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**DOCTORAL THESIS**  
**-SUMMARY-**

**RESEARCH ON THE INTEGRATED PROJECT  
MANAGEMENT IN NONPROFIT ORGANIZATIONS  
OPERATING IN MULTI-PROJECT ENVIRONMENTS**

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## **Introduction**

The purpose of the doctoral research consists in providing adequate managerial instruments, models and procedures for the integrated efficiency of the management of nonprofit entities operating through multi-project environments.

The purpose of the research is achieved throughout the objectives of its six chapters. The first chapter aims at: the economic and legal definition of nonprofit entities from a managerial perspective; the delimitation of nonprofit management and the identification of the specifics of multi-project environments; the presentation of the difficulties and solutions regarding the social impact measurement of the nonprofit activity. This chapter offers the conceptual basis of the subsequent chapters, the notions defined at this level being afterwards used consistently throughout the following chapters.

The second chapter presents the research methodology by: mapping the tools employed to achieve the research objectives; presenting the conceptual link between the chapters and the description of the notion of multi-project profile. The notion of multi-project profile being a construct which guides the selection of a sample of multi-project nonprofit organizations from Romania.

The third chapter presents three main results: it provides a description of the interactions between the managerial features peculiar to the institutional design of nonprofit entities and the multi-project practices and structures; the conception of an operational framework for micro-knowledge management in multi-project environments; an identification of the factors influencing the organizational agility of nonprofit entities. The operational framework for micro-knowledge management is based on self-reflection techniques derived from experiential education and it serves to substantiate decisions regarding knowledge codification and staff retention. The presence of the factors influencing organizational agility is going to be assessed in the sixth chapter for the case of Romanian organizations.

The fourth chapter led to a general model of efficiency for multi-project nonprofit management. The construction of this model involved: the formulation of an objective function that weighs the social results with the efficiency of the implementation of the projects; an inventory of administrative requirements for determining the value of the function; defining the domain of constraints affecting organizational efficiency, identifying the types of managerial decisions delimited by the structural tiers of organizations.

The objectives concerning aspects of multi-project strategic nonprofit management constitute the domain of the fifth chapter. This chapter uses a dynamic systems approach to assessing various threats to the sustainability of nonprofit organizations, which, in its own turn, leads to mapping the strategic positioning of organizations from the perspective of dynamic systems levels. In order to facilitate the decision-making processes of project selection, a prototype of the decision-making process is elaborated in this chapter based on a succession of steps from strategic adequacy to the determination of a forecasted score function. The chapter concludes with a proposal on the generalization of a project management structure for communities in difficulty.

The sixth chapter presents the results of a research undertaken in Romanian organizations fitting into the multi-project profile, these results are analysed in terms of the adequacy of the conceptual and procedural proposals made in the previous chapters to the realities of multi-project nonprofit organizations in Romania.

In **Chapter I**, the notion of nonprofit organization was conceptually delimited as referring to organizations which, from an economic point of view, are operating under the constraint of profit non-distribution. From the point of view of modeling the microeconomic behaviour of nonprofit organizations, at this level were presented the main features regarding the competition and cooperation in the nonprofit sector, along with the interaction of these agents with economic and governmental organizations. The legal framework was specified from the institutional and fiscal manners of obtaining income by nonprofit organizations, offering, in this context, an assessment of the managerial relevance of the Romanian legal framework regarding the organization and functioning of associations and foundations.

The multi-project environments were defined and the difficulties specific to these environments were mapped, being offered a procedural solution for monitoring the consumption of resources through mechanisms such as those of advance requests and periodic control reports. The specific elements of the design of nonprofit organizations with direct influence on managerial practices were delimited as being: the primacy of mission formulation; the pre-eminence of donors among stakeholders; the pre-eminence of boards of directors as governing bodies; the availability of volunteering activity; the difficulty of measuring organizational success.

A way to use the social return on investment (SROI) as a tool for forecasting and evaluating the social impact of projects in monetary terms was presented. The approach of this topic started from the managerial limitations of the financial-accounting metrics for the nonprofit entities, moving on to an exposition of the SROI methodology and with the presentation of some ways of employing SROI in multi-project management.

The main theoretical contribution of **Chapter II** is given by the operationalization of the elements related to the complexity of multi-project environments through a profile of the presence of multi-project environments, such a profile is framed by detailing the dimensions and factors of presence of multi-project environments.

As a preamble for the analysis of the multi-project nonprofit management in the Romanian nonprofit organizations, the following steps were made: the description of the analyzed sample regarding the Romanian multi-project nonprofit management; the method of selecting the respondents; the structure of the questionnaire, the assessment of the internal coherence of the questionnaire from the perspective of the ordinal variables, as well as the number of questions and the type of the variables obtained, respectively.

At the level of **Chapter III**, the achievement of the objective of presenting the interactions between the specifics of nonprofits and multi-project practices brings as a theoretical contribution the fact that the managerial and structural-organizational development of nonprofits has been presented diachronically in parallel with appropriate multi-project practices. From the perspective of organizational design and the various life stages of the organizations. A second contribution is to propose a multi-dimensional approach for evaluating the impact of the presence and interaction of the members of multi-project teams.

Although this dimensional plurality of the influence of team members' activity makes more descriptive justice the complexity of multi-project contexts, it still retains the disadvantage of being a rather static framework, neglecting the changes occurred upon the team members themselves during the projects. The transformations experienced by the members of the project teams are mainly of the nature of the experiential gain of knowledge and skills through fulfilling the project tasks. Thus, the achievement of the third objective of this chapter led to the development of an operational framework for micro-knowledge management in a multi-project context. This framework guides the following organizational objectives:

- identifying an operational balance between detaching the knowledge from its owners - through codification - and affirming the tacit and irreducible personal dimensions of experiential learning;
- the adaptation in multi-project management of appropriate experiential learning tools;
- the inventory of multiple decisions related to micro-knowledge management;
- the integration of knowledge management in current project management practices and standards, *via* the recognition of knowledge the deliverables.

One of the limitations of this operational description presented above is that it does not give sufficient weight to the management processes following knowledge capture, ensuring hence that coded lessons are not only stored, but also used and updated periodically - once they are put into practice.

The analysis of the opportunities to increase the agility of nonprofit organizations executing projects with iterative life cycles has led to the identification of the contextual factors that determine the degree of organizational agility or a disposition towards Agile methodologies.

**The IV<sup>th</sup> Chapter** has led to the development of a model for increasing the efficiency of nonprofit management in entities operating in multi-project environments. The value of the objective function for this model can be improved by manipulating the indicators of deliverables and the duration of activities. This implies at the life cycle level a demarcation of:

- project and portfolio managerial constraints which are specific to nonprofit organizations operating in multi-project environments;
- mapping the typology of dependencies between activities, in terms of their obligation and source, supplementing this distinction with the triple constraint of purpose-time-budget.

Regarding the influence of project life cycles on the model, the predictive and iterative cycles of projects require distinct managerial solutions regarding the manner of yielding deliverables (*i.e.* achieving the purpose of the projects) and the compliance to the deadlines included in the project time baselines.

The computation of the value of the objective function was exposed taking into account the organizational and informational requirements and the typology of dependencies between the project activities. The final section of this chapter examined the decision-making relevance of the proposed efficiency model at the various organizational levels.

**The V<sup>th</sup> Chapter** aimed at using system dynamics modeling techniques to analyse the sustainability prospects for nonprofit organizations operating in multi-project contexts.

Concepts of system dynamics such as causal loops, stocks and flows were used to describe the complex relationships between projects, funding sources and social outcomes. The purpose of the modeled system was to reduce the identified social needs of the beneficiaries - by providing a series of social results - mediated by project deliverables and resources obtained by contracting different funders. The construction of a model of stocks and flows for such a system oriented towards the aforementioned objective presupposed the definition of its limits, of the main stocks, flows and of the rates of decision.

This approach led to the proposed objective –*i.e.* to identify the systemic threats to nonprofit sustainability and the dynamic nature of managerial decisions, in the context of interactions between nonprofit organizations, their beneficiaries and funding agencies. The peculiarities of these systemic factors threatening sustainability are mainly related to the delays in information flows and the different asymmetries characterizing the information flows.

Regarding the main stocks of the model, four categories of strategic areas for multi-project nonprofit management were described. On this basis, a matrix was built which identifies four major strategic contexts given by the variation of two of the main levels of the system - funding and social needs - that affect the multi-project activity of nonprofits, Identifying the strategic positioning, in one of these contexts, allows the initiation of a feed-forward managerial processes contributing to the sustainability of nonprofit organizations.

Because the model presented is a generic one, a limitation of the approach offered in this research, and the first step for its use in the real world, is a proactive analysis performed by nonprofit managers and stakeholders in customizing the model according to their organizational structural and cultural particularities. This proactive approach can turn the customized model into a powerful tool for assessing the dynamic processes that affecting nonprofit sustainability and for designing policies to improve the functioning of the system.

The chapter also provided a prototype of the decision-making process to guide project intake decisions, decisions aimed at balancing project efficiency requirements, in terms of triple constraint, and the need for stakeholder satisfaction. The designed process handles project proposals through four main procedural steps. The last step of the project decision-making process is based on a project intake score, aggregating the factors of the net social outcome (weighted by the time preference of stakeholders) and the effectiveness of meeting the project constraints. The theoretical contribution of the section consists in obtaining an intake function and a project selection procedure, explicitly linking the metrics of social outcomes to project efficiency criteria and the criteria of relevance expressed by stakeholders.

As a continuation of these concerns related to the sustainability of nonprofits solving public problems through the aggregation of social actors, the last section of this chapter is expanding multi-project management for nonprofit entities and local actors in communities in difficulty. The result of this approach is an integrated organizational structure based on the deliverables of projects, programs and portfolios which interact with the needs expressed, and with the requirements requested by, individuals, municipalities and companies.

The content of the **VI<sup>th</sup> Chapter** answered several methodological requirements, granting an empirical support for the proposals made in the previous chapters, its approach is mainly descriptive, depicting the multi-project nonprofit managerial landscape from Romania.

The adequacy of the method of selecting the respondents was confirmed by comparing the descriptive statistics of the questionnaire with the dimensions of the multi-project profile, a profile meant to operationalize the complexity factors of the multi-project environments. From the perspective of the latter aspect, the following aspects were noticed: the predominance of matrix organizational structures and the partial absence of departmental structures specific to project management (project management offices and/or project documentation departments).

The high retention rate of project team members and the project scatter factor of these members represent a manner of sharing knowledge and the lessons learned during project implementation. On the other hand, the harvesting of knowledge and the assessment of acquired skills take place, in many cases, insufficiently often and through methods consisting mainly of meetings and self-assessments.

From a strategic point of view, an aggregate matrix of importance / influence of stakeholders has been built, finding that the majority of stakeholders are placed towards the top right quadrant, which indicates either an overestimation of the importance / influence of third parties, or the need for a theoretical refinement that would increase the gap in the assessments of the position of these third parties. In this strategic context, boards of directors have often proved to be decisive in the selection of projects, and the frequency of meetings of this governance body is, in most cases, adequate. Among the project selection criteria, the social impact and the strategic alignment proved to be the most significant ones.

Although the social impact is very significant in the process of project selection, most organizations use indicators to assess the achievement of deliverables as a substitute for a measure for the social impact of both the projects and the organization. The efficiency indicators of the projects are drastically influenced by the requirements of the financing contracts, being rarely adapted to informational needs for guiding the managerial action.

Regarding the constraints that affect the implementation of projects, the most pressing is the constraint of compliance with deadlines, while the most rigid one is related to budgetary provisions. The fact that the objectives and characteristics of deliverables are less pressing, and relatively more flexible, raises the issue of the adaptability of iterative project management methodologies.

When it comes to the prospects of increasing organizational agility, the presence of the contextual factors of organizational agility was analysed in terms of the managerial practices used by the investigated organizations. A peculiar attention was paid to the level of the project teams, namely – to the autonomy of the teams, the participative dimension of decision-making, and the size and location of the teams. This analysis indicated that, in the context of the flexibility of purpose constraints and partially autonomous multidisciplinary teams, there are promising prospects for increasing organizational agility by adopting iterative incremental delivery methodologies. But these perspectives must always be assessed in terms of the power to negotiate the project constraints in contracting funding.

## **Conclusions**

The results of this research that led to the achievement of the purpose set out in the introductory paragraph are summarized below.

The first chapter made a series of conceptual delimitations on nonprofit entities - their institutional features, the nonprofit management and the modeling the economic behavior of these agents. At this level, the managerial relevance of the Romanian legal framework regarding the establishment and functioning of associations and foundations was presented. Multi-project environments were also defined and a procedural solution for monitoring resource consumption was provided through mechanisms of an advance request and a periodic control report. The capacity of the social return on investment methodology to meet the multi-project managerial information needs was appreciated and some solutions were offered to integrate this methodology into the project management tools.

The main contribution of the second chapter consists in the operationalization of the elements related to the complexity of multi-project environments through a multi-dimensional profile of the presence of multi-project environments.

The third chapter presented diachronically the managerial and structural-organizational development of nonprofit entities in parallel with the multi-project practices appropriate to various stages of the organization's life, proposing a way to assess the impact of the presence and interaction of multi-project team members. The opportunities to increase the agility of nonprofit organizations, which can present projects with iterative life cycles, were analyzed, thus identifying the contextual factors determining the disposition for iterative cycle management methodologies. An operational framework for micro-knowledge management in a multi-project context has been developed. This framework guides the adaptation of experiential learning tools and the integration of knowledge management into current project management practices.

The fourth chapter consisted in developing a model for increasing the efficiency of multi-project nonprofit management. This model has at its core an objective function whose value can be enhanced by improving the efficiency indicators for deliverables and deadline compliance. The informational requirements for determining the objective function were exposed and the typology of dependencies between the project activities was demarcated. The decision-making options of the model at the level of organizational tiers were inventoried.

The fifth chapter presents three contributions from the field of the strategic management of multi-project nonprofit entities. First, a model of the dynamic system, of which the targeted entities are part, was built. This construction aimed at analyzing the sustainability perspectives for nonprofit organizations. The factors threatening sustainability are mainly related to delays in information flows and various information asymmetries. Subsequently, the construction of a matrix of strategic contexts allowed for the description of feed-forward managerial processes that would strengthen organizational sustainability.

Secondly, a four-step procedural prototype of the project decision-making process was designed. The final step in this decision-making process is based on a project adoption score, aggregating net social outcome factors and efficiency. compliance with project constraints.

Thirdly, an integrated organizational structure was proposed based on project deliverables, programs and portfolios that interact with the expressed needs and requirements

of individuals, municipalities and companies - as actors in revitalizing communities at risk in post-industrial areas.

The sixth chapter presented the analysis of multi-project nonprofit management in Romanian organizations. This analysis used the results of a self-administered questionnaire. The adequacy of the method of selecting respondents was confirmed by matching the sample with the dimensions of the multi-project profile.

From the point of view of organizational structures, the predominance of matrix structures and the relative absence of departmental structures specific to project management were found.

It was also observed that a manner of sharing the lessons learned in the projects is ensured by the retention of the project team members and by the project scatter factor of these members.

Related to strategic management, an aggregate matrix of importance/influence of stakeholders was built. In this strategic context, the boards of directors have often proved to play a decisive role in project selection, and the most significant project selection criteria have been identified as being the social impact and the strategic alignment of projects.

Regarding the measurement of results, most organizations use indicators to assess the achievement of deliverables as a substitute for a measure for the social impact of projects. Considerations related to metrics make necessary the proposals presented in this research on: a model for increasing the efficiency of multi-project nonprofit management, the customization of methodologies for measuring social impact, a project selection process guided by a forecast of their social impact.

The most pressing constraint during project execution is given by deadlines compliance, and the most rigid is the one regarding the budgetary provisions.

In assessing the presence of organizational agility factors, attention was paid to the level of teams, more precisely to their autonomy, participation in decision-making, and to the size and location of teams. This analysis identified prospects for increasing agility by adopting iterative incremental delivery methodologies.

The main contributions of the doctoral research are the following:

#### **Theoretical contributions**

- defining multi-project environments through the multi-project profile;
- the diachronic presentation of organizational development in parallel with multi-project management solutions;
- the identification of the contextual factors of organizational agility for nonprofit entities;
- the construction of a needs/funds matrix for assessing the strategic positioning of nonprofit organizations;
- the extension of the concepts of project management for the organizational needs of communities at risk;
- a study on multi-project nonprofit management in Romanian organizations;

#### **Methodological contributions**

- the adaptation the methodology of the social return of investments to multi-project environments;



- the design of a model for increasing the efficiency of multi-project nonprofit management - based on improving the value of an objective function;
- the design of a dynamic system model for analysing the sustainability of multi-project nonprofit organizations.

#### **Practical contributions**

- the construal of a procedure for controlling the consumption of resources in multi-project environments through mechanisms of advance requests and periodic activity reports;
- the design of an operational framework for micro-knowledge management in multi-project environments;
- the designing a procedure for the project intake decision-making process.

**The limits** of the doctoral research are mainly related to the following aspects: the fact that the impact of working with volunteer staff in multi-project environments has not been studied; the need to calibrate the dynamic system of nonprofit entities to specific cases of entities and funding; the need to generalize a language and local communities of practice on the assessment of social change. There are thus some promising **directions for the development of the contributions** made, these directions refer to:

- the development of a project comparison tool (for projects having similar stakeholders, similar deliverables, etc.) from the perspective of knowledge needs;
- an analysis performed by nonprofit managers in customizing the dynamic system model;
- the desing of tools for project control from the perspective of the proposed efficiency model;
- the design of means of reporting and archiving projects, for reports containing homogeneous data on project delivery efficiency and social impact metrics;
- the tailoring of the proposals made herein to organizations that work mainly with volunteer staff.