

Information Project Assessment by the ANDA Method

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INTRODUCTION

It is well known that the decision to invest is preceded by (pre-)feasibility analysis and studies, which should show that the investment is necessary, opportune, and efficient. As concerns the information field, we consider this feasibility study practice as partially adequate, as there is no full financial assessment of the *necessity* and *opportunity* of the information project by taking into account its advantages/disadvantages, the studies presenting only a list of these advantages/disadvantages. Moreover, given the impossibility of determining the contribution of each information function to the economic efficiency indicators of the organization (turnover, profit, etc.), the final result is also a partial assessment of the efficiency of the *information project*, which may lead to bad influences on the managerial team when making the decision of investing or not in that project. This is why we proposed in this study *a new method of financial assessment of the necessity and opportunity of the information project*, namely the annual net discounted advantages method or, more simply, the **ANDA method**). This chapter also includes, besides theoretical aspects, a case study with a concrete application of the ANDA method to an information project.

We mention that the ANDA method may be applied to the assessment of the efficiency and of the opportunity of any investment project of modernization in any business area.

BACKGROUND

Modern management lays increasing emphasis on the organization on *projects* of investment activities and their funding, by means of the *budget technique*.

Briefly, a project is the first decomposition of a program, with a beginning and an ending, including a series of logically chained and efficiently planned actions/activities, which are supposed to be carried out in a certain period of time, for which a financial support is associated/assigned by budget, aimed at achieving one or a set of objectives (Belanger, 1995; Devaraj & Kohli, 2002; Hayes, 1989; Lewis, 2000; Lientz & Rea, 1999; Mantel, Meredith, Shafer, & Sutton, 2001;

Oprea, 2001; Project Management Institute [PMI], 1996; Sages Group [SG], 1997; Tugui & Fătu, 2004).

The previous definition leads to the idea that a project should include:

1. A (logic) schemata for running the established activities depending on the objectives undertaken;
2. An adequate financial support, that would enable the mobilization of the resources necessary for objective achievement;
3. A project administration team with a project manager that should coordinate the necessary procedures like a traditional manager.

The three items required for objective/objectives achievement within a project, support the project management concept, which has been thoroughly developed and widely used lately.

Basically, project management is defined as being the application of the knowledge and techniques specific to the project-oriented activities, so that the stakeholders' expectations and requirements should be attained or even overcome (Beise, Neiderman, & Mattord, 2006; Kern, Galup & Nemiro, 2000; Laudon & Laudon, 2000; PMI, 1996; Sisco, 2001; Walker, 2001).

Information project is a particular case of the project concept. As to the information-related activities in an organization, we can state that the project which reassembles them is an information project within a program run by such organization.

For a project to succeed, it is necessary to perform all the tasks assigned to the project management team resulting from the objective set, so the project management work becomes of primary importance.

Irrespective of the type of project considered for financial efficiency and opportunity analysis, the following information is necessary (Tugui & Fătu, 2004, p. 139):

- The initial investment value;
- The future cash flows;
- The analysis period; and
- The advantages and disadvantages as to the scenario "without project".

Please note that decisions related to information projects rely on feasibility studies stating their necessity, opportunity, and efficiency.

ANDA METHOD: THE METHOD OF ANNUAL NET DISCOUNTED ADVANTAGES

Motivation of ANDA Method

The assessment of the *necessity*, *opportunity*, and *efficiency* of an investment project is a stage of the utmost importance in any economic entity.

Usually, the *necessity* and *opportunity* of an investment project is justified by a description, under the form of a list, of the technical-economic advantages or disadvantages, without an *integrated financial value estimation*, under the form of impact studies, market surveys, and so forth, while for economic *efficiency*, the information included in the previous studies under the form of business plans, cost-profit analysis and, finally, feasibility studies, is molded.

As for the assessment of the efficiency of investment projects, there are specific indicators, such as: internal rate of return (IRR or ROI), payback time, net present value (NPV), and so forth. All these indicators apply to future cash flows for each project. In Table 1, we present the work schemata to obtain the analysis indicators of the efficiency of an investment project.

There is also the practice of justifying the *necessity* and *opportunity* of investment projects through sensitivity analysis of *efficiency indicators* between the scenario “with project” and the scenario “without project”. The disadvantage of this comparison consists of the fact that it does not provide actual indicators to estimate the necessity and opportunity of the project, but only some differences that should be interpretation and supported.

Note: The scenario “*without project*” is the variant in which the analyzed investment project is not applied, while the scenario “*with project*” is meant to commission the analyzed project.

Thus, the building of a set of economic-financial assessment indicators is justified for the assessment of the necessity and opportunity of an investment project.

The Essence of ANDA Method

As seen earlier, there is no set of economic-financial assessment indicators to assess the necessity and opportunity of an investment project, should the organization management request such information.

Under such circumstances, in order to assess the *necessity* and *opportunity* of an investment project we propose the employment of the **method of annual net discounted advantages (ANDA)**.

The essence of the *ANDA method* consists in substituting the cash flows with net advantages within the method of discounted cash flows (DCF) in order to calculate the indicators

Table 1. Model of data organization for the assessment of the efficiency of an information project. Note: IRR: Internal rate of return; NPV: Net present value; Vr: Residual value; ra: Discounted rate

Explanations	Years					
	0	1	2	3	4	5
Investment value (I_i)	I_i					
Net cash flows (F)		F1	F2	F3	F4	F5+Vr
Discount factor		$(1+ra)^{-1}$	$(1+ra)^{-2}$	$(1+ra)^{-3}$	$(1+ra)^{-4}$	$(1+ra)^{-5}$
Net discounted flows		$F_1 * (1+ra)^{-1}$	$F_2 * (1+ra)^{-2}$	$F_3 * (1+ra)^{-3}$	$F_4 * (1+ra)^{-4}$	$(F_5+Vr) * (1+ra)^{-5}$
Cumulated net discounted flows		$F_1 * (1+ra)^{-1}$	$F_1 * (1+ra)^{-1} + F_2 * (1+ra)^{-2}$	$F_1 * (1+ra)^{-1} + F_2 * (1+ra)^{-2} + F_3 * (1+ra)^{-3}$	$F_1 * (1+ra)^{-1} + F_2 * (1+ra)^{-2} + F_3 * (1+ra)^{-3} + F_4 * (1+ra)^{-4}$	$F_1 * (1+ra)^{-1} + F_2 * (1+ra)^{-2} + F_3 * (1+ra)^{-3} + F_4 * (1+ra)^{-4} + (F_5+Vr) * (1+ra)^{-5}$
Payback period	The investment value is compared to the cumulated net discounted flow. The year that overruns the investment value is the payback period.					
NPV	$- I + \sum F_i * (1+ra)^{-i} + Vr * (1+ra)^{-i}$ i takes values from 1 to 5					
IRR	For NPV = 0, ra is determined $- I + \sum F_i * (1+ra)^{-i} + Vr * (1+ra)^{-i} = 0$					

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