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PROJECT PORTFOLIO MANAGEMENT: AN ANALYSIS OF MANAGEMENT PRACTICES

Marly Monteiro de Carvalho, Escola Politécnica da Universidade de São Paulo, Av. Prof. Almeida Prado, Travessa 2, N° 128 Cidade Universitária - São Paulo – SP, marlymc@usp.br, Phone.: +55 11 3091-5363

Daniela Santana Lambert Marzagão, Escola Politécnica da Universidade de São Paulo, Av. Prof. Almeida Prado, Travessa 2, N° 128 Cidade Universitária - São Paulo – SP, dslm0401@usp.br, Phone.: +55 11 3091-5363

Ana Paula Lopes, Escola Politécnica da Universidade de São Paulo, Av. Prof. Almeida Prado, Travessa 2, N° 128 Cidade Universitária - São Paulo – SP, aplopes10@hotmail.com, Phone.: +55 11 3091-5363

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Abstract: Project portfolio management has been a relevant subject of academic research and organizational management. This article aims to analyze the management practices of project portfolio management. For this, was performed a survey, whose results were analyzed using a statistical technique of multivariate data known as clustering.

Key words: Project management, portfolio, project portfolio management, management practices, portfolio management.

1. INTRODUCTION

The activities of project portfolio management are the identification of project opportunities, initial assessment of the feasibility of these ideas, evaluation of potential projects according to strategic criteria, prioritization of projects, project selection, resource allocation, portfolio monitoring and ongoing feedback the results of this portfolio in the selection of projects and strategic planning.

The theme was born with Markowitz (1952), initially treating the subject of managing portfolio investments. In project management, portfolio management is a more recent focus, whose early work relevant date of the 90's. Due to the novelty of the issue of portfolio management of projects, many organizations still face challenges and problems in its implementation.

The project portfolio management has been increasingly the subject of academic research, especially from the standpoint of specific criteria necessary for its implementation in new product development deployment (COOPER, EDGETT, KLEINSCHMIDT, 1997; GRIFFIN, 1993; MONTOYA-WEISS and CANTALONE, 1994; WHEELWRIGHT and CLARK, 1992), pharmaceutical industry (SENN, 1996), and information technology (BARDHAN, BAGCHI, SOUGHSTAD, 2004). These authors report the uncertainty inherent in decision making in this type of project, which conflicts with the strategic benefits of these projects, combined with the very concept of innovation.

2. THEORETICAL

A project can be defined as a grouping of temporary efforts dedicated to the creation of product, service or result (PMI, 2004). It brings together people looking to achieve a single goal, which should be clearly defined. Besides the uniqueness, the project also involves timing, i.e., has declared the beginning and end (ISO 10006, 1997). For Block and Frame (1998), a project is a vehicle of change, which helps businesses are facing new challenges and seize the best opportunities.

Project management applies knowledge, techniques and tools in order to jointly meet the needs of each project (PMI, 2004) and can be seen by the external environment, characterized mainly by the market and the organization's strategy and the internal environment, characterized by the project itself (OLIVEIRA, 1995). The decades from 1950 to 1990 the project management had a greater focus on the project itself, what has changed in the mid-90s here, where the focus shifted to organizational (CARVALHO and RABEQUINI, 2005).

The decisions of the project group of organizations are made through the portfolio management of these projects (*Project Portfolio Management - PPM*). Portfolio can be defined as a process

composed of projects, programs and activities grouped together, facilitate management, decision making and achieving goals (PMI, 2008). This process evaluates, selects and prioritizes the projects, stating that should be accelerated, braked or closed (COOPER, EDGET, KLEINSCHMIDT, 2001).

The management of project portfolio management approach for each individual project with the strategic management of organizations (LEVINE, 2005), reducing the number of failures initiatives and minimizing investments in projects of little benefit. The seven main advantages of portfolio management of projects presented in the work of Cooper, Edgett, Kleinschimidt (2001) are:

- Favors finances by earning money and maximize resources
- Auxilia a elaboração e suporte da estratégia
- Assists the development and support strategy
- Facilitate horizontal communication
- Allow more objective
- Favors increased sales and market share
- Helps to achieve focus

3. RESEARCH METHOD

The following sections present the data analysis technique chosen and the data collection instrument.

3.1 Multivariate analysis – Cluster analysis

Cluster analysis can be defined as a multivariate analysis technique that allows data to establish homogeneous groups of individuals (FRALEY, RAFTERY, 2002). Is an important research tool that has been used as a way of structuring the survey data, grouping individuals by similar characteristics.

3.2 Instrument for data collection

The survey questionnaire was developed based on literature review was performed and sent to 73 officials from 21 companies, of which 57 were answered. The questionnaire was divided into two blocks:

- Block I → project portfolio management in the organization
- Block II → Profile of respondents and the company

4. DATA ANALYSIS

Initially, we proceeded to analyze the profile of the companies surveyed. Figure 1 shows the profile of companies by industry sector.

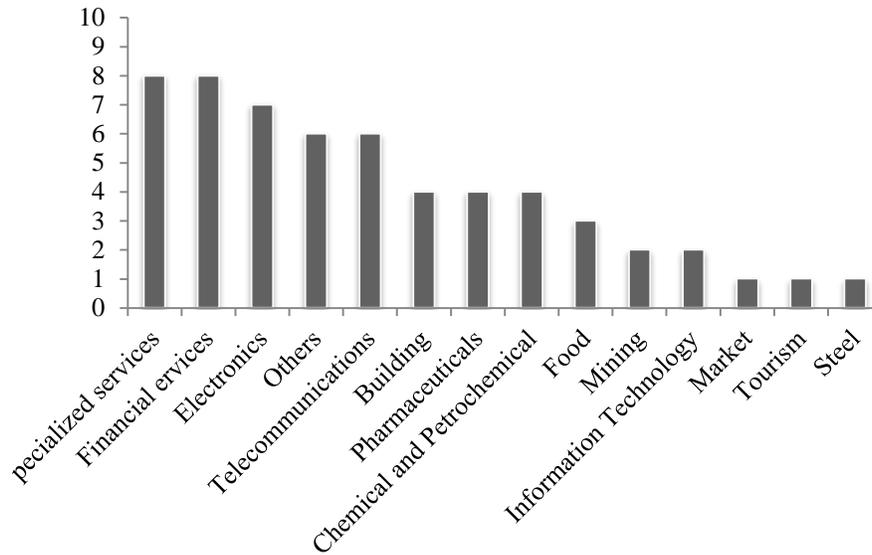


Figure 1 - Profile of the companies surveyed by industry sector.

The sampled firms include companies large and small, as can be seen in Figure 2.

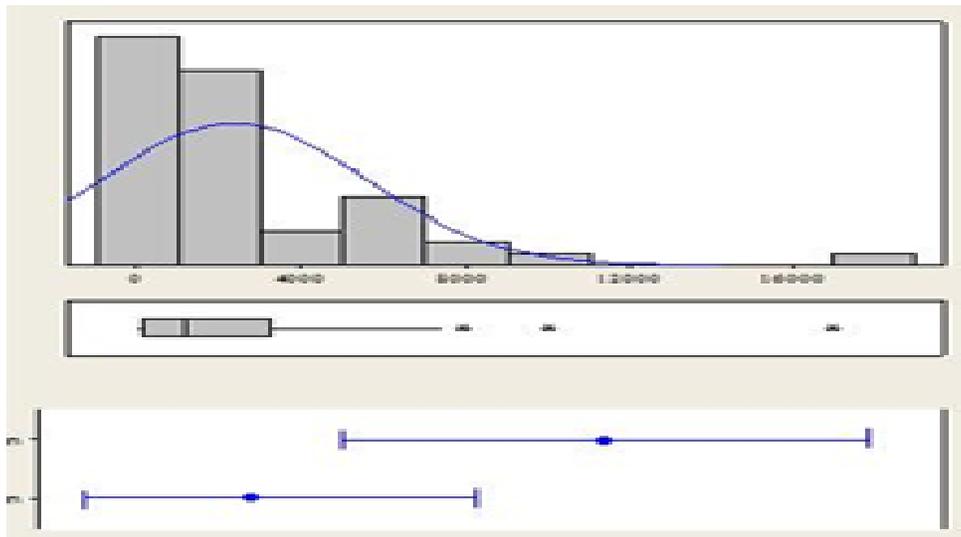


Figure 2 - Size of companies surveyed.

Regarding the presence of project offices in the company, most companies do not have a PMO, as can be seen in Figure 3.

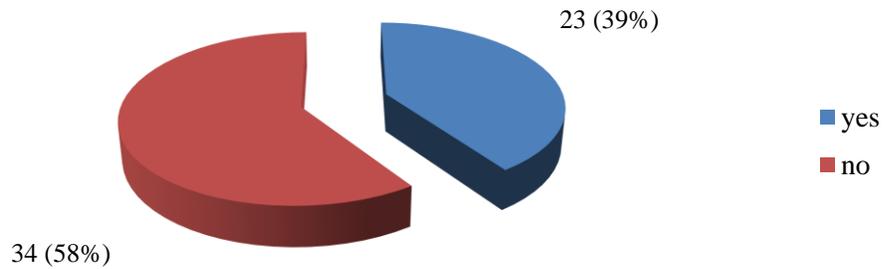


Figure 3. Presence of PMO in the company

Respondents are on average almost seven years working in companies over which answer the questions, although there are 14 respondents who are less than 1.5 years in the company, as seen in Figure 4.

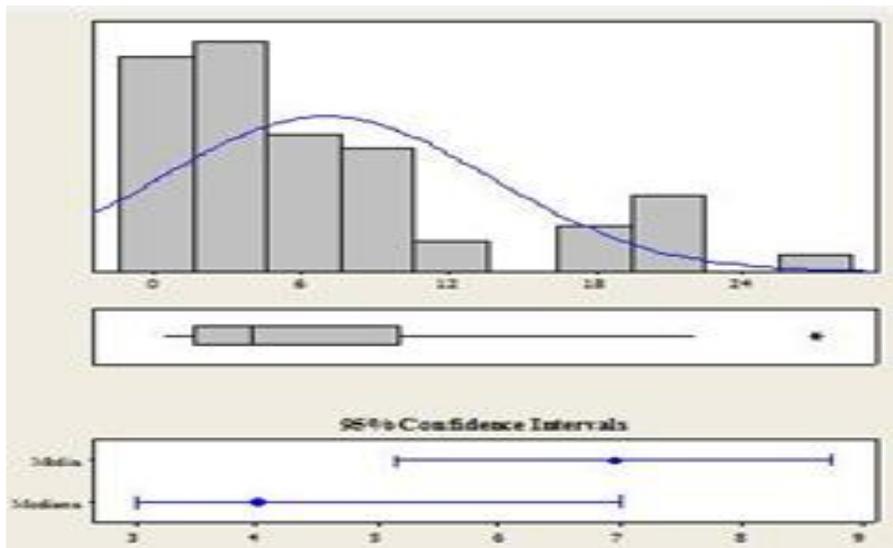


Figure 4. Residence time in the company of the respondents.

Most of the respondents are involved with the activities of evaluation and monitoring of projects, as shown in Figure 5.

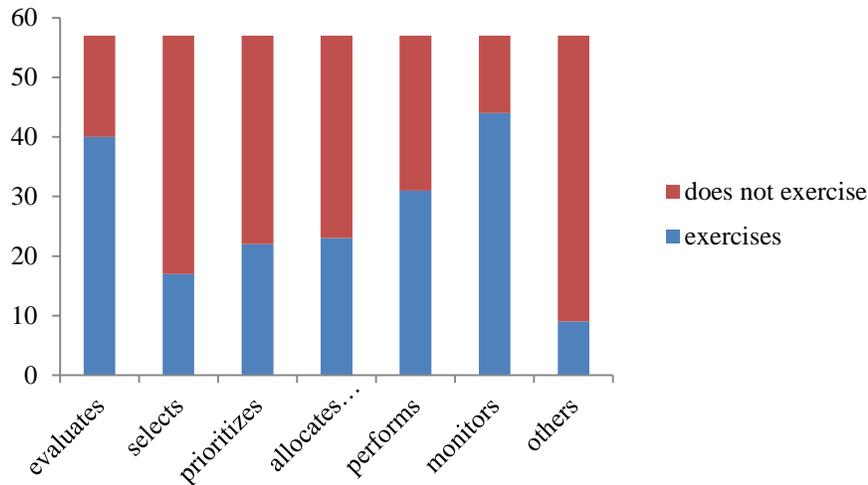


Figure 5. Participation of respondents in the activities of Portfolio Management.

Were used in the cluster analysis only the ordinal variables from P1 to P14 (see Annex 1), dealing with the extension of the 73 respondents agreed with the use of portfolio management processes in companies.

Based on this scheme acquired, was elected the solution with four clusters, the first with 15 respondents, 39 respondents to the second and the last two clusters containing only one respondent each, which could be outliers (see Table 1).

Table 1

Mann-Whitney

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14
Mann-Whitney U	109,00	103,00	89,50	137,00	82,00	105,50	173,00	144,00	241,00	122,00	118,00	44,00	79,50	134,00
Wilcoxon W	229,00	223,00	209,50	257,00	202,00	225,50	293,00	264,00	1021,00	242,00	238,00	164,00	199,50	254,00
Z	-3,82	-3,92	-4,16	-3,10	-4,18	-3,72	-2,39	-3,02	-1,04	-3,45	-3,73	-4,95	-4,24	-3,21
Sig. (bicaudal)	0,00	0,00	0,00	0,00	0,00	0,00	0,02	0,00	0,30	0,00	0,00	0,00	0,00	0,00

5. CONCLUSIONS

The classification of the clusters obtained indicates that there are two groups of companies with respect to the Project Portfolio Management. The first group (cluster A), which constitutes approximately 26% of the sample does not perform or performed only incidentally the activities of project portfolio management, as the definition of strategic guidelines, evaluation of the strategic

priorities of projects classified into categories, survey resource requirements, standardization in the method of analysis for project selection, periodic re-evaluation of projects, feedback from the strategic planning process.

The second group (cluster B) consistently performs such activities. In this second group, you can find most frequently attended by directors, functional managers, project managers, as well as the use of tools such as financial methods, weighting models, bubble diagrams, checklists and linear programming, and perform frequently biannual revaluation of its portfolio.

A strategic action for the results is in the food business culture the importance of alignment of the portfolio management of your projects with organizational strategy. The fact that the study dealing with a small sample of respondents limits the generalizability of results. Future work could explore a larger sample, trying to identify possible influences of industry type, industry sector, technological level, etc.

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ANEXX 1

P1	The organization has clear strategies	
P2	The organization classifies the projects into different categories	
P3	The organization assesses the projects according to strategic priorities	
P4	The organization has clarity on the availability of resources (human, technological, financial, etc.)	
P5	The organization evaluates, selects and prioritizes projects in a standardized way	
P6	The organization evaluates, selects and prioritizes projects specifically for each category	
P7	All projects are compared with each other and compete for the same resources, regardless of category	(-1; -0,5; 0; 0,5; 1)
P8	All projects the same category are compared with each other and compete for resources allocated to the category	
P9	Projects are evaluated, selected and prioritized individually and do not compete for resources with other projects	
P10	The availability of resources is considered in the selection and prioritization of projects	
P11	Resources are allocated to projects according to priority set	
P12	Information regarding the ongoing projects are considered in assessing, selecting, and allocating resources	
P13	The ongoing projects are reviewed periodically and may be stopped so that resources are directed to other	
P14	Information regarding the evaluation and implementation projects are used in the process of strategic planejamento	