The value of project management methodology: a case study

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Abstract: In order to effectively observe and comprehend the problems, executives must understand their new role in a project management environment and should attend the same "therapy" training sessions as middle management (KERZNER, 2001). So, we see that is very important to give the executives quantifiable benefits of good project management. We must prove that spend the company's money in project management will give them an opportunity to get more business and manage effectively the existed ones. Crawford (2003) says that, if we want to value the project management, we must be able to: develop a system to measure value in our organization, know what project management initiatives are more important, know what value other organizations have obtained by implementing project management and sell project management to our senior executives. This paper presents how to try to measure the value of project management. The methodological option adopted was a conducted survey with companies that are supposed to have good methodologies in project management in the IT Brazilian market.

Keywords: Project management, value, strategy.

1. Introduction

The competitive environment that arises in the postindustrial era, characterized by the speed of technological changes and turbulent markets, demands learning and flexibility ability of organizations results (CARVALHO; LAURINDO, 2003). In consequence, Project management has been considered a strategic issue for successful companies.

Several companies today work with projects, which could be demonstrated by the significant number of companies adopting the PM methodology (KERZNER, 2001). It is easy to realize this, taking the increasing number of *Project Management Institute* (PMI) members as a parameter as well as the number of project managers certified as *Project Management Professiona*l (PMP) by the PMI.

On the other hand, in the last few years many companies are spending significant quantities of resources in project management, remaining controversial the discussion about the results considering the return over the investments. They realized that it is important to have a structured project management methodology, but some questions about the results and benefits over project management investments arise, such as:

- How can we prove that spend money in project management worth?
- How get top management committed to project management without the accountability of the results?

The main literature of project management concerns with tools and methodology implementation. There are just few papers about the value of project management to organizations. The accountability of the PM investments is another important issue that demand further researches. Regardless of how much literature exists in the area of effective project management, executives will not become committed until they see the system operating effectively and producing the expected dollar value of profit on the bottom line of the project.

Porter (1996) argues that the strategy's essence remains in choosing the activities to be made in a different way. The strategic planning could be defined as the process of creating and implementing decisions about the organization future (KERZNER, 2002). King (1978) says that the projects can unify the strategies and spread them to the corporation areas. In order to effectively observe and comprehend the problems, executives must understand their new role in a project management environment and should attend the same "therapy" training sessions as middle management (KERZNER, 2001).

So, we see that it is very important to give the executives quantifiable benefits of good project management. We must prove that spend the company's money in project management will give them an opportunity to get more business and manage effectively the existed ones.

Crawford (2003) says that, if we want to value the project management, we must be able to: develop a system to measure value in our organization, know what project management initiatives are most important, know what value other organizations have obtained by implementing project management and sell project management to our senior executives.

This paper presents how to try to measure the value of project management. In order to contribute to the evaluation of PM value in organizations, this paper presents one possible systematic to measure the value of project management, trying to establish a connection between the investments in project management and the financial return obtained by the companies.

This paper has five sections. Section 2 presents a synthesis of performance measurement systems theoretical discussion, followed by PMS analysis on project management scope. Section 3 presents methodological approach adopted in the field research followed by results analysis of case study in section 4. Finally section 5 brings paper conclusions.

2. Literature review

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).

According to the Project Management Institute, PMI (2001) a project could be defined as a temporary endeavor 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.

The project management is each time more present in the agile and flexible organizations and companies all over the world are sending their workers to make training with the objective to improve their control over projects. So the project managers are becoming much better in finalizing their projects on time, under budget and according to the scope. Beside that, there are emergent worries that project management should be controlled in the organization level and not in the individual. Recognizing this, recently there is a great effort in the direction of creation and maintenance of a department called Project Management Office which takes the responsibility of monitoring projects (HALLOWS, 2002).

2.1. Project management and corporate strategy

Challenged by the changes in the markets and because of the aggressive competition, the companies learned to be flexible in order to quickly answer the competition. Searching to gain efficiency, the management best practices reach more importance (PORTER, 1996).

The fulfilment symbol in the industrial era was the continuous improvement. Besides that, in the revolution era, it will not be the knowledge that will produces the new richness, but the insight – the ability to see opportunities of disruptive innovations (CHRISTENSEN; OVERDORF, 2000). For the first time in the history, our inheritance is not more our destiny (HAMEL, 2000).

Porter (1996) argues that, although the operational efficiency is necessary in the competitive scenery, it is not a strategy format and cannot replace it. A company can surpass the performance of other competitors only if it can establish a competitive advantage that could be perpetuated. Therefore, the company should try to deliver value to the client, to create value for itself with the lower costs or make both.

The operational efficiency could be defined as the manner to carry out similar activities better than the competitors. To reach efficiency, many management tools were created, for example: total quality, benchmarking, outsourcing, partnering and reengineering. These tools are necessary, but not sufficient, to substitute the strategy of a company. In the other hand, a strategic position means carrying out different activities from the competitors or carrying out similar activities in a different way. So, one of the problems in drawing attention only in the operational efficiency is the fact that a few companies could compete with success for a long period, because quickly the excellence standards are reached by the concurrence, making the competitive advantage loose its power (PORTER, 1996).

The operational efficiency fits some companies worried in measuring performance. Deciding for a strategy is difficult, trade-offs could scare and choosing a position have a risk to make a wrong decision. In this environment, the strategy seems to limit the growing of the company, because in choosing a group to server, it is abdicating the revenues generated from the excluded groups.

A strategic vision does not means a statically vision of the competitive environment and one company could change its strategy if there is a significant change in the sector's structure. Besides that, choosing a new position should be drive by the ability to make new changes and develop a new system of complementary activities to obtain sustainable advantage.

2.2. The benefits of project management

Several authors highlight the benefits of a project management methodology. Kerzner (2001) presents the following list of benefits from project management:

- Identification of functional responsibilities to ensure that all activities are accounted for, regardless or personnel turnover;
- Minimizing the need for continuous reporting;
- Identification of time limits for scheduling;

- Identification of a methodology for trade-off analysis;
- Measurement of accomplishment against plans;
- Early identification of problems so that corrective action may follow;
- Improved estimating capability for future planning; and
- Knowing when objectives cannot be met or will be exceeded.

Other benefits that could be listed are related to the following topics:

- Financial improvements: better return on investment (ROI), higher productivity, improvement in the sales growth and better economic value added (EVA);
- Customer improvements: improvement in the customer satisfaction, higher market share, better customer retention and customer acquisition;
- Project and/or process improvement: analysis of requirements performance, schedule performance and budget performance, alignment to strategy, adequate time to market and project completion, decreasing number of process errors and scope changes; and
- Learning and growth improvements: higher employee satisfaction and employee productivity, lower employee turnover and optimized training time.

2.3. The OPM3 maturity model

OPM3 is an acronym for the Organizational Project Management Maturity Model. It is the first standard for organizations published by the Project Management Institute (PMI) and has three, interlocking elements: Knowledge, Assessment and Improvement.

The knowledge element describes organizational project management and organizational project management maturity. It explains why they are important and describes how organizational project management maturity can be recognized (the capabilities and corresponding outcomes that need to be achieved). Assessment is the procedure by which an organization can measure itself against the description of maturity in the knowledge element, in order to gauge its organizational project management and its maturity. The Improvement element provides information to assist an organization in determining and selecting paths to navigate from its current state of maturity to a more desired state of maturity, should the organization choose to improve its current state.

The OPM3 self-assessment contains 151 binary (yes/no) questions. The time and effort it takes to complete the assessment varies from organization to organization. All of the questions must be answered before the user reviews the analysis of the results. The results of the OPM3 self-assessment provide an organization's overall maturity labeled as the OPM3 continuum that provides for the organization being analyzed a percentage score in relation to the body of OPM3 best practices the organization

2.4. Information technology and PM

As presented by Laurindo and Carvalho (2003), the information technology worries about complex relations between information systems, the use and innovation of hardware, automation systems, services and users. The success of the project, the roll-out of the solution and the operation of the computers and information systems depends on efficiency (quality, accuracy and performance) of the equipments and software developed by engineers and analysts.

The efficacy concept that fits with the computers systems objectives and information for the organization necessities and end users is becoming more and more important. The information technology efficacy depends on the organization structure and company and can impact and change the business strategy and its management. The information technology efficacy can be achieved through changes in the organizational structure involving analysts, managers and users (LAURINDO; SHIMIZU, 1999).

If you are one solutions provider, it is mandatory that the investments in your solutions provide minimal returns, and that you have a system developed to quantify the benefits before selling with the objective to gain the business and, even more important, to collaborate with the customer and guarantee future benefits. We are facing a moment where is mandatory that the innovation and the maturity of investments in IT – the IT accountability age. It is of interest of IT stakeholders – project managers, business units managers, IT executives, CIOs, CFOs, board members, consultants and solutions providers – to best understand the aspects related to the achievement of the IT value, and to provide the basic tools to quantify, communicate and guarantee superior returns to the investments in IT (PISELLO; STRASSMANN, 2003).

2.5. Value analysis

Value Analysis and value engineering are not new concepts, their origin date to World War II. Their successes were challenged at times, yet flexibility and continued improvements have enabled value analysis and value engineering to overcome roadblocks with remarkable results. As the old saying goes, the proof of the pudding is in the eating. Value analysis and value engineering were first developed by Lawrence D. Miles, an electrical engineer with General Electric (GE), now universally known as the "father of value engineering." When World War II broke, material shortages began occurring, and electrical components that once were plentiful were committed to strategic applications. A product that had been produced easily in the past had to be redeveloped using different

materials. The function remained the same, but the method of providing that function had to be changed. Miles, who had often in the past been dissatisfied with the high cost of many of GE's projects, realized that many times when circumstances fore people to do things differently – altering a design or using a different material, for example – the result is superior performance combined with reduced cost (THIRY, 1997).

Since Miles' times, value has evolved from a simple quality/cost ratio to a more customer-oriented notion. Value increases when the satisfaction of the Customer's need augments and the expenditure of resources diminishes. (THIRY, 1997). Customer value is a measure of relativity that consists of a balance between quality and resources. Quality is the capability to respond to the customer's needs, and resources are the global overall resources needed to fulfill that need.

Womack and Jones (1996) say that the value should be expressed through a specific product or service that satisfies the desires of the customers with reasonable price and time of delivery.

It is important to say that the value concept that would be worked in this paper is related to companies and not to the shareholder value concept, as presented by Williams (2000), besides others authors.

Thiry (1997) arguments that there are many types of value and all of them must be considered in a value study. Depending on the client's objectives, they will vary in importance, and more energy should be spent on optimizing those considered most important, while the less important ones might not be considered at all.

- Use Value: the amount of current resources expended to realize a finished product that performs as it was intended;
- Esteem Value: the amount of current resources a user is willing to expend for functions attributable to pleasing rather than performing; e.g., prestige, appearance, and so on;
- Exchange Value: the amount of current resources for which a product can be traded. It is also called worth, as the minimal equivalent value considered;
- Cost Value: the amount of current resources expended to achieve a function measured in dollars; and
- Function Value: the relationship of function worth to function cost.

The current literature on the evaluation of project management commonly reports that efficiency measures in terms of time, cost and scope. Financial terms are generally limited to the project, as opposed to broader evaluation practices that extend to the organization (THOMAS et al., 2002).

The project management's value is generally perceived to be at the operational level, and, in consequence, as a tactical issue. On the other hand, the top management level generally focus on corporate issues and those related to business strategy and results. This gap is also part of the conundrum within project management that affects the sale of project management. Thus, it is necessary to show quantifiable evidences of the benefits of project management.

Thomas et al. (2002) state that is necessary to measure the following items of project management:

- Contribution to improved financial measures;
- Enhancement of staff growth and development;
- Enhancement of customer satisfaction, profits and market share; and
- Value of new projects obtained.

One of the most directly way to evaluate project management benefits is to analyzes the margins in the current projects of a company. It is possible to compare the margin of a project when a company sell it with the obtained value when it is concluded. The difference should be explained by the project management methodology.

The project management success value could also be measured by the process. Regarding Ibbs and Reginato (2002), in many cases, processes are born of successful projects. As such, many companies determine project success as a function of processes they create.

3. Field research design

The methodological approach adopted was multiple cases. The selection criteria demanded a 3 years implementation of project management methodology and belong to IT sector. The initial source of information was companies which the greatest number of certified project managers (Project Management Professional - PMP) by the Project Management Institute (PMI).

For these companies a survey was conducted through the use of the OPM3 maturity model from the PMI analyzing their project management methodology.

This information was compared with the profitability from these companies with the figures of the majority of the companies from the IT Brazilian market.

4. Field research results

The analyzed companies are presented in the Table 1 with the specific segment of the IT market that they belongs

Table 1. Analyzed companies.

Company	Position in the PMP certification	Segment
A	3	IT Services and Telecom
B	10	Solution Business
C	25	IT Services
D	30	Solution Business
E	32	IT Services

to. They were selected from the list of companies with the great amount of certified project managers as PMP in the Brazilian market. The names of the companies were omitted in this work for copyright reasons regarding their project management methodology and status at the OPM3 evaluation. Here they are just presented as "A" until "E" companies.

To the analyzed companies a survey was conducted based on the 151 questions of the OPM3 maturity model questionnaire. Table 2 presented below show us, the final results of the analysis.

To the 5 analyzed companies the increase of sales and profit was measured in the last year, comparing the data from 2006 with 2005. The results obtained are presented in Table 3.

Table 4 compares the analyzed companies with the mean for the IT Brazilian market and with the general market in Brazil, regarding the OPM3 results, the increase in sales and the increase in profit. The increase in sales and profit were measured for the 500 major companies in Brazil. The mean OPM3 results for the Brazilian IT market and for the general Brazilian market were obtained from the OPM3 database.

Table 2. OPM3 results for the analyzed companies.

Company	OPM3 Results
A	71%
B	64%
C	48%
D	29%
E	24%

Table 3. Increase in sales and profit for the analyzed companies.

Company	Increase in sales	Increase in profit
A	17.0%	25.0%
B	–8.3%	88.0%
C	35.3%	18.9%
D	7.7%	22.0%
E	11.6%	4.0%

Table 4. Summarized data for the analyzed companies, the Brazilian IT market and for the general market in Brazil (Source: Adapted from data of EXAME, 2006).

Group of companies	OPM3 Results	Increase in sales	Increase in profit
Analyzed companies	67%	12.7%	31.6%
Brazilian IT market	34%	4.0%	5.7%
General Bazilian market	31%	3.26%	14.5%

5. Conclusion

With the information presented in Table 4 was possible to compare the companies from the Brazilian IT market analyzed in this work, with other two groups of companies. The first one was Brazilian IT market and the second one was the general Brazilian market.

Regarding the status of the project management methodology, the analyzed company that are positioned at the first positions in the ranking of the PMP certification, have a better project management methodology presented through the OPM3 results. They obtained 67%, comparing with 34% from the IT market and 31% for the general market. It is possible to perceive that the IT market have a 10% better grade than the general market.

Comparing the increase in sales and profitability, the analyzed companies also presented better figures than the other companies. They presented a 12.7% increase in sales versus a 4.0% from the IT market and a 3.26% from the general market. Here, the IT market have a little better number than the general market. In the profitability analysis the companies analyzed presented a 31.6% improve, against a 5.7% in the IT market and a 14.5% in the general market. In this case, the general market presented a better number than the IT market. With this last information was possible to imply that the IT market in Brazil is increasing as much as the general market, but the profitability improvement is not so good ad in the general market.

Though the analysis of the value creation through the PM methodology, it is possible to confirm that it is supported for the existed theory. It was possible to prove that spend the company's money in project management gave them an opportunity to gain more money, reduce costs and manage effectively their projects, and it is special true for the companies from the IT market.

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