data Processing Management Association from USA found that organizations with high strategic expectations rely heavily on organizational goals, management support and environmental factors, while those with low strategic expectations choose criteria based on management support, political considerations, and risk. In this context managers can

select the specific criteria according to their strategic expectations. Also, if an organization wants to switch its strategy, it should not continue to select projects focusing on political and risk considerations (Jiang and Klein, 1999, pp. 70-71).

Kudratova *et al.* (2018) have developed a novel optimization approach incorporating sustainability cost and reinvestment strategy in the traditional project investment practices. They concluded that range of sustainability cost significantly influences investors' objective value and optimal project selection decision. Investors' project selection decision and maximum objective value is obtained at 3% sustainability cost (Kudratova *et al.*, 2018, pp. 474-478).

Although an increase in the weight of sustainability criteria in project selection can be highlighted, studies still show a dominance of the triple constraint criteria - time, cost and quality (Silvius *et al.*, 2017, p. 1145).

3. Methodology

The premise of our research is the discrepancy between the declarative level of the orientation of the non-reimbursable financing programs towards the principles of sustainability, presented within the programming documents, and the operational level, which can be highlighted in the selection criteria of the investments, in the implementation of the selected projects and in the functioning of the investment objectives after the finalization of the projects. This assumption from which we start is convergent with the conclusions of other studies, according to which there is a consistent gap between the importance given to the dimensions of sustainability at a theoretical level and the actual degree of implementation of these principles (Økland, 2015; Stewart *et al.*, 2016).

The objectives of the research aim to analyze the orientation of the main operational programs in Romania towards sustainability, to determine the proportions of the economic, social and environmental criteria within the project selection process, to segment the selected projects according to the sustainable approach dimensions and to highlight the sustainable and unsustainable investments made with European funds.

To illustrate the theoretical aspects regarding the integration of sustainability in the project management, we selected the relevant articles that resulted from a filtering by the keywords "project management" and "sustainability", carried out by conducting searches in Google Scholar and the Thomson Reuters Web of Science. Most of the resulting articles come from *Journal of Cleaner Production* and *International Journal of Project Management*.

The research methodology is mixed, quantitative and qualitative, on a documentary basis and through interviews at the level of the development agencies that manage the analyzed programs. For our research we have adapted an instrument developed by UNOPS, called Sustainability Marker, by using three of the four proposed major groups: *social, environmental* and *economic*.

For documentation we used the analysis of the programmatic documents specific to the 3 analyzed programs (Regional Operational Programme - ROP, National Rural Development Programme - NRDP and Joint Operational Program Romania-Ukraine-Republic of Moldova / Romania-Republic of Moldova) and the evaluation grids used for the different categories of projects. We also performed a content analysis based on the lists of projects selected for funding during the 2007-2013 and 2014-2020 periods for all measures of these programs (except for the technical assistance measure, which is of little relevance for illustrating sustainability, having a predominantly technical character).

The interviews were held with managers from the regional bodies of the 3 programs and addressed issues regarding the way the managing authorities include sustainability issues in the selection and monitoring process, as well as to illustrate the causes that contribute to the lack of sustainability of the funded projects. To illustrate the categories of unsustainable projects, we used the case study method. The case study method is used for sustainability analysis, especially for large infrastructure projects (Kivilä *et al.*, 2017).

4. The Principle of Sustainability within the Programming Documents for the periods 2007-2013 and 2014-2020

The principle of sustainability has been strongly promoted during the 2007-2013 and 2014-2020 programming periods, fact that can be proved through the analysis of the related programming documents, the National Development Plan 2007-2013 and the National Strategic Reference Framework 2007-2013 or Partnership Agreement 2014-2020. The main highlights of the analysis can be seen in the Table 1.

Table 1. The analysis of the programming documents for the 2007-2013 and 2014-2020 periods

No.	Programming document	The “density” of sustainability ¹	The evidences of sustainability
1.	<i>National Development Plan 2007-2013</i>	183	<ul style="list-style-type: none"> - It was designed in terms of meeting the Lisbon and Gothenburg objectives, namely to increase competitiveness, full employment and sustainable environmental protection: “<i>The development strategy 2007–2013 is based on the achieving the Lisbon and Gothenburg objectives, namely increased competitiveness, full employment and sustainable environmental protection.</i>” (NDP 2007-2013, p. 5). - The establishment of development priorities for the programming period 2007-2013 was made by reporting to the National Strategy for a Sustainable Development (Horizon 2025): “<i>The national development priorities ensure the continuity with the strategic guidelines of the NDP 2004–2006 and draw together the elements of the sectoral policies and the regional development policy, including the view of National Strategy for a Sustainable Development.</i>” (NDP 2007-2013, p. 244).
2.	<i>National Strategic Reference Framework 2007-2013</i>	107	<ul style="list-style-type: none"> - It integrates the objectives of the Lisbon Agenda and the Gothenburg Strategy: “<i>The NSRF demonstrates how Romania intends to integrate the sustainable development objectives as defined in the renewed Lisbon Agenda and the Gothenburg Strategy.</i>” (NSRF 2007-2013, p. 9). - The strategic framework includes the point of view of the National Strategy for a Sustainable Development: “<i>This strategic planning draws together the elements of the sectoral policies and the regional development policy, including the view of Romania’s National Strategy for a Sustainable Development</i>” (NSRF 2007-2013, p. 86).
3.	<i>Partnership Agreement 2014-2020</i>	159	<ul style="list-style-type: none"> - It analyzes the arrangements to ensure alignment with the Union strategy of smart, sustainable and inclusive growth: “<i>Arrangements to ensure alignment with the Union strategy of smart, sustainable and inclusive growth as well as the fund specific missions pursuant to their treaty-based objectives, including economic, social and territorial cohesion</i>” (Partnership Agreement 2014-2020, p. 1). - Out of the 11 thematic objectives, 5 refer to the principles of sustainable development. Even the other thematic objectives incorporate priorities for sustainable development.

Source: Authors’ representation

The conclusion that can be drawn from this analysis is consistent with the premise of the research, namely a high degree and a persistent temporal incorporation of the sustainability dimensions in the documents of the financing programs.

5. The analysis of the project evaluation grids for the 2007-2013 and 2014-2020 programming periods

In order to evaluate the real implication of the sustainable principles within the projects related to the 2007-2013 and 2014-2020 periods we decided to analyse the technical and financial evaluation grids used for the project selection within *Regional Operational*

¹ How many times the term "sustainability" or words with the "sustainable" root are used

Programme (ROP), National Rural Development Programme (NRDP) and Joint Operational Programme Romania-Republic of Moldova (JOP). The main highlights of the analysis can be seen in the Table 2.

Table 2. The analysis of the technical and financial evaluation grids used for the project selection within Regional Operational Programme (ROP), National Rural Development Programme (NRDP) and Joint Operational Programme Romania-Republic of Moldova (JOP)

No.	Program	Number of analysed evaluation grids	The weight of the sustainable principles	Highlights
1.	<i>ROP 2007-2013</i>	5 technical and financial evaluation grids	between 12% and 18% of the evaluation criteria	<ul style="list-style-type: none"> • Most of the grids focus their attention on sustainable development and energy efficiency, analyzing and evaluating if the projects respect the minimum legal requirements for protection the environment and energy efficiency • In the cases of the projects financed through the Priority Axis 5 (Sustainable development and tourism promotion), the evaluation grid goes further, analyzing if the applicant identifies the potential impacts on water, air, soil and subsoil, noise and vibrations, etc., both during the investment period and during the operational period. • The priority axes that aim to improve the competitiveness of small and medium-sized enterprises or try to develop health, social and educational infrastructure don't pay a great attention to the sustainable principles, allocating them less than 10% of the total evaluation criteria.
2.	<i>ROP 2014-2020</i>	12 technical and financial evaluation grids	between 6% and 52% of the evaluation criteria	<ul style="list-style-type: none"> • The priority axes that support the transition to a low-carbon economy or focus on sustainable urban development are more dedicated to the sustainable principles, allocating them between 42% and 52% of the evaluation criteria. • The technical evaluation criteria of the projects refer to the complementarity of the project with the measures related to the grant programs, which include agri-environment measures (related to the improvement of the balance between the need for economic development of rural areas and the sustainable use of natural resources, addressing the problem of abandoning agricultural activities in disadvantaged areas, protecting the environment for the conservation of flora and fauna etc.).
3.	<i>NRDP 2007-2013</i>	15 evaluation grids	between 9% and 30% of the evaluation criteria	<ul style="list-style-type: none"> • More than 63% of the grids use the sustainable principles in order to evaluate if a project is eligible for funding and deserve to move to the next evaluation stage, the scoring. • During the eligibility evaluation stage a project is checked if it uses renewable energy sources, if it contributes to the reduction of green house gas emissions and ammonia emissions from agriculture, if it provides for manure management platforms, according to environmental standards etc..
4.	<i>NRDP 2014-2020</i>	11 general evaluation grids	between 0% and 15% of the evaluation criteria	<ul style="list-style-type: none"> • Only 45% of the analysed grids use the sustainability as a scoring criteria, in most of the cases these criteria referring to the production and marketing of organic products or to the approaches related to water saving.

5.	<i>JOP Romania- Ukraine- Republic of Moldova 2007-2013</i>	2 evaluation grids	12,5% of the evaluation criteria	<ul style="list-style-type: none"> • General aspects are targeted – orientation towards horizontal objectives (does the proposal contain specific value added elements: sustainable development and environmental issues?) and aspects related to post-implementation sustainability (tangible impact on target groups, multiplier effects, and financial, institutional, environmental and political sustainability of the expected results). • One of the 3 funded measures is directly oriented to sustainable development • Although the share of sustainable criteria is very small, the hard projects that manage to pass the technical and financial assessment are subject to a new evaluation stage by checking the additional documents (evaluation of additional documents grid). Among others, within this stage the Environmental Impact Assessment is checked for each project partner executing an infrastructure component. If the document does not meet all the necessary criteria, the project is rejected.
6.	<i>JOP Romania- Republic of Moldova 2014-2020</i>	2 technical and financial evaluation grids	between 2,8% and 4% of the evaluation criteria	

Source: Authors' representation

From the interviews conducted with the three managers from the implementation agencies of the 3 programs, it was also confirmed the relatively low importance of the aspects regarding sustainability in the selection process, a possible motivation being given by the accentuated subjectivism of the specific evaluations, the lack of preparation of the evaluators in this field, as well as the preponderance of other priorities (related to economic development). The conclusion that can be drawn from this analysis is, again, consistent with the research premise, respectively a low degree of consideration of the principles of sustainability at a pragmatic level. In most evaluation grids, the proportion granted to sustainability issues does not exceed 20%, which is a prerequisite for a low attention to these aspects paid by the promoters of the projects and also a premise for obtaining a low sustainability of the implemented projects.

5. The analysis of the orientation towards sustainability of the selected projects

Starting from the premise that the sustainability quality of 'hard' deliverables, such as capacities / infrastructure projects, is more visible or measurable than that of 'soft' deliverables - of training human resources, of making databases, (Huemann and Silvius, 2017, p. 1069), it is advisable that the sustainability analysis of the projects must be done according to the type of projects. „Sustainability is too important for the future of the project management profession to be addressed in generalizations” (Silvius, 2017, p. 1491).

Thus, Capacity / Investments type projects are those for which the sustainability is the most difficult to insure at institutional level and involves the biggest financial effort. Often involves additional jobs, but it is essential in project evaluation and post-implementation monitoring.

For the projects targeting human resource development, sustainability mainly involves demonstration of the use of post-implementation equipment for similar purposes and to monitor the situation of the target group who participated in the training. For the projects that aim the launching of new products / services, sustainability requires to ensure the demand for these products during the post-implementation period and to ensure the conditions for the provision of services (e.g. accreditation, qualified staff coverage). Studies show that there is a close connection between the innovative-ecological methodology of these projects and the integrated orientation at the organizational level (Brones *et al.*, 2014, p. 116). For infrastructure projects, aspects relevant to the 3 dimensions of sustainable development include (Kivilä *et al.*, 2017, p. 1175):

- economic: positive (using local sub-contractors, cost savings), or negative (strategic partnerships and alliances, frequently encountered in the realization of these projects can cause sub-optimization);
- environmental: positive (dust-binding and noise-reducing work methods, comprehensive environmental effects measurement) or negative (decreased groundwater level);
- social: positive (fast decision through collaboration with the customer, improvement of public image, transparency) or negative (the opposition of many members of the community in the first phases of the project, the great investments being perceived as having major environmental implications).

Within the projects of the construction industry, the most important factor of integrating the sustainability in all the stages of their development (from the definition of the idea to the commissioning of the built system) is the pressure of the stakeholders - if they consider the aspects of sustainability as important, they will be integrated into the project management (Banihashemi *et al.*, 2017, p. 1115). The same conclusion, namely that for suppliers integrating sustainability in projects is strongly dependent on the demand and willingness of the customer to pay for sustainability, came from another study with 19 participants of 9 engineering and construction companies (Peenstra and Silvius, 2017, p. 62).

According to a study carried out on 121 construction projects, an integrated project management (with components of sustainability) leads to an increase of the performance of these projects in the

field of construction, which besides the traditional aspects of cost, term and quality includes another 2 components - safe and client satisfaction (Demirkesen and Ozorhon, 2017, p. 1646).

Our analysis aimed to determine the proportion of the projects admitted to financing within the different calls of the programs and directly oriented to sustainable development, to determine the types of projects, for which differentiated procedures for measuring the sustainability could be applied, and to identify relevant case studies to illustrate the consequences of superficial treatment of sustainability issues. The analysis of the lists of projects funded on the 3 programs included in the study (**ROP**, **JOP** Romania-Ukraine-Republic of Moldova / Romania-Republic of Moldova and **NRDP**, for both programming periods, 2007-2013, respectively 2014-2020 - till now) followed the way in which the project promoters integrate the principles of sustainability directly, by including specific expressions in the title and / or within the purpose of the project.

The expressions taken into account as direct declarations of the awareness of the importance of integrating sustainability in project management are: sustainable development, sustainability, circular economy, energy efficiency, ecological, eco-efficiency, environment, waste processing / recycling, renewable resources, decontamination, non-polluting, degraded land conversion, carbon emission reduction, green space / park, quality of life, equal opportunities, cultural / natural heritage, as well as their derivatives. An additional category in the analysis was the projects that specified explicit social objectives (orientation towards disadvantaged target groups, job creation, location in disadvantaged areas etc.). From the analysis of the lists of projects financed under the **ROP** 2007-2013 (<http://www.old.inforegio.ro>) totaling 4560 projects (15 measures and sub-measures, without those within the technical assistance axis), it was found that a number of 315 projects contain terms related to the concept of sustainability (6.9%), and an additional 139 projects have explicit social and / or environmental objectives (3%). If we exclude from the analysis measure 1.2, regarding the energy efficiency of buildings, where all the projects have in their title specific expressions of this priority, the percentage of projects with a direct declaration for sustainability is reduced to 4.4%. Within the two measures there is no sustainable development project, and below average, paradoxically, there are projects within the measures of tourism development (measure 5.1) - only 3.9% of the projects refer to sustainable tourism.

The situation seems to be improving for the current programming period. Analyzing the lists with the projects contracted until the middle of 2019 (<http://www.inforegio.ro>) - without those related to the technical assistance – it was found that, out of 4330 projects, a number of 548 contain in title / purpose terms specific to sustainability (respectively 12.65%), and 191 projects (4.41%) have an explicit orientation towards social and / or environmental objectives. If we eliminate from the analysis

the projects related to measure 3.1 (energy efficiency) that have stated the clear orientation towards sustainability, either directly or indirectly, the percentage of the projects with orientation towards sustainability decreases significantly, reaching a level comparable to the previous programming period, respectively 5.65%.

The situation is similar at the level of the *NRDP* 2007-2013. From the analysis of the lists of funded projects (<https://portal.afir.info>) it resulted that 5.26% of projects are focused on sustainability. It should be mentioned that 3 measures do not include any project with sustainable orientation. For the current programming period (2014-2020), until now, the situation has not improved, with only 4.44% of projects being oriented towards sustainability. If we eliminate from the analysis the specific measure related to forestation (where all projects can be considered sustainable), the percentage decreases to the level of 3.53%.

For the *JOP* Romania-Ukraine-Republic of Moldova (<http://data.gov.ro>), due to the existence of a priority of 3 directly oriented to the environment (priority 2), the percentage of the projects oriented towards sustainability is the highest of the analyzed programs - respectively 22,89%. For the current programming period, no information is available.

In order to illustrate the cases of the projects with major deficiencies in terms of sustainability, a "scan" of the information sites in the field of non-reimbursable financing and of the press articles was performed, which indicated the projects with problems. The contract termination rate, as a first stage of demonstrating the unsustainability of the projects, can be considered a low one within the *ROP* - 184 projects out of 4560 on the *ROP* 2007-2014 (4.04%), but it rises to the level of 26.81% on the *NRDP* 2007-2014 for 3 analyzed measures. The termination of contracts, either at the request of the beneficiaries or as a result of non-compliance with the contractual clauses, is a first identification of the unsustainability of the projects and partly is a result of an inadequate selection process. In the post-implementation monitoring period, there may be other situations that demonstrate the lack of sustainability. Through the case studies method, we have highlighted the categories of representative unsustainable projects, which can generate measures to improve the design and selection processes of the projects.

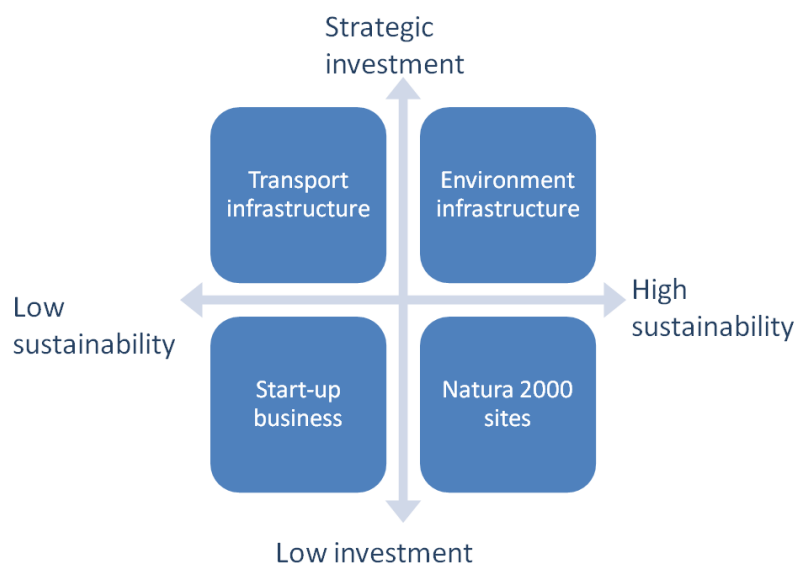
Business start-up and development projects have as main causes of failure the market factors (overestimated demand or inaccessible market) or supply (insufficient suppliers). Representative for these situations are the projects (most funded by *NRDP*) related to non-traditional products or services (mushrooms, snail farms, lavender crops) or fruit processing centers (when the production

line, oversized, does not have enough suppliers in the area) or the producers of pellets and briquettes (the quantity of sawdust decreasing dramatically compared to the project design period).

The social infrastructure projects have as main cause of unsustainability the lack of financial resources at community level after the completion of the non-repayable financing, so that the social canteens or the centers for the elderly cannot be sustained long after the projects have been completed by the local authorities. The consequences may be the closing of centers or the changing of the functionality of the objective - for example, social centers become kindergartens.

Environmental infrastructure projects can apparently, paradoxically, generate unsustainability. A representative situation is that of the ecological trash pits constructed from non-reimbursable funds, inadequately located (tourist areas, mountains, etc.), generating the opposition of the civil society organizations and the population in the affected areas (as, for example, the case of the landfill in the Mestecanis Pass) (<https://e-juridic.manager.ro>). Another case is that of the projects for the construction of micro-hydroelectric plants, for generating the “green” energy, but which affect the habitats or are even built in Natura 2000 areas or other protected areas (as, for example, the case of the hydropower plant built on the Taia River in the Sureanu Mountains) (<http://www.romaniacurata.ro>). Analyzing the projects implemented in Romania within the different financing programs we can obtain, taking into account the specific aspects of sustainability (economic, social and environmental dimensions) and the size of the budget, a clustering that can be the basis for the different treatment of the requirements regarding the fulfillment of the horizontal themes and justification for sustainability (Figure 1).

Figure 1. Project Cluster



Source: Authors' representation

Thus, the projects in the quadrants that are oriented, as a field, towards high sustainability, must justify the coverage of horizontal themes in more detail than the other types of projects. Strategic projects, with consistent budgets, need to justify in more detail the conditions of contractual sustainability (5 years after the completion of the project). The projects in the low investment quadrant (weak orientation towards sustainability) could treat simplified in the application form these aspects, possibly by checking the fulfillment of the eligibility requirements, thus avoiding the declarative level which represents a barrier in the implementation of the projects.

Conclusions

Understanding how different facets of sustainability influence the success of a project is a fundamental condition of setting the ways in which the concept of sustainability can be integrated into project management.

The results of the study support the main research hypothesis, namely an orientation towards sustainability at the programmatic level during the both analyzed programming periods, but with relatively small proportions of the environmental and social objectives within the selection criteria, the implementation of the selected projects and the functioning of the investment objectives. The measures identified to improve the sustainability of projects can be differentiated at organizational and system level:

- at organizational level: internal selection / substantiation; meetings with stakeholders; key people for different areas / partnerships; incorporating sustainability issues in early phases of projects and explicit project design documents.
- at system level: differentiated treatment of the projects according to their type (domain, budget, etc.) and simplification of documentation for small projects; reconsidering the evaluation and selection criteria of the projects financed under the operational programs by introducing new social and environmental criteria and increasing their relative importance, with a significant impact on the sustainability of the financed projects and on communities.
- In order to increase the sustainability of the projects and, implicitly, to contribute to a more consistent absorption of European funds we can recommend the following measures: to set accessible and realistic levels of sustainability dimensions for different types of projects, to train evaluators and experts in writing project applications in the field of sustainability, to communicate clearly the requirements for the project promoters, to build databases with examples of successful

projects by integrating sustainability issues but also failed projects, highlighting the causes that led them to failure.

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