NEW APPROACHES TO THE QUANTITATIVE ASSESSMENT OF THE NEED FOR INVESTMENT PROJECTS

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ABSTRACT
The performance of an investment project depends on the objectives and outcomes assumed at each stage of the life cycle, and also how it generates a positive impact in relation to the organization's needs. The fact that the current systems for the evaluation of investment performance are used in the ex-post stage generates, in the event of inappropriate outcomes, a situation of impossibility to apply certain changes or corrections on the project. In this context, we consider relevant the decision-makers' choice to focus on increasing the performance level in the investment needs substantiation phase. This paper presents the outcome of research conducted on the issue of substantiating the needs system, in the context of a new metrological proposal, whose advantages are related to the increase of the overall performance of the project.

KEYWORDS: *assessment, investments, performance, project*

JEL CLASSIFICATION: *H54, R53*

1. INTRODUCTION

Investments represent the main tool through which public and private organizations ensure the conditions for the economic and social development, in the context of capitalizing on opportunities or eliminating certain non-compliance situations. The investment strategy at the level of organizations reflects how their management addresses the phenomenon and ensures an appropriate level of convergence between personal, organizational and external goals. In the most common situations, the low investment performance level, assessed in the ex-post phase of the project, is motivated by the limited financial and administrative capacity of the initiator, the implementation conditions or the legislative framework. Investment management practice has highlighted lately that poor results of the projects are more likely to be caused by an inconsistent decision-making system. This situation is based on the methodologies and tools used, the level of professional training of decision-makers, but also the limited ability to forecast and anticipate or to take into account the present and future needs system. Added to these is the lack of adequate systems to collect and manage data and information, which is the informational support in substantiating decisions.
This context of investment management requires a new approach of the decision-making process, on the one hand from a quantitative and qualitative perspective and on the other hand from an integrating vision, taking into account the current influential and perspective factors, and how they interact.

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2. LITERATURE REVIEW

Investments as economic process represent a complex approach, consisting of an assembly of actions, correlated from a strategic and operational point of view, ensuring that certain economic, social, technical or ecological objectives are reached. This entire approach involves a predefined combination of resources, a time horizon, a stable implementation and assessment framework and a generated impact on the needs system. Public investments represents capital expenditures, materials and expenditures for research and development funded fully or partially from the state budget, local budgets, from special funds set up by law except those budgets and external credits guaranteed or contracted directly by the state made in order to satisfy some needs of communities, in terms of efficiency, effectiveness and performance (IMF, 2015).
Dezvoltarea si implementarea proiectelor de investitii necesita existenta unui sistem de obiective si argumente convergente la nivelul proprietarilor, a entitatilor care asigura exploatarea obiectivului si la nivelul beneficiarilor rezultatelor (Miller & Mustapha, 2016).
From a temporal point of view, stages specific to an investment project can be integrated in a life cycle, with a predefined succession, whose structure is presented in figure no. 1.

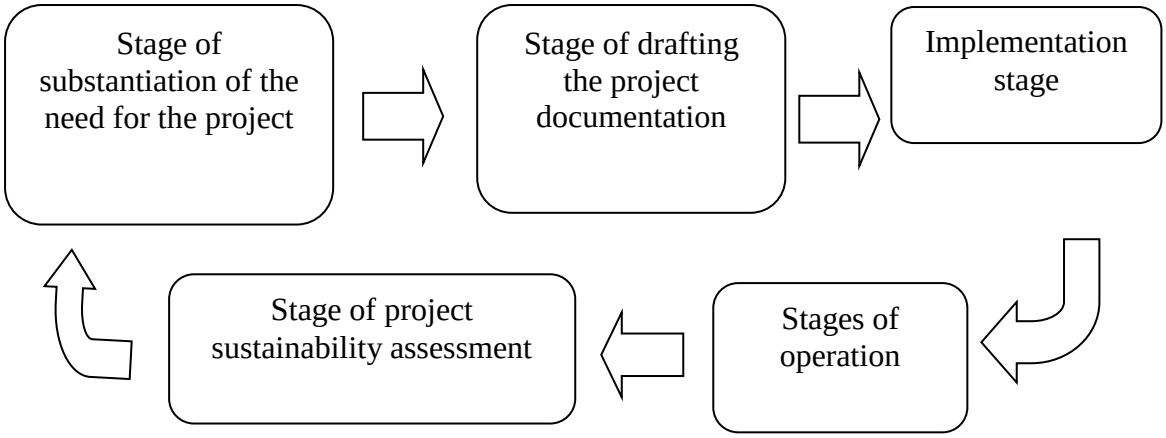

Figure 1. Specific stages of an investment project

Implementation of projects should be done from the perspective of an investment strategy based on territorial capacity assessment, competitive advantages, growth, innovation and jobs. , in line with the principles of equity and sustainable development. (OECD, 2014)
The specialized economic theory has analyzed all these stages, with specific methodologies, tools and indicators being developed, the use of which has been validated through the legislative framework and officially recognized in all the entities involved. The most important results from the point of view of utility and operability were obtained for the stage of drafting the project documentation and for the implementation stage. Substantiating the need and opportunity to invest, together with the operational and the sustainability stages, remain still characterized by a high level of subjectivity, being permanently subject to a number of influence factors.
Investment design can also be achieved in the context of a polycentric development strategy, which is a way to rehabilitate areas with major structural problems that ensure efficient territorial management, spatial planning through institutional mechanisms. (Peptanatu et al., 2009)
The objective of this research was to analyze the deficiencies of the present system of substantiation of investment projects, in the necessity and opportunity stages, respectively to formulate a proposal for supplementing the current methodologies.

In accordance with the current legal provisions (GR, 2016), the substantiation of the need and opportunity of a project is achieved in several successive sub-stages, based on which the specific documents are also drawn up.

The first substantiation sub-stage is based on the two important documents, named conceptual note and design theme. The role of the note is to highlight the preliminary data necessary to implement the investment objective proposed and provides information on estimating the affordability of the public investment.

The utility of this sub-stage is to present and analyze the preliminary data of the investment and assess its affordability at the applicant's and beneficiaries' level. In the second sub-stage of the substantiation process, the pre-feasibility study, the feasibility study or the documentation for the endorsement of intervention works are prepared, if appropriate. These documents, made in a standardized format, are the main support in the decision-making process, both in terms of complexity and the way in which the technical, economic, financial, environmental, social, sustainability aspects are integrated. The third sub-stage of the process aims at the elaboration of the project for endorsement/cancellation of the investment works, on the basis of which the construction permit can be obtained and in the end the technical execution project, respectively the fourth sub-stage, can be elaborated.

In terms of sub-stages specific to the process, it is remarked that the level of complexity and regulation increases significantly as they take place. If initially perceptions are perceived on the needs system and personal visions on the way in which opportunities and threats are interpreted, some of them with great potential for subjectivity, the last sub-stages are characterized by a high level of regulation, both through legislative acts with a general nature (laws, decisions etc.) and also specific legislative acts on different areas of intervention.Manuscript must contain answers to following questions: what is the problem, what has been done by other researchers and where you can contribute, what have you done, which method or tools you used, what are your results, what is new and good, what is not good.

3. RESEARCH METHODOLOGY

From the need to create a common framework of analysis and decision-making regarding the needs system triggering a potential investment intervention, we proposed a multidimensional approach of the process.

The six dimensions proposed to be integrated in the needs analysis process in the perspective of an investment project are presented in figure 2.

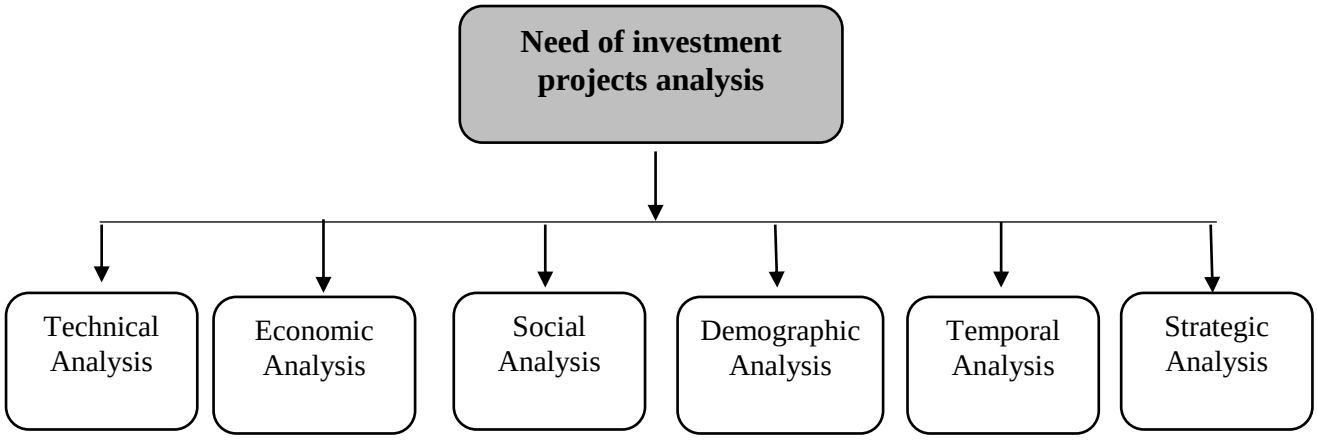

Figure 2. Synthesis of proposed approach to the needs analysis of the project

For each of these dimensions of the analysis process, we identified and proposed for integration the most relevant aspects, from the perspective of the possibilities of collecting the data and the information, their availability, in correlation with the processing alternatives, the information support and utility.

The technical analysis highlights the current situation with the existing gaps by reference to standards, rules or specific conditions for carrying out activities. Thus, one can determine the assessment sub-criteria, potentially quantified by reporting scales, taking into account the specific interests and objectives of the beneficiary institution from a technical point of view, identification of reference standards and adequate assessment in relation to them, setting the main technical alternatives for solving the current situation, as well as the real possibilities of implementation in the given conditions, from a territorial point of view.

From the overall technical indicators that can be taken into consideration, we propose:

- the time span from the date of commissioning and/or the date of acquisition, the existing technical solutions, if any;
- the remaining technical life and operating conditions to date;
- the history of technical incidents, repetitive or accidental failure associated with the recorded effects;
- the degree of novelty of the proposed solution, as compared to other similar solutions on the market, if they exist;
- the assembly of necessary technical facilities and the possibility of achieving them: access, utilities, administrative spaces etc.;
- the impact on related areas, if any.

The principle underlying the technical analysis should take into account the reasonableness between the technical dimension (technical progress) and the economic dimension (associated cost).

Economic analysis requires a preliminary assessment of investment needs, in terms of an estimated budget, identification of potential sources of funding, conditionalities associated with each source, annual/multiannual budget planning capabilities and prioritization options for resource allocation processes. From an economic point of view, the issue requires, on the one hand, internal analysis based on financial-accounting documentation, on the capacity to use the existing resources and on the degree of indebtedness (if applicable), respectively, the reporting modality in relation to requirements of the regulatory authorities. The external component, part of the economic analysis, involves identifying external sources of funding and the constraints imposed to access them. If the collection and use of the amounts is entirely achieved under a reference legal framework, the reimbursement of the amounts is subject to the organization's capabilities and the way in which it will ensure its sustainability in relation to the assumed obligations. Multi-annual budgeting, strategic planning of resources, sustainable financial management represent not only alternatives, but obligations, which must be appropriately assumed, in the economic analysis of project substantiation.

The analysis variables proposed in the model can take into account:

- the estimate of the total cost of the project as close as possible to reality, depending on the proposed technical solution and the costs assimilated to the identified alternatives, by using specialized software and databases;
- the characteristics of the financing sources in terms of the modality of allocation/transmission and ensuring the institutional sustainability, during the implementation and exploitation of the project;
- the financial integration of the future project, in accordance with the organization's strategy and the short and long term objectives;
- the average labor productivity per categories of economic activities, calculated at the population level in the area/region of implementation of the future project;
- the average monthly net nominal gain per activities of the national economy and possibly the average monthly labor cost.

The third dimension proposed to be used must reflect the main causes of social nature, which are arguments aimed to support the necessity and opportunity of a project. However, in the most common situations social analysis is limited to identifying possible influenced categories and how they will be involved, all from a qualitative perspective.

In this new approach, the proposed aspects to be introduced in the analysis are:

- the categories of persons, organizations, associations, entities that can justify the necessity of a project;
- their quantitative characteristics and how they can be influenced by or can influence the future project;
- the dynamics of these variables over a time period considered relevant, at least 3/5 years;
- the quantitative and qualitative assessment of project impact, transparency of results for the interested categories;
- the methodologies and instruments on the basis of which the impact will be assessed and ensured in terms of sustainability.

The demographic perspective and statistical developments in the last period have led to an increasing influence on the performance of investment projects. The direct effects of such an approach were the lack of medium- and long-term performance, the inconsistency of sustainability assumed from an institutional, technical and financial point of view, and ultimately the disappearance or abandonment of the realized objective.

The context of demographic evolution, the analysis of its structure from a temporal point of view, is a conditionality of the investment, without which the estimated effects are impossible to achieve. The frequent migratory phenomena of the rural population to the urban environment, coupled with the mechanisms of attracting the population to the large cities, considered poles of economic growth, led to changes in the structure of the territorial administrative units.

The regional disparities generated in this way are one of the priorities of investment management and solving them can only be of integrated type, taking into account the identification and treatment of causes that led to the depopulation of the areas (e.g. lack of medical services and specialized education, lack of social protection policies, lack of access infrastructure etc.). Solving such problems can be achieved through an adequate complementarity of public and private investments, namely by promoting partnership.

Specific demographic indicators to be analyzed according to the proposed model are:

- labor resources, in terms of population, which has all the physical and intellectual capabilities that allow the carrying out of a specific activity in a local and regional context;
- employed population by activities of the national economy;
- employed population by status, i.e. employees, employers, self-employed workers, unpaid workers etc.;
- structure based on the education performed and graduated of the active population in the area;
- the unemployment rate in dynamics;
- labor migration, potential economic events that also influenced medium-term prospects, departures with residence, departures with domicile;
- situation of labor force providers, units in the education system (high schools, vocational schools, universities), recruitment agencies.

The set of proposed information required for demographic analysis can cause difficulties in terms of access to data or even non-existence thereof at local level. The experience of the management team of the future project is a strength in the selection of information, accessing indicators and especially their interpretation in relation to the objectives set.

The temporal analysis refers to the dimension of the time factor in relation to the occurrence, manifestation and evolution of a needs system, towards the potential beneficiary of the project or its owner. The need to introduce such an assessment is justified by the identification of relevant and justified answers, at least to the following questions:

- What is the moment of occurrence of the problem and who found or acknowledged its existence?

- If there were previous assessments, in terms of impact of failure to solve the problem and what was its size?
- Have there been attempts or solutions applied to solve the problem since its occurrence until the moment of the present analysis? What were the effects of the solutions applied and how did the problem evolve?
- What are the prospects for the evolution of the problem, after the intervention through the future proposed project?

In applying a model of temporal analysis of the problem, the main difficulty is related to the way in which information is collected, the quality and accuracy of the information, the existence and the cost associated with the sources of information, the objectivity of the analysis method and the quantification of the costs of not solving the problem (Damodaran, 2012).

Efficiency assessment in classical alternatives is based on the theory of the system, which sees an organization as a system where inputs are the resources that are used to obtain the desired results (Draft, 2010).

The strategic analysis, considered as part of the proposed process of analyzing the needs of a project, has the role of validating the evolution of the problem, the proposed solutions and alternatives and the beneficiary on a relevant temporal perspective, usually minimum 3-5 years. The need for such an analysis is justified by the way in which the various documents of a strategic nature deal with the problem, realize its existence and offer solutions or options of realization. In the context in which the various strategic documents are prepared by various entities or institutions, with different objectives and interests, the issue of integrability of a problem and the unitary approach are still a challenge.

Additionally to the aforementioned, this analysis must also integrate the potential influences or difficulties generated by the political environment, by its orientation to a certain type of economy, by the way in which the political factors understand, interpret and support the investment phenomenon. In this regard, the mechanisms that "political force" creates and develops on the economic environment through the legislative framework are determinant.

The outcome of such an analysis must be a model of strategic alignment, where the issue or set of issues investigated can be found in documents, highlighting the common elements, the differentiating ones and possible solutions to narrow the gaps.

4. CONCLUSIONS

The reasoning of the model for the analysis of the needs or problems system proposed to be developed is based on the combination of quantitative elements, including the first four types of assessments with qualitative elements, in which the last two proposals are included. The conventional approach, structured on a limited level of quantitative elements, can no longer guarantee the success and performance of future investment projects.

Using this model of analysis is also conditioned by how the collected information can be integrated into the process of substantiating the future project. From this perspective, attention should be focused on the process of transferring information of a qualitative nature in a quantitative version, the compatibility of the units of measurement or the degree of integration.

Even if such analysis leads to the emergence of new elements of complexity for the process of substantiating a project, the solutions and information provided may constitute support elements in the selection of projects or alternatives, respectively the removal of those projects whose impact on the problem is limited or impossible to assess.

The usefulness of the proposed model of analysis and the expected results are synthesized in a set of effects, of which the most relevant are the financial, economic ones.

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