

ASSESSING THE VALUE OF PROJECT MANAGEMENT OFFICES (PMO)

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ABSTRACT

The purpose of this study is to assess the value of Project Management Offices (PMO) in the organizations. First, the study conducts an in-depth literature review on Project Management Office. Then the research suggests a systematic approach that quantitatively measures the value of PMO. This model will enable to assess the current PMO level and addresses the strengths and weaknesses of PMO characteristics. The approach also conducts an analysis to correlate effectiveness of PMO with the actual project performance to determine meaningful relationships. The study will provide potentially useful insights and guidelines for adoption or improvement in the use of PMO to enhance the successful project outcomes.

1. INTRODUCTION

There is a growing view from the point of organizational aspects in project management that using project office entity form is valuable to the organization [Lullen and Sylvia 1999]. Recently, many organizations show interest in establishing Project Management Office to support and manage information systems/information technology projects. PMO can be defined as an organizational entity with full time personnel to provide and support managerial, administrative, training, consulting and technical services for project driven organization. Establishing PMO in the organization is one approach toward improving overall project management effectiveness that leads to successful project outcomes.

However, previous studies on whether a PMO significantly contributes to the project management effectiveness have been very limited and largely anecdotal. Therefore, there is a need for a systematic and quantitative approach that justifies the existence of PMO. This study suggests a systematic approach that measures the benefit and value of PMO quantitatively. By using this model, project managers will be able to better justify the needs of PMO in the project-oriented organizations.

2. LITERATURE REVIEW

2.1 PMO IN VARIOUS LITERATURES

The use of the PMO has a long history dating back to the 1930's [Wells 1999]. Recently, The topic of PMO has resurfaced with its strong needs. [Block 1999] discusses key factors to achieving a project office's long-term vision. [Fleming and Koppelman 1998] provide insights on the role of the project office in assisting project teams. [Bates 1998] claims that establishment of a PMO and discusses the PMO manager role and requirements. [Whitten 2000] suggests to better define the PMO to get respect from the organization. [Knutson 1998] presents an implementation plan that allows the project discipline to unfold into an accepted and viable

project office. [Dinsmore 2000] presents a PMO design guideline that will fit and customize into different size of organization.

PMO is viewed as a central point for PM implementation throughout an organization as well as a supportive element that applies PM tools and techniques effectively. Some PMOs are on a level comparable to various functional managers that report to senior managers. Others are within divisions of the organization [Wells 1999]. PMO has different names such as project office [Whitten 2000], project support office [Bolles 1998] [Murphy 1997], and project management center of excellence [Ibbs and Kwak 2000].

2.2 FUNCTIONS, SERVICES AND BENEFITS OF PMO

PMO is an internal consulting service that focuses on providing project management support to an organization's projects. Functions and services of PMO vary depending on its size and organization's management objective. PMO's functions and services can be summarized by the following which will lead organization improve project management effectiveness [Block and Frame 1998] [Bates 1998].

- Project support, which focuses mainly on offloading administrative burdens, such as reporting and software operations, from the project manager.
- Consulting and mentoring, whereby professional project management expertise, including proposal development and project planning, is to be shared as needed throughout the organization.
- Standards and methods should be developed and enforced to leverage best practices and to ensure that members of the organization are all speaking the same project management language.
- Training is to be made available to enhance individual skills and encourage certification of project management professionals.
- Help the organization staff its projects with appropriate project managers.
- Play a high-tech project support role by enabling virtual project offices.
- Emphasize having a central historical archive for all types of projects.
- Assume tasks such as providing project risk assessment, performing post-project evaluation services.
- Leading the organization transition to an effective project environment.

[Whitten 2000] also developed a starter list of services that a PMO can provide to ask whether PMO would be applicable to your organizations.

- Provides well-trained and component project managers to run key projects.
- Provides project management consulting periodically as required.
- Develops, documents, and maintains project management best practices.
- Review contract proposals from vendors or from within the home organization.
- Sponsors project management education seminars and classes.
- Conducts project culture training.
- Performs project reviews.
- Performs post-project reviews.

- Ensures that new projects are applying lessons learned.

Establishing and actively utilizing the PMO in the organizations can have the following benefits [Wells 1999].

- Predictable and repeatable use of project management tools and techniques.
- Growing staff professionalism in project management.
- Standardization and portability of tools and techniques.
- Facilitation of use of project management in becoming a core competency.
- Improvements in organizational design and performance.
- More productive and skillful project teams.
- Profitability improvements.
- External recognition for overall organizational performance.

2.3 HARD TO JUSTIFY THE NEEDS OF PMO

Unfortunately, PMOs are not always well received or well respected across an organization. There are mainly three reasons of unfavorable views [Block and Frame 1998] [Whitten 2000].

- Simply being overhead, expensive and unnecessary
- Adding another layer of bureaucracy that will slow down business and consume resources
- Providing uncertain value based on its costs to the organization (hard to justify Return on PMO Investment)

CATEGORIES	VARIABLES
CONTEXT	THE NEED FOR A PO THE ARTICULATORS COMPANY BACKGROUND IMPLEMENTATION INTENT INTENDED SCOPE OF PO
ORGANIZATION AND PEOPLE	MANAGEMENT PREMISE RESPONSIBLE TO SCOPE OF PROJECT PEOPLE FOR PROJECTS SIZE
SUPPORT FUNCTIONS	METHODOLOGIES TOOLS MAINTAINING RECORDS TYPE OF SUPPORT
PROJECT EXECUTION	TRACKING AND REPORTING AUDITING PLANNING AND SCHEDULING COMMUNICATIONS CHANGE MANAGEMENT

EXHIBIT 1. PROJECT OFFICE VARIABLES [DINSMORE 2000]

2.4 DEFINING PMO VARIABLES

Based on the previous literature reviews, PMO variables can be extracted and categorized to measure the effectiveness of PMO. [Dinsmore 2000] suggests the variables that would impact its performance when designing a project office. Exhibit 1 summarizes project office variables.

3. RESEARCH OBJECTIVE

PMO has a great potential of being a source of providing useful and consistent assistance to project driven organizations, project managers, and project teams. However, the previous findings of PMO research were mainly anecdotal. There is a need for a framework that will assess the benefits of PMO quantitatively. Furthermore, the study will provide potentially useful insights and guidelines for adoption or improvement in the use of PMO to enhance the successful project outcomes.

4. PROBLEM STATEMENT

Incorporating the needs and motivations of PMO literatures, the problem statement of the study is:

There is a lack of quantitative data and an analysis methodology that can be reliably used to better understand the benefits/values of Project Management Office (PMO). The establishment and effective use of a PMO will improve the overall project management effectiveness and contribute to the project success in the organization.

5. RESEARCH HYPOTHESES

Based on the problem statement, two major research hypotheses were constructed.

H1: The effectiveness of PMO in the organization can be measured quantitatively.

H2: There is a positive relationship between PMO's effectiveness and project performance data (cost, schedule, quality).

There are of course, other important quantitative relationships related to the benefits of PMO. However, these hypotheses were suitable to test the problem statement.

6. RESEARCH STEPS

The following is the proposed research steps for this research.

1. Examine past and current PMO related research.
2. Integrate various research approaches that measure PMO effectiveness in the organization.
3. Develop a model that measures PMO effectiveness quantitatively.
4. Develop a methodology to evaluate an organization's current PMO effectiveness and actual project performance data such as cost and schedule.
5. Select target organizations to assess current level of PMO effectiveness.
6. Measure organizations' level of PMO effectiveness using a proposed model.
7. Identify strengths and weakness of PMO among different organizations.
8. Find the relationships by correlating level of PMO effectiveness and actual project performance.
9. Collect and report success and failure cases in implementing PMO in the organizations.
10. Summarize the findings of the research and provide suggestions and recommendations for future PMO related research.

7. PMO ASSESSMENT MODEL

Based on the literature review, PMO features, services and functions can be identified into the following six categories [Dai 2000]. The PMO Assessment Questionnaire will be based on these six categories.

- Developing and maintaining PM standards and methods
- Developing and maintaining project historical archives
- Assuming project administrative tasks
- Human resources/Staffing assistance
- Project management consulting and mentoring
- Providing and arranging PM training

7.1 DEVELOPING AND MAINTAINING PM STANDARDS AND METHODS

PMO develops and maintains a set of PM standards and methods as the leading group of project management. The following represents the areas of standard procedures.

- Project procedures
- Project selection procedures
- Project planning and scheduling procedures
- Change management procedures
- Risk assessment procedures
- Documentation procedures

7.2 DEVELOPING AND MAINTAINING PROJECT HISTORICAL ARCHIVES

Project historical archives allow to collect, document, and retrieve previous project information. Project knowledge such as lessons learned and templates provide useful input for potential projects. The following represents the area of project historical archives.

- Records of prior project performance
- Records of previous project plans
- Issues and problem lists of previous projects
- Historical project archives database
- Description of techniques and templates

7.3 ASSUMING PROJECT ADMINISTRATIVE AREA

Administrative works are often not reflected directly in project deliverables and thus can represent distraction to the core project team. The following represents the area of project administrative issues.

- Project schedule maintenance
- Project timesheet maintenance
- Project workbook maintenance
- Project report production and distribution

- Active project management office in providing conference room for reviews and meetings
- Project management software assistance

7.4 HUMAN RESOURCE AND STAFFING ASSISTANCE

The demand for qualified and experienced project managers becomes very high as the organization adapts project management principles and practices. The following represents the area of human resource and staffing assistance.

- Project manager skill set identification
- Project manager candidate personnel identification
- Project team member candidate personnel identification
- Providing input on project manager's performance evaluation
- Appropriate changes in policies and procedures

7.5 PROJECT MANAGEMENT CONSULTING AND MENTORING

As organizations become more sophisticated in implementing project management tools and techniques, there is a need for a more systematic and planned project management applications. The following represents the areas of project management consulting and mentoring.

- Confidential advice on sensitive issues and problems
- Project start-up assistance
- Timely response to project needs and problems
- Group sharing sessions for project managers
- Assisting senior management

7.6 PROVIDING AND ARRANGING PROJECT MANAGEMENT TRAINING

The demand for project management training grows as organization devotes more resources and energy to project based environment. PMO can plan and assist human resource department for identifying and training PM related curriculum, selecting outside training vendors, or developing and delivering internal training courses. The following represents the areas of project management training support.

- Project management basis
- Advanced project management topics
- Assistance in preparation for career advancement
- Project management software skills
- Design and development of training course both for internal and external customers

Based on these six categories, detail questionnaire will be developed and used to measure the PMO effectiveness in the organization. PMO assessment questionnaire will be the primary tool to measure the level of PMO effectiveness. Each question will be phrased to require the respondent to indicate level of agreement of each question on a 7 point Likert scale from strongly agree (7) to strongly disagree (1). The PMO Assessment Model will enable to measure each category of PMO and report on the strengths and weakness of sub categories as well as overall level of effectiveness.

8. DATA COLLECTION TECHNIQUE

The primary source of data collection is through the membership of PMI. Data will be collected from Washington DC chapter membership list as well as PMI 1998 membership list.

Pilot test will be conducted to make sure that the questionnaire and the assessment methodology is working properly.

9. DATA ANALYSIS PROCEDURE

After collecting the necessary information, data will be analyzed using statistical software package to determine and measure many different aspects of PMO. Statistical analyses will be performed to quantify effectiveness of PMO as well as to identify any relationship between PMO and project success.

10. IMPACT OF THE RESEARCH

There are two major impacts of this research. The primary goal is to develop an analysis methodology to measure an organization's PMO effectiveness. The PMO Assessment model will collect and analyze the current stage of PMO.

The secondary goal is to provide a process to promote the usage of PMO. It will further assist project managers to establish and justify the needs of PMO.

11. CURRENT STATUS OF THE RESEARCH

The research is expected to be completed in 2001. The research methodology and data analysis approach has been finalized and the questionnaire is currently being developed. The overall research approach is recaptured in exhibit 2.

TARGETED INDUSTRY	VARIABLES AND FACTORS	DATA COLLECTION METHOD	DATA ANALYSIS METHOD	CONTRIBUTIONS
MULTIPLE INDUSTRY	- 6 PMO CHARACTERISTICS - PROJECT SUCCESS MEASURES	SURVEY QUESTIONNAIRE	- DESCRIPTIVE STATISTICS - CORRELATION ANALYSIS - REGRESSION ANALYSIS	- BETTER UNDERSTANDING OF PMO CHARACTERISTICS - FIND RELATIONSHIP BETWEEN PMO AND PROJECT SUCCESS

Exhibit 2. PMO Assessment Research Methodology

12. CONCLUSIONS

This research represents an effort to make substantial additions to the inadequate knowledge of PMO in the project management community. It is intended to provide invaluable information for those operating, expanding or considering PMO in its advanced project management practice. By demonstrating the relationship between PMO effectiveness and project success, scholars and practitioner will have a better knowledge and confidence adapting PMO in the ever-increasing project driven business world.

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