Project Portfolio Management: An Analysis in the Brazilian Market

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ABSTRACT

The definition of portfolio for project management states that portfolio is a collection of projects and or program and other work that are grouped together to facility the effective management of that work to meet strategic business objectives (PMI, 2006). It is necessary to select the right projects to be conducted; otherwise too much effort and money will be invested in wrong projects. The main objective of this paper is to analyze the theory of portfolio management for projects and check its applications in the Brazilian market. Three companies in the Brazilian market were studied, an international bank, a Brazilian public company in the transportation market and a multinational electric manufacturer.

INTRODUCTION

The modern portfolio theory was first described by the Nobel Prize in economics Harry Markowitz in 1952. In brief, it describes how, for a given risk level, there is a specific mix of investments that will achieve an optimal return (LEVINE, 2005). Portfolio management is formally defined as a dynamic decision process, whereby a business list of active new product (and development) projects is constantly updated and revised (COOPER et al., 1997). In this process, new projects are evaluated, selected, and prioritized; existing projects may be accelerated, killed, or reprioritized; and resources are allocated and reallocated to active projects.

The portfolio concept applied to projects comes from economics and management. Some research has been developed in the last years about project portfolio, as the integrated framework for project portfolio selection proposed by Archer & Ghasemzadeh (1999) that states that the task of selecting project portfolios is an important and recurring activity in many organizations and proposes a framework that may be implemented in the form of a decision support system and a prototype system to support the decision making activities.

Portfolio for project management is a collection of projects and/or program and other work that are grouped together to be managed in an easily manner. Morris and Jamieson (2004) arguments that project and program management are widely used as a means of implementing corporate and business strategy and that strategies should be aligned and moved from the corporate level through portfolios, programs and projects in a systematic and hierarchical manner.

The main objective of this paper is to analyze the theory of portfolio management for projects and check its applications in the Brazilian market. The research is basically structured in two parts: project and portfolio management theory and practical application of portfolio management including three case studies.

PROJECT MANAGEMENT

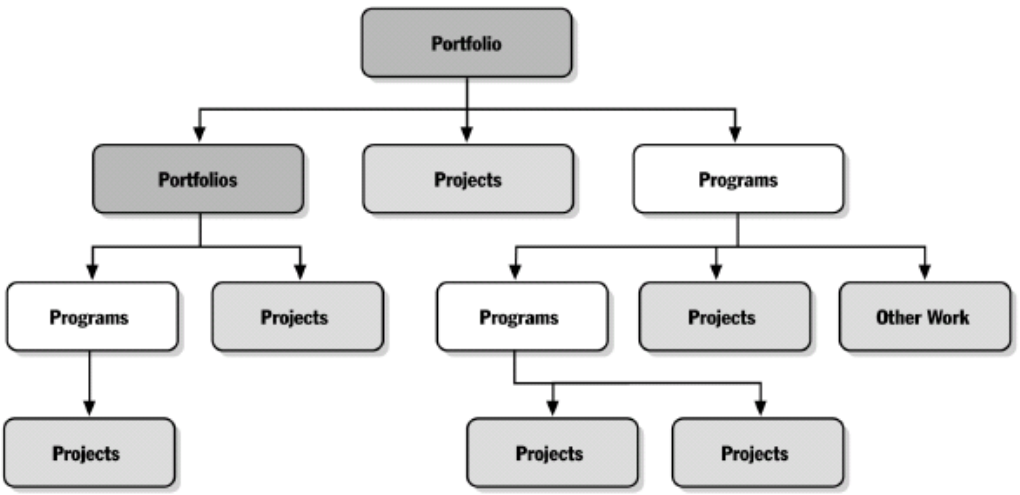
The project management was developed as a leadership concept of interdisciplinary activities with the objective to solve a temporary problem. This characteristic permits the project management to reach a high degree of innovation in the presented solutions to more complex's works (LITKE, 1995).

In the most significant areas of application, new products and services are created through projects, what could be demonstrated by the increasing number of companies that are adopting the project management methodology (KERZNER, 2001).

According to the PMI (2004) a project could be defined as a temporary endeavour to create a unique product or service and project management could be defined as the art of coordinating activities with the objective to reach the stakeholders expectations.

Rabechini Jr and Carvalho (2003) argue that in all the project definitions it is possible to realize two intrinsic concepts: temporality and uniqueness. The temporality

Figure 1. Portfolio and its components (PMI, 2006)



means that all projects have a well-defined beginning and end. The uniqueness or singularity means that the product or service created by a project is different from all the others already made.

PORTFOLIO MANAGEMENT

The portfolio concept applied to projects comes from economics and management. But just recently a standard was properly defined for project management. The definition of portfolio for project management states that portfolio is a collection of projects and/or program and other work that are grouped together to facility the effective management of that work to meet strategic business objectives (PMI, 2006). In the same way, PMI (2006) defines portfolio management for projects as the centralized management of one or more portfolios, which includes identifying, prioritizing, authorizing, managing, and controlling projects, programs, and other related work, to achieve specific strategic business objectives.

Figure 2. Portfolio process (PMI, 2006)

The Figure 1 presents an example of a portfolio and its components.

All of the components of a portfolio present some common characteristics:

- They are investments made or planned by an organization;
- They are aligned with the goals and strategic objectives of the organizations;
- Typically they present some specific characteristics that allows an organization group them in order to a more effective management;
- The components of a portfolio are quantifiable, that means, they can be measured, ranked and prioritized.

The portfolio should also be aligned with the strategy of the company. It should be the way the strategy is implemented by the company. It components must come from the strategic objectives and goals of the company. The output of the portfolio must increase the project and program activities authorized by the company. This process is presented in the Figure 2.

PMI (2006) also presents the phases of the portfolio management. They are organized in two groups:

1. Aligning Process Group:
   - Identification;
   - Categorization;
   - Evaluation;
   - Selection;
   - Prioritization;
   - Portfolio Balancing;
   - Authorization.
2. Monitoring & Controlling Process Group:
   - Portfolio Review and Reporting;
   - Strategic change.

Figure 3 presents the phases of the portfolio management.

There are lots of tools that the theory presents to evaluate and manage the portfolio. One of the most used is the bubble chart. The Figure 5 presents one example.

BRAZILIAN PROJECT MARKET

The Brazilian market for projects could be defined as a big one, considering the number of big projects in the ongoing phase and the value of each one, and all of

Figure 3. Detailed phases of the portfolio process (PMI, 2006)

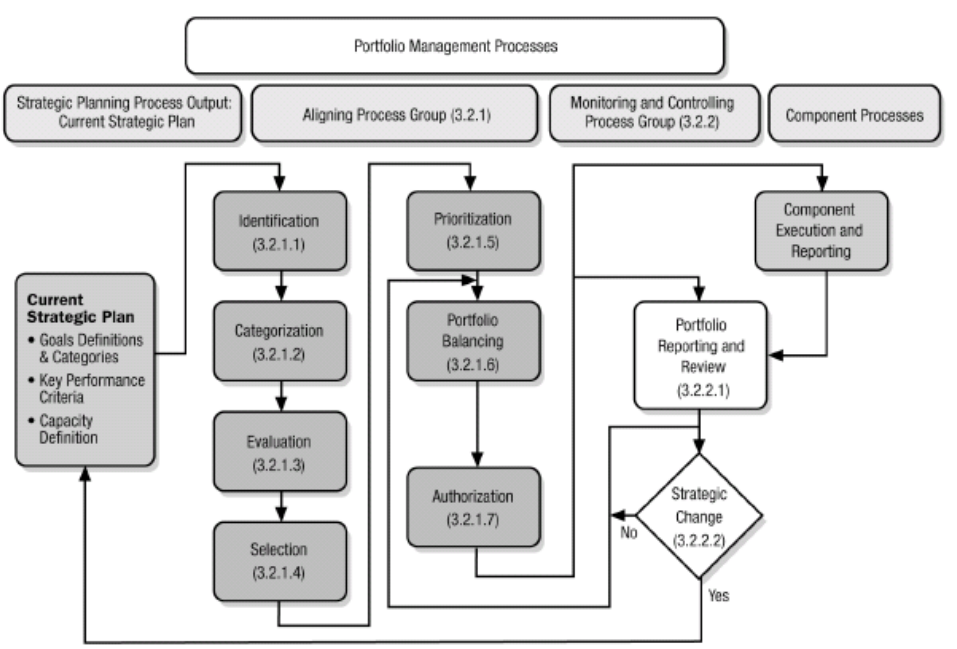


Figure 4. Bubble chart (PMI, 2006)

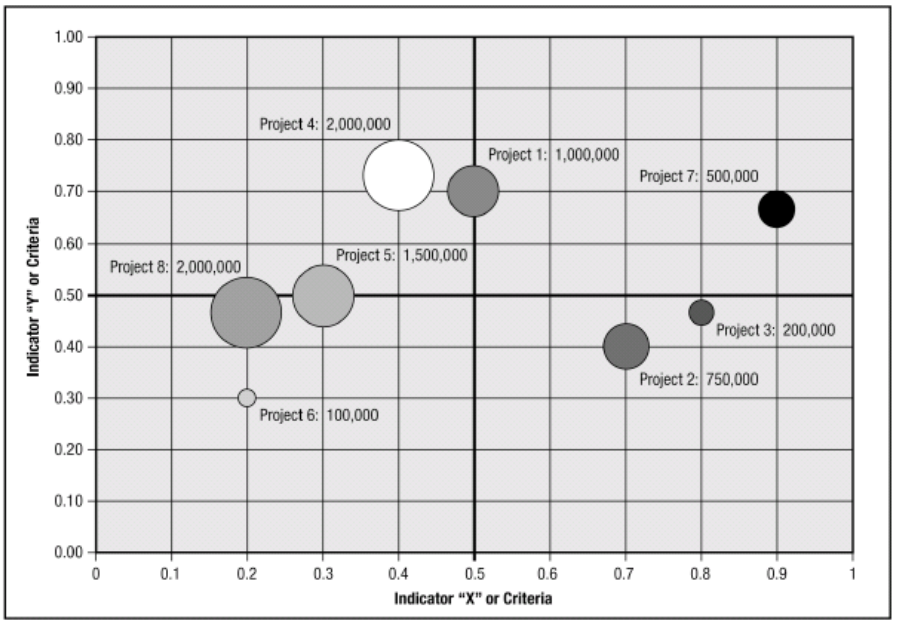


Table 1. Brazilian project market (EXAME, 2005 and EXAME, 2006)

	2005	2006
Total Number of Projects	403	707
Total Value of Projects (millions of US$)	83,574	99,600
Avarege Value of Projects (millions of US$)	207	141

Table 2. Tool for evaluation of projects from a bank

Criteria	Project 1	Project 2
	Grade	Grade
Revenue	5	2
Cost	5	5
Importance	2	1
Final Results	12	8

them. The market is also increasing. In the last year, the total value of the projects increased in 19%, from US$ 83.6 billion to US$ 99.6 billion, as presented in the table below.

The data presented below represent the following economy sectors:

- Energy;
- Oil and gas;
- Water;
- Telephone;
- Transportation.

METHODOLOGY

For the analysis of the practical application of portfolio management, three case studies were selected. For the cases studies, three companies in the Brazilian market were studied, an international bank, a Brazilian public company in the transportation market and a multinational electric manufacturer. The cases were selected to compound a multi-varied scenario were the portfolio management could be evaluated.

CASE STUDIES

International Bank

The analyzed bank has more than 170 years and started its operations in Brazil in the beginning of the last century. The main area that uses project management in the bank is the information technology. This area owns 95% of the projects of the bank.

The method used to select the projects for the portfolio of this company is based in spreadsheets with three defined criteria: revenue to be obtained after the implementation of the project, cost of the project and strategic importance. For each criteria there is a grade related to some specific values defined by the top management. Table 2 presents a simple example of two projects evaluation.

Brazilian Public Company in the Transportation Market

The public transportation company analyzed in this study works simultaneously in three metropolitan regions, which includes 67 cities and a population of 23 millions of inhabitants. It attends 1.5 millions of passengers per day.

It portfolio includes 12 projects and totalize US$ 383 millions. The tool used by the company to select the projects and control the portfolio is the bubble chart as presented in the Figure 5.

Multinational Electric Manufacturer

The electric manufacturer is a Europe based company, with more than 150 years, with 400,000 workers, placed in almost 200 countries. The company produces and installs a great variety of electrical and electronic equipments, in the great majority delivered to customers through specific projects adapted to the necessities of each one. The products innovation tax is extremely high and the products actually sold were developed maximal three years ago. Basically the company sells customized solutions to their customers.

Figure 5. Portfolio of a public transportation company

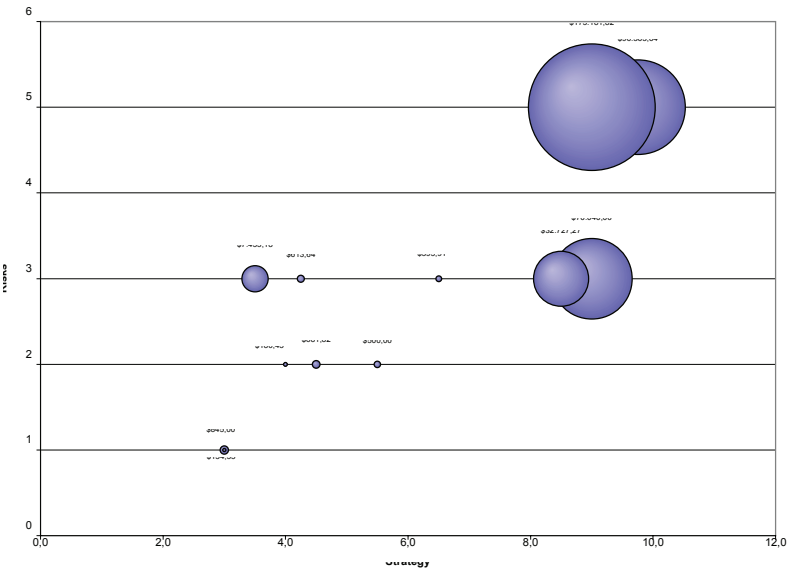
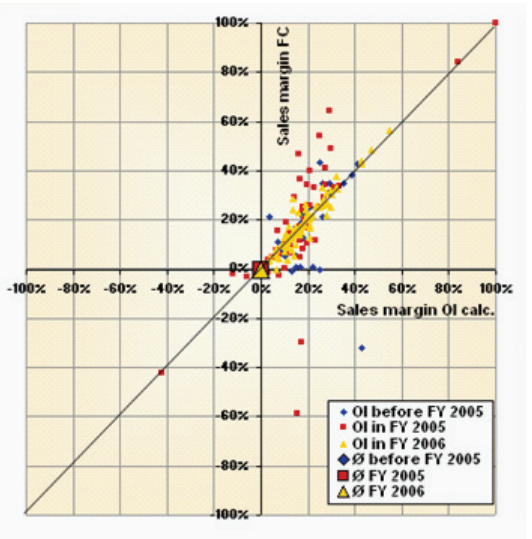


Figure 6. Portfolio of an electric manufacturer



In Brazil more than 50% of its gross sales are managed as projects. In the fiscal year of 2005/2006 this represents almost US$ 1.2 billion. This demonstrates the importance of a good project management for this company. The tool used by the company relates the margin of the projects in the beginning of them and the margin in the closing of the project. This information is crossed in a graph as presented in the Figure 6, where the 220 major projects of the company are placed.

CONCLUSIONS

The conclusions obtained from this study could be grouped in two sections: adoption of portfolio management and tools used by the companies.

- The companies realized the importance of the portfolio management for projects and programs and are starting initiatives in order to implement methodologies to administrate the portfolio;
- There is not a standard tool used by the companies and the tools used by them are made inside the companies and not developed by a specific software provider.

Although the companies in Brazil are realizing the importance of portfolio management in the management of their business, there is some room of improvement for them in the portfolio management topic, for example, the selection methods are not as objective and systematic as presented in the theory.

The great challenge for the companies in general is to do more, better and faster, always with less. To achieve these objectives, the companies must be able to measure what they do, and how well they do. And it is here that portfolio management could help the companies.

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