

## VALUE CREATION FROM ORGANIZATIONAL PROJECT MANAGEMENT: A CASE STUDY IN A GOVERNMENT AGENCY

**Warlei Agnelo de Oliveira**

University Center UNA, Minas Gerais, Brazil

**Cristiana Fernandes De Muylder**

University FUMEC /FACE, Minas Gerais, Brazil

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### ABSTRACT

This paper aims to analyze, through a case study based on a construct of the work of Thomas and Mulally (2008), called *Researching the Value of Project Management*, the relations of the constructs of this conceptual model and to show how they interfere with the organizational values, possibly in programs conducted by a government agency, from the perspective of the senior management directly involved. The analysis of information collected indicated that project management has brought value to the organization, but not all components of the conceptual model used were perceived. Additionally, differences between respondents from outside and inside of this department become evident, indicating a difference in *stakeholders'* interests. Finally, from the perspective of institutional isomorphism, we searched for evidence of an effort to increase the organization's management maturity in project management, indicating by documents the mimetic and coercive isomorphism to ensure the achievement of goals and financial efficiency of the projects analyzed.

**Keywords:** Project Management, Strategy, Organizational value, Government. Isomorphism.

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Address for correspondence / *Endereço para correspondência*

*Warlei Agnelo De Oliveira*, Centro Universitário UNA, Professor do Centro Universitário UNA nos cursos de graduação em Engenharia Civil e Tecnólogos em Gestão Ambiental e Logística. Engenheiro Assessor da Secretaria de Transportes e Obras Públicas do Estado de Minas Gerais. Mestre em administração pela Faculdade Novos Horizontes, especializado em gestão de projetos pela Fundação Getúlio Vargas, graduado em Engenharia Civil pela Universidade Federal de Minas Gerais. Endereço: Rua Lindolfo Caetano, 90 – Bairro Calafate - Belo Horizonte – MG - Brasil, CEP 30190-051 – Telefone (31) 3377-2493 – Email: warlei.oliveira@prof.una.br / warlei@gmail.com

*Cristiana Fernandes de Muylder*, Universidade FUMEC /FACE Professora e pesquisadora do Mestrado e Doutorado de Administração e do Mestrado de Administração de Sistemas de Informação e Gestão do Conhecimento da Universidade FUMEC. Doutora e Mestre em Economia Aplicada pela Universidade Federal de Viçosa. Especialista em Planejamento estratégico e sistemas de informação – PUCMinas. Endereço: Av. Afonso Pena 3880 – 1º. Andar – Bairro Cruzeiro - Belo Horizonte – MG - CEP 30310-009 – Telefone (31) 3260-5232 – Email: cristiana.muylder@fumec.br

## 1 INTRODUCTION

The *Project Management Institute* (PMI) defines project as "a temporary endeavor undertaken to create a unique product, service or result " and project management as "the application of knowledge, skills, tools and techniques to project activities to meet their requirements" ( PMI, 2008).

Even if conceptually, the use of project management is related to the proper performance of goals and concepts of business strategy to corroborate this necessity. However, there are problems in the acceptance of project management, especially among senior executives in organizations.

This difficulty was found in practice by Thomas, Delisle and Jugdev (2002), in a survey of 933 people, including project managers, consultants and American executives, in which the main question of the first phase of the research was "Why is it difficult to sell project management to senior executives? ". The study showed, among other conclusions, that this difficulty is often due to cognitive gaps between the project *stakeholders*.

This article summarizes a research that aimed to revisit the topic in the literature "Project management and organizational value measurement " through a case study from the perspective of the Brazilian public administration, and then built on the Thomas and Mullaly (2008) conceptual model and the relationships between the constructs of this model in the Department of Highways of the State of Minas Gerais - DER / MG - demonstrated by two main programs managed from the perspective of the senior management involved how these programs possibly interfere with the organizational values. Particularly, the article intent is: to identify the dimensions and components and variables of each component of the constructs of the model of Thomas and Mullaly (2008), identifying the most perceived dimensions of the "value" construct and to analyze possible influences of context and implementation in the perceived values.

## 2 DEVELOPMENT

### 2.1 Project management and organizational structure

Ansoff (1993) defines three basic characteristics of an "innovation plan": temporality, specific beginning dates and ending dates and no binding to the business units, which is similar to the characteristics of a project proposed for several authors in Kerzner (2002, p. 17), Cleland and Ireland (2002, p. 5) and PMI (2008), the latter stating the projects "... are often used as a means of achieving the strategic plan of an organization."

Thus, Kerzner (2002, p. 22-23) says that since the 1990s, the organizations have decided to implement project management, mostly not by choice, but by necessity.

So, the project management is best suited to organizational structures called "matrix" and "projectized." The concept is already well established and can be seen from studies of Galbraith (1971), Larson and Gobeli (1987), Kerzner (2001), Archibald and Prado (2007, p. 100) and PMI (2008, p.28).

## 2.2 Organizational value

The attempt to measure the organizational value initiatives has been in a range of disciplines for a long time (Thomas & Mullaly, 2008, p. 10), and there is no consensus on the concept of a defined organizational value, as well as the components that build it.

Figueiredo (2003) demonstrated this effort, dividing the organizational performance measurement systems (OPMS) in three distinct chronological phases: the first between the fourteenth and nineteenth centuries, the second between the beginning of the twentieth century and the beginning of the 1980s and the third this decade to the present day.

The first phase summarize today's primary accounting practices and the development of the first management systems and production control. In the second phase the performance measurement incorporated to the planning and control of organizations was observed, taking as references the studies of authors such as Frederick Taylor and Henry Gantt with a focus on manpower and production time, besides several techniques, emphasizing the development of *Tableau de bord* and "Du Pont Pyramid" (Neely, 2004, p. 148, 162), operational processes represented by Deming and Shewhart) and *Scenario planning* (Netto, 2007).

Finally, the third stage, according to Netto (2007), was a criticism of previous and similar models and it is based on intangible assets, not totally financial. The *Balanced Scorecard* (BSC) is the greatest representative of this new model. However, still based on the financial dimension, we have the economic value added (EVA), from Stern Stewart & Co., created in 1990s.

Starting with bias models, also based on intangible assets, we can quote the work of Keegan, Eiler and Jones (1989), who proposed before the 1992 Kaplan and Norton work, a performance assessment array, reflecting the need of balancing the measurement of organizational indicators, Fitzgerald et al. (1991) (which includes a competitive perspective), Brown (1996) (*Macro Process Model Organization of the.*) and Neely (2004), who described the *Strategic Measurement and Reporting Technique* (SMART), that use internal efficiency and external effectiveness measures of the organization.

Regarding the public sector, Kaplan and Norton (2004, p. 9) indicate a BSC model for the public sector, which differentiates in the original model. According to the authors, public and non profit entities "[...] should define their social impact and their goals differently." But fundamentally, their success criteria are the performance of a mission accomplishment.

More specifically, as to the value of project management in the organization, we can list Ibbs and Reginato (2002), who correlated project management maturity level (measured by Berkeley's Model) and indicators such as ROI (Return on Investment), CPI (*Cost Performance Index*) and SPI (*Schedule Performance Index*), Bryde (2003), who built the model to evaluate the performance of project management and, indirectly, revealed the value of project management, Eskerod and Riis (2009), in multiple case studies of public and private Canadian and German, Crawford and Helm (2009) in case studies of public organizations in Australia.

Given the inadequacies of the current OPMS, with limitations and disabilities for measuring the value of organizational initiatives, Thomas and Mullaly (2008, p. 23) suggested, from studies of Hackman and Wageman<sup>1</sup> (1995) and Hills et al.<sup>2</sup> (2003), that the studies devoted to measuring the value of project management in organizations should respond to three types of questions to be detailed in the next section.

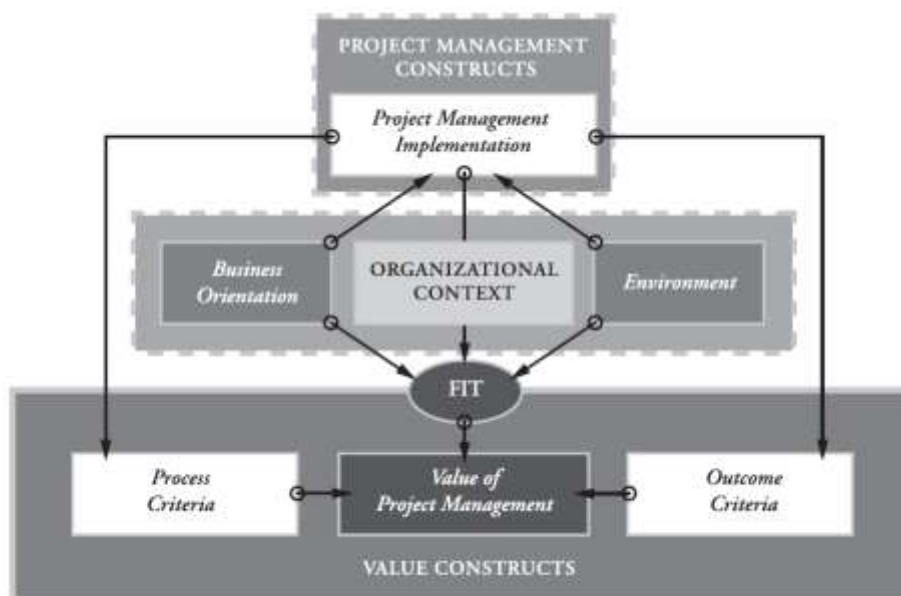
### 2.3 The model of Thomas and Mullaly (2008)

Corroborating to the various attempts to measure the organizational value seen in the previous section, the project management simply joins a long line of other initiatives that also engage to prove their value to their organizations if the value and impacts on the organization are not clear and widely defined. (Thomas and Mullaly, 2008, p. 1).

In this effort to prove that the value of project management can create value to the work of organizations, PMI began in April 2005 and published in 2008 a study to identify and quantify this value, called *Researching the Value of Project Management*.

The work contains 65 case studies of organizations in various categories throughout the world. One of the revelations of this study shows that project management practices are highly correlated with satisfying results of the project, success in achieving the project goals and success in project outcomes.

Thomas and Mullaly (2008) guiding conceptual model was designed in 2005<sup>3</sup> as Figure .



**Figure 1** - Conceptual model of Thomas and Mullaly

Source: Thomas and Mullaly (2008)

<sup>1</sup> Hackman, J. R.; Wageman, R. (1995). Total quality management: Empirical, conceptual and practical issues. *Administrative Sciences Quarterly*, Vol. 40, n. 2, p. 309-342.

<sup>2</sup> HILLS, F. J. L.; JOVER, A. V.; MOLINA Fernandez, L. M. (2003). Factors Affecting the relationship Between total quality management and organizational performance. *International Journal of Quality Management and Reliability*, v. 20, n. 2.

<sup>3</sup> THOMAS, J., Mullaly, M. (2005) What's the benefit? Challenges in Demonstrating the value of project management. *PMI Congress*. Toronto, Canada.

This model proposes that the choice for the implementation of project management within an organization will be influenced by any direction of the organization's business - focus, strategic direction and vision of itself as an entity - and the environment in which the organization operates, which, in turn, is influenced by its line of business, its customers, its economic context and the types of projects usually managed (PMI, 2008a, p. 24).

From the perspective of the analysis of the three constructs, the model attempts to make the understanding of how project management can create value to the work of an organization (Thomas and Mullaly, 2008, emphasis added):

- a) **Organizational Context** - To what degree does the organization "do the right things" in the context of project management that is appropriate to itself and the types of projects managed?
- b) **Implementation project management** - To what degree does a working model of established project management influence the delivery of projects? They are more efficient, more effective and better able to deliver more reliable projects? Did the process improvement of project management enable the organization to improve the strategic focus and differentiate their services on the market?
- c) **The type of value considered by the organization that produces project management** - To what degree do the capabilities of project management actually impact the organizational goals, such as cost reduction, efficiency, or increase revenue? What is the return on investment for the organization in training in project management in place?

Among the many findings of multiple case studies organized and characterized by Thomas and Mullaly (2008), it was noticed that the values that the project management conveys to the organization are determined by its context and its way of implementation.

## 2.4 Project management in the public sector and its relation with the institutional isomorphism

The management of projects and programs in the public sector are being recognized in the governmental initiatives of various countries, in most cases associated with an increased public scrutiny and the need for quality of public spending (Crawford & Helm, 2009).

Such initiatives may be associated with the movement of *New Public Management* (NPM), and the significance embodied in the British government, which promised to "reduce costs and at the same time, promote improvements in government operations" (Caiden<sup>4</sup>, 1998 cited by Crawford and Helm, 2009, our translation). Since then, Abrucio (1997) describes the evolution of British public management model and Bresser Pereira (1997) cites some British programs focused on managerialism and other similar reforms in Sweden, New Zealand and Australia. Nowadays, Yasin et al (2009)

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<sup>4</sup> Caiden, N (2008). The new generation of budget reform. In: G. B. Peters and D. J. Savoie (Ed.), *Taking stock: Assessing public sector Reforms* (Pp. 252-284). Montreal, Canada: Canadian Centre for Management Development, McGill-Queen's University Press.

present studies showing that NPM emphasizes a systematic use of strategic planning, programming, budgeting, risk management, accountability and services and activities geared to the population (output orientation).

However, there is a controversy regarding to the effectiveness of new management models, explained by *new institutionalism* and managerial trends and simplified transfers of private management practices to the public sector, indicated by Paula (2007, p. 90-91). The COCOPS - Coordinating Cohesion - is in the sector of the Future Public, in a review of 520 studies on NPM reforms seen in Europe, revealed that these do not provide solutions that work well in all circumstances and that government is not always successful. The research shows that 51% (average) of the reforms analyzed in 866 “results to the population” (or *outcomes*), “services to the population” (or *outputs*) and processes of “transformation of resources into outputs” (or *process*), on average, 51% were improved or worsened and the rest was simply maintained (Cocops, 2011).

The classic text of Powell and DiMaggio (2005), the greatest representatives of the new institutional theory, warning that organizational innovations spread across organizations, does not necessarily mean that it improves their performance, but provides legitimacy “[...] to demonstrate that organizations are at least trying to improve their working conditions” against their peers in an organizational field or society.

Another phenomenon noted by the authors is the homogenization of these practices in a given organizational field, “causing them to become more similar to each other,” reducing the diversity in the field. So to explain this homogenization, DiMaggio and Powell (2005) identify three mechanisms that induce isomorphic change: the coercive, the mimetic and normative. The coercive isomorphism “[...] the result of pressures of formal and informal pressures exerted by other organizations on which they depend and by cultural expectations of society in which organizations operate” (DiMaggio and Powell, 2005, p. 77).

When organizations have problems with unclear answers, taking as a model other organizations is a response to uncertainty (DiMaggio and Powell, 2005, p. 78). Thus, the uncertainty encourages imitation of patterns and management models, characterizing the mimetic isomorphism. The authors emphasize that such an isomorphism can be spread by powerful organizational models and new management practices developed by consulting firms (DiMaggio and Powell, 2005, p. 79), for example.

Finally, normative isomorphism stems primarily from professionalization of the organizational field through formal education and legitimization of the knowledge base produced by universities, institutions or professional associations (DiMaggio and Powell, 2005, p.79-80).

### 3 METHODOLOGY

As for the approach, this work is characterized as a descriptive and qualitative case study, because, by its justification, it contains at its core a replication of a conceptual model of Thomas and Mullaly (2008) to create organizational value through the project management and their causal relationships at the unit of analysis observed.

Yin (2001) states that the case study contributes to understanding the unique phenomena of the individual, organizational, social and political issues and that this is

the strategy chosen when examining contemporary events, but when you can not handle relevant behaviors. Completing Yin, Triviños (1987, p. 111), states that a descriptive study exactly describes the facts and phenomena of a certain reality.

The basic strategy used in this case study was the theoretical proposition of the model of Thomas and Mullaly (2008) and its two correlations indicated in item 2.3 of this article. According to Yin (2001, p. 133), the theoretical propositions on case studies help to organize the same set and alternative explanations to be examined.

The unit of analysis was the DER / MG, subject to the State Secretariat of Transportation and Public Works - SETOP, which managed and executed the two "Structural projects" or "Structural programs" that mobilize the material and human unit of analysis, called ProAcesso and Pro-MG.

The ProAcesso is part of a set of actions of the Minas Gerais State Government to improve the infrastructure in all regions of the state, whose strategic objective is to increase the accessibility of the population of small municipalities to basic social services and markets (MINAS GERAIS, 2009, p. 269). On the other hand, the Pro-MG Program aims to reduce transportation costs, to expand access to markets of mining production, at the provision of an efficient, adequate and safe road network, and to overcome bottlenecks and improve the quality of transport infrastructure, to expand the competitiveness of the mining economy and the development of the regions of low economic activity (MINAS GERAIS, 2009a, p. 174).

Both projects mentioned above have great weight in the DER / MG, exceeding more than 50% of expenditure committed to investments in 2008 and over 76% of the credit provided for investment for 2009, shown in the budget of the Minas Gerais State Government.

The subjects were divided into four groups, with people that at least for the past two years have been directly involved in at least one of two programs, with power to decide on the programs:

- a) senior management of the DER / MG (directors);
- b) top management SETOP (undersecretaries and secretary);
- c) executive and associate managers, and
- d) representatives of outside bodies to the DER / MG and SETOP with direct influence on projects.

The study was divided into two groups: either respondent stakeholders internal to DER / MG working directly in this department, and respondents or stakeholders external to the DER / MG who do not work directly in this department.

One peculiarity is that some of the respondents held senior management positions and, at the same time, they are managers or assistant managers of a program.

As for the research technique, the main semi-structured questionnaire was chosen and applied mainly by the interaction with the respondent. Yin (2001, p.112) states that interviews are essential sources of information.

In order to increase the reliability of the construct analyzed, we used the triangulation technique proposed by Yin (2001). One reason for that was that the source of information on some variables of the model was best interpreted by the evidence, which were captured through questionnaires applied to secondary representatives of the

operational part of the analyzed projects and document analysis in a time horizon (two years).

All of this information was obtained based on the variables which presented an analysis of the main components of the three constructs from Thomas and Mullaly's conceptual model (2008). It must be emphasized that not all variables that were introduced in the original study suit the type of organization, since this study was conducted in different kinds of organizations and countries, in various contexts.

Thus, for each variable adjusted in DER / MG question was developed, which has a connection to a component of the conceptual model of Mullaly and Thomas (2008) which, in turn, binds to a dimension and finally to a construct. Table contains the number of questions in the questionnaire divided by construct, dimension and component.

**Table 1** - Summary of questions in the questionnaire divided by the model of Thomas and Mullaly (2008)

| Construct  | Dimension            | Component   | Number of questions |
|--|----------------------|---|---------------------|
| Context  | Culture              | Positive attitudes in PM  | 2                   |
|  |                      | Conflict avoiders   | 1                   |
|  |                      | Innovations   | 1                   |
|  |                      | Not focus on customer   | 2                   |
|  | People               | Experience in PM  | 2                   |
|  |                      | Seniority   | 5                   |
| Implementation   | Organization         | PM Authority  | 1                   |
|  |                      | PMO targeted deliveries   | 1                   |
|  |                      | PMO directed the methodological support   | 1                   |
|  | Training             | Duration  | 2                   |
|  |                      | Deliveries  | 1                   |
| Value  | Alignment            | PM Alignment  | 2                   |
|  |                      | Organizational alignment  | 2                   |
|  |                      | Strategic alignment   | 2                   |
|  | Benefits realized    | Growth and reputation   | 1                   |
|  |                      | Corporate Culture   | 1                   |
|  |                      | Improved HR and life quality  | 1                   |
|  |                      | New services and staff retention  | 1                   |
|  | Consistent practices | Good practice for PM  | 8                   |
|  |                      | Complexity of project approval  | 1                   |
|  | Business results     | Impact of project management culture and the overall result of the organization | 2                   |
|  | Satisfaction         | Desire for better management tools  | 1                   |
|  |                      | Desire to support a Project Office  | 1                   |
|  |                      | Desire for change   | 5                   |
| Customer Satisfaction  |                      | 2   |                     |
| <b>Total questions in the questionnaire related to the model</b> |                      |   | <b>49</b>           |

Note: Project Management (PM)

Source: Research data



The questionnaires were then transcribed and processed using the program *PASW Statistics 18* (old *Social Package for the Social Sciences - SPSS*) and the Microsoft Excel spreadsheet.

Due to the small number of respondents, the survey was limited to a preliminary analysis of data, which according to Malhotra (2006), includes the frequency distribution, cross tabulations and testing of hypotheses, without the analysis of measures of central tendency or location or other descriptive statistics elements.

As the research is framed in a descriptive case study, the data that could not be tabulated were analyzed in the aspects of accuracy, completeness, attention to outliers and trends of the researcher (Maxwell, 1996).

#### 4 RESULTS

The survey identified all the component variables of the model of Thomas and Mullaly (2008) that could be applied in the case. The following was observed to the construct *context* the following observations<sup>5</sup>:

- The vast experience of working in public organizations of the absolute majority of respondents belonging to the state government and, in turn, the lack of experience in private organizations demonstrates the existence of a strong public career of these respondents as in Table 1.

**Table 1-** Distribution of respondents according to the total working time in the organization

| Answers                | Stakeholder |          | Total    |
|------------------------|-------------|----------|----------|
|                        | External    | Internal |          |
| Between 5 and 10 years | 1           | 1        | 2        |
| Over 20 years          | 3           | 3        | 6        |
| <b>Total</b>           | <b>4</b>    | <b>4</b> | <b>8</b> |

Source: Research data.

- The respondents have a reasonable knowledge of the topic of "Project Management", although the majority confuses the concepts of certification standards in project management (PMBok) with the organization that provides certification (PMI/IPMA) and their own certification (PMP) as
- Table 2 and Table 3.

<sup>5</sup> NOTE: Due to the limited number of pages for submission to the journal, the authors inserted the tables with the most relevant results.

**Table 2-** Distribution of respondents according to the variable knowledge in project management certifications

| Answers      | Stakeholder |          | Total    |
|--------------|-------------|----------|----------|
|              | External    | Internal |          |
| Yes          | 3           | 3        | 6        |
| No           | 1           | 1        | 2        |
| <b>Total</b> | <b>4</b>    | <b>4</b> | <b>8</b> |

Source: Research data.

**Table 3-** List of responses to the question 4a of the questionnaire

| Answers                            | Frequency |
|------------------------------------|-----------|
| PMBok                              | 2         |
| PMP                                | 2         |
| Know but can not remember the name | 2         |
| Do not know                        | 2         |
| IPMA                               | 1         |
| PMI                                | 1         |
| <b>Total</b>                       | <b>8</b>  |

Note: Only two respondents indicated correctly certified PMP and IPMA, and one respondent indicated two.

Source: Research data.

- The high willingness of the organization to the challenges imposed by the government's strategy (variable entrepreneurship) in an environment of encouragement to low-risk, as Table 4 and
- Table 5.

**Table 4-** Distribution of respondents according to the variable entrepreneurship

| Answers      | Stakeholder |          | Total    |
|--------------|-------------|----------|----------|
|              | External    | Internal |          |
| Null         | 0           | 1        | 1        |
| Very low     | 1           | 0        | 1        |
| High         | 3           | 3        | 6        |
| <b>Total</b> | <b>4</b>    | <b>4</b> | <b>8</b> |

Source: Research data.

**Table 5-** Distribution of respondents according to the variable encouragement to risk

| Answers  | Stakeholder |          | Total |
|----------|-------------|----------|-------|
|          | External    | Internal |       |
| Very low | 2           | 2        | 4     |
| Average  | 1           | 1        | 2     |
| High     | 1           | 1        | 2     |

|              |          |          |          |
|--------------|----------|----------|----------|
| <b>Total</b> | <b>4</b> | <b>4</b> | <b>8</b> |
|--------------|----------|----------|----------|

Source: Research data.

The following observations of construct implementation are highlighted:

- Surprised that most respondents have experienced some type of training in project management, although of short duration (less than 1 week), as Table 6.

**Table 6-** Distribution of respondents according to the variable average duration of the courses

| Answers                    | Stakeholder |          | Total    |
|----------------------------|-------------|----------|----------|
|                            | External    | Internal |          |
| No courses                 | 1           | 1        | 2        |
| Less than 1 week           | 2           | 1        | 3        |
| Between 1 week and 1 month | 1           | 1        | 2        |
| Between 1 and 3 months     | 0           | 1        | 1        |
| <b>Total</b>               | <b>4</b>    | <b>4</b> | <b>8</b> |

Source: Research data.

- The lack of clarity regarding the real purpose of the ProAcesso and Pro-MG Project Management Offices that are delivering the goals and objectives of the project, not project management methodologies, as Table 7 and Table 8.

**Table 7-** Distribution of respondents according to the variable commitment of PMOs projects analyzed for delivery of projects

| Answers      | Stakeholder |          | Total    |
|--------------|-------------|----------|----------|
|              | External    | Internal |          |
| Average      | 1           | 0        | 1        |
| High         | 2           | 4        | 6        |
| Very High    | 1           | 0        | 1        |
| <b>Total</b> | <b>4</b>    | <b>4</b> | <b>8</b> |

Source: Research data.

**Table 8-** Distribution of respondents according to the variable involvement of the projects analyzed for PMOs of project management methodologies

| Answers      | Stakeholder |          | Total    |
|--------------|-------------|----------|----------|
|              | External    | Internal |          |
| Average      | 1           | 2        | 3        |
| High         | 2           | 2        | 4        |
| Very High    | 1           | 0        | 1        |
| <b>Total</b> | <b>4</b>    | <b>4</b> | <b>8</b> |

Source: Research data.

- The idea that project managers do not have the necessary authority can be explained by the adverse organizational structure found in research, the absence of incentives for those who have this function and the lack of a career in project management, as evident in Table 9.

**Table 9-** Distribution of respondents according to the variable degree of authority the project manager

| Answers      | Stakeholder |          | Total    |
|--------------|-------------|----------|----------|
|              | External    | Internal |          |
| Average      | 3           | 3        | 6        |
| High         | 1           | 1        | 2        |
| <b>Total</b> | <b>4</b>    | <b>4</b> | <b>8</b> |

Source: Research data.

The construct value draw attention to the following:

- A high desire to replicate the structures of Project Management Offices. Although the results do not show unanimous satisfaction, respondents considered that there are important structures for the conduct of strategic projects, as Table 10.

**Table 10-** Distribution of respondents according to the variable perceived need for most of the other structures of similar design offices in the organization

| Answers      | Stakeholder |          | Total    |
|--------------|-------------|----------|----------|
|              | External    | Internal |          |
| Average      | 1           | 0        | 1        |
| High         | 3           | 2        | 5        |
| Very High    | 0           | 2        | 2        |
| <b>Total</b> | <b>4</b>    | <b>4</b> | <b>8</b> |

Source: Research data.

- The desire for change, more specifically by the respondents placed internally to DER / MG than externally, as Table 11.
- The high perception of the alignment of all the projects analyzed in the Government strategy, embodied in the program in 2009 called "State for Results", as Table 13.

Note in Tables 12, 13 and 16 large differences in satisfaction between internal and external respondents, where none of all the values that can bring project management were perceived.

**Table 11 - Values perceived - Dimension "satisfaction"**

| Component                    | Variable  | Total |
|------------------------------|---|-------|
| Support for a Project Office | Perceived need for more office structures like other projects in the organization | 7     |
| Desire for change            | Need for training in Project Management   | 6 *   |
| Desire for change            | Need for improvement of organizational processes                                  | 7     |
| Customer Satisfaction        | Perception of the degree of internal customer satisfaction                        | 7     |
| Customer Satisfaction        | Perception of the degree of external customer satisfaction                        | 7     |

\* Not for the respondents perceived externally

Source: Research data.

**Table 12** - Values perceived - Dimension “consistent practices”

| Component            | Variable  | Total |
|----------------------|---|-------|
| Good practice for GP | Satisfaction with project management                                  | 7     |
| Good practice for GP | Satisfaction with the process of project planning                     | 5     |
| Good practice for GP | Satisfaction in the final quality delivery of projects                | 5 *   |
| Good practice for GP | Satisfaction with the physical implementation (construction) projects | 6 *   |
| Good practice for GP | Satisfaction with the controls of the projects                        | 6 *   |
| Good practice for GP | Clarity in decision-making intentions of managers                     | 7     |

\* Not for the respondents perceived externally

Source: Research data.

**Table 13** - Values perceived - “organizational alignment” dimension

| Component                | Variable   | Total |
|--------------------------|--|-------|
| Alignment GP             | Clarity of objectives, goals and results of projects | 7     |
| Organizational alignment | Alignment of projects to organizational strategy     | 8     |

Source: Research data.

**Table 14** - Values perceived - Dimension “result in business”

| Component   | Variable                               | Total |
|---|--|-------|
| Impact of project management culture and the overall result of the organization | Impact on organizational culture       | 6     |
| Impact of project management culture and the overall result of the organization | Impact on the organization's processes | 5     |

Source: Research data.

**Table 15** - Values perceived - “benefits realized” dimension

| Component             | Variable                                | Total |
|-----------------------|---|-------|
| Strategic alignment   | Production of good quality services     | 7     |
| Growth and reputation | External reputation of the organization | 7     |
| Corporate Culture     | Reduction of rework                     | 6 *   |

\* Not for the respondents perceived externally

Source: Research data.

Finally, Chart 1 summarizes the results of all dimensions of perceived value, in ascending order:

**Chart 1** - Summary of variables in relation to the perceived value dimensions of project management

| <b>Dimension</b>         | <b>Number of variables</b> | <b>Variables perceived</b> | <b>Percentage of perception</b> |
|--------------------------|----------------------------|----------------------------|---------------------------------|
| Business results         | 2                          | 2                          | 100%                            |
| Consistent practices     | 9                          | 6                          | 67%                             |
| Benefits realized        | 6                          | 4                          | 67%                             |
| Satisfaction             | 9                          | 5                          | 56%                             |
| Organizational alignment | 4                          | 2                          | 50%                             |

Source: Research data.

The top management then observed that project management in DER/MG had brought positive results to the business of the department, which concentrates on the construction, conservation and maintenance of state highways.

However, in relation to other value dimensions, there was not total acceptance of the variables, but most of them were positively perceived, except the "organizational alignment", value dimension which had 50% of perceived variables.

From the perspective of institutional isomorphism, it is a fact that the project management at the strategic level of the state government of Minas Gerais from 2004 to 2010 results from a process of mimetic isomorphism, replicated from the private sector coming from a large consulting firm, as described in Vilhena et al, 2006, p. 79.

It was perceived that, through coercive isomorphism, in the expectation of better results of the structure projects and enforcing contracts to receive funding (for specific program ProAcesso), project management offices were created for the management of specific projects analyzed, as evidenced by DER/MG Ordinance 1862, of March 7, 2005, creating this unit for purposes of accountability for contracts with the Interamerican Development Bank - IDB, among other responsibilities.

The failure to achieve goals, which led to differences in satisfaction between internal and external respondents, may have produced ambiguous goals, which would address the temporary harmony between the parties, but at the end of an evaluative period, there was a dissatisfaction in relation to external stakeholders to the DER / MG, as evidenced in Table 12, supporting an explanation for one of the assumptions made by DiMaggio and Powell (2005), where the conflicting situations on goals are suppressed due to the interest of harmony between the parties.

Finally, there were some inconsistencies between the analysis of documentary evidence and what was answered in the questionnaires and the theoretical framework, including:

- a) The very functional organizational structure of the DER / MG, with the lack of a structured and stimulating career for project managers and respondents recognition of a low desire for structural change, incompatible with models of

maturity in project management aimed at a more focused organizational structure and projectized matrix structures and incentives for careers in project management.

- b) The existence of few tools, documents and software directly related to management of projects and, whenever they exist, most were created by the coercive forces arising from contractual obligations with lending agencies and with their own state government, which created a central office project management which has powers to release funds by preparing project status reports (called *status report*), which were originally developed by the consulting firm.

## 5 CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

This research examined the relationships of the constructs of the model of Thomas and Mullaly (2008) and showed how they interfere with the values for the two possible aggregate principal structuring programs, called ProAcesso and Pro-MG, both developed by DER / MG.

Based on these findings from the construct, it was found that the context in which project management was implemented, in a highly functional and low training and guidance to projects, as well as its form of implementation binding, it may have contributed to only one of the five dimensions of organizational value, which was well perceived.

Moreover, significant differences became evident in some dimensions of the model studied among respondents outside the DER / MG and internal to this department, indicating the difference of interests and point of view of the stakeholders.

Finally, evidence was collected from the organization's efforts to increase project management maturity level, which evaluated from the perspective of institutional isomorphism, may be the result of coercion exerted within and outside government to ensure the achievement of goals and financial efficiency of the projects analyzed. Such coercion may have contributed to a lower compliance value of project management.

The deployment *per se* as a management practice project management led to some organizational values to the DER / MG, but the inclusion of this practice to achieve the goals is not sufficient due government complex context in which this department is inserted. The high degree of bureaucratic regulation of this department and the context in which it is inserted generates a conflict with organizational initiatives.

The main limitations of this study are the relevance of the work of Thomas and Mullaly (2008) that has not produced many secondary works, the literature on organizational value creation from project management is still low and the case study that limited the search to the department, which does not allow generalizations.

It is recommended that future studies about organizational value creation from project management improve and deepen the knowledge of the subject, by replicating the methodology of research in other institutions, especially governments, and with increasing diversification of the number of responders, in order to be statistically significant.

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