Pilot Portfolio Model
Portuguese Navy

Ricardo Simplicio, ISEG, Universidade de Lisboa, Portugal
Jorge Gomes, ADVANCE/CSG/ISEG, Universidade de Lisboa, Portugal
https://orcid.org/0000-0003-0656-9284
Mário Romão, ADVANCE/CSG/ISEG, Universidade de Lisboa, Portugal

ABSTRACT
In the times of major technological changes with ever-shorter production cycles, subject to strong global competition, it is vital for organizations to optimize resources and benefit from their investments in order to achieve the expected successes. One of the main difficulties that organizations face is the high number of projects in their portfolio. Selecting and prioritizing projects is essential to ensure the maximum return on investment and the sustainability of the organization. The selection and prioritization of projects depends to a great extent on the profile of the managers, organizational culture and frameworks best suited to the organization's environment. This study intends to confront the pilot model of selection and prioritization developed by the Portuguese Navy and establish a bridge with the academic literature. The project was carried out with the purpose of improving the process of allocating the necessary resources for the accomplishment of the missions of the Navy in the context of the Portuguese National Defence.

KEYWORDS
Multi-Criteria Analysis, Portfolio Management, Portuguese Navy Portfolio, Project Management, Projects Selection And Prioritization

INTRODUCTION
One of the great difficulties for organizations is the large number of competing projects in their portfolios. Budget and resources are limited, and this situation can lead to conflicts between competing projects, compromising the organization’s strategy. Proper project selection and prioritization is one of the key points to ensure maximum return on investment for the organization (Archer and Ghasemzadeh, 1999; Cooper and Edgett, 2009). Although there are organizations that only use financial indicators to select projects, such as ROI, VAL or Payback.

Organizations that rely solely on these financial methods have worse portfolio performance (Cooper and Edgett, 2009). Projects represent important challenges for organizations and ensure that projects are aligned with strategy is one of the key factors for the success of organizations (Cooper, 2008; Petro and Gardiner, 2015).

There are no ideal approaches to project selection, however, portfolio management should promote the best possible results from a correct selection of projects (Cooper and Edgett, 2009). The present case study was carried out within the framework of the Portuguese Armed Forces (PAF), more specifically the Portuguese Navy.

DOI: 10.4018/IJRCM.2020070104

Copyright © 2020, IGI Global. Copying or distributing in print or electronic forms without written permission of IGI Global is prohibited.
The focus is the construction of a portfolio of projects as PAF’s main investment instrument. Like other economic sectors, selecting and prioritizing projects is equally vital to the success of the organization. The selection and prioritization of projects aim to build and sustain the pool of forces and resources required for PAF missions, and this task is of utmost importance to the organization and to the country.

After an analysis of the advantages and disadvantages of the PAF, projects are identified that aim to eliminate the deficiencies found, which will have a diverse impact on the accomplishment of the PAF missions and, consequently, on the contribution of the PAF to the national defence policy.

The prioritization of these projects is determined at an early stage through a multicriteria analysis, particularly considering the results of the risk assessment of each of the identified gaps. Subsequently, a cost-benefit and sensitivity analysis are performed, which considers a set of constraints imposed at the level of available resources, mainly financial resources.

The objectives of the study are to identify the theoretical models established in the academic literature and to validate the PAF pilot model, supported by theoretical models, considering the specificity of the military context.

LITERATURE REVIEW

Project Portfolio

A portfolio refers to projects, programs, sub-portfolios, and operations managed as a group to achieve strategic objectives (PMI, 2013). In a portfolio, the components do not have to be interdependent or have common objectives, but they must be quantifiable, classified and prioritized individually. A project portfolio is a group of projects that compete for scarce resources and are conducted under the sponsorship or management of a specific organization (Archer and Ghasemzadeh, 1999; Shenhar et al., 2001; Elonen and Arto, 2003; Martinsuo and Lehtonen, 2007). There are three well-known objectives of portfolio management (Elonen and Arto, 2003; Cooper, Edgett, Kleinschmidt, 2002):

- The maximization of the portfolio value.
- The linkage of the portfolio to the strategy.
- Balancing the portfolio.
- According to the literature, project portfolio success is comprised of several dimensions (Martinsuo and, Lehtonen, 2007; Cooper, Dewe, and O’Driscoll, 2001; Meskendahl, 2010; Müller, Martinsuo and, Blomquist, 2008).
- Average project success – which includes the classical success criteria of budget, schedule, and quality adherence, as well as customer satisfaction of all projects in the portfolio (Shenhar et al., 2001; Martinsuo and Lehtonen, 2007).
- The use of synergies is also used to measure the success of a portfolio, which includes the use of technical and market skills that the projects in the portfolio produce among themselves (Shenhar et al., 2001; Martinsuo and Lehtonen, 2007).
- Strategic fit – which incorporates the extent to which all projects reflect the corporate business strategy (Dietrich and Lehtonen, 2005).
- Portfolio balance - that balances the project portfolio with respect to risks and expected benefits (Archer and Ghasemzadeh, 1999).
- Preparing for the future – which deals with long-term aspects and considers the ability to seize opportunities that arise after the projects have been ended (Shenhar et al., 2001).
- Economic success – which addresses the short-term economic effects at the corporate level, including overall market success and the commercial success of the organization or business unit (Shenhar et al., 2001; Meskendahl, 2010).
Secure Multiparty Computation via Oblivious Polynomial Evaluation
www.igi-global.com/chapter/secure-multiparty-computation-via-oblivious/76519?camid=4v1a

Reducing Risk by Segmentation
www.igi-global.com/article/reducing-risk-by-segmentation/181855?camid=4v1a