

Empirical Research on Project Implementation Success and Change Management Practices in Malaysian Government-Linked Companies (GLCs)

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ABSTRACT

The purpose of this empirical study is to address the practices of project change management in the context of Government-Linked Companies (GLCs) in Malaysia, focusing on Project Managers (PMs), Project Team Members (PTMs), Change Managers (CMs) and any other Top Managers involved in a project. Also, checking the validity of a number of critical success factors from the Project Implementation Profile (PIP) in the context of GLCs in Malaysia. PIP is a comprehensive managerial tool introduced by Pinto's and Slevin and later was enhanced and re-tested by study done by Belout and Gauvureau. Government-linked companies were previously government agencies or public enterprises established to provide services for social purposes. The Malaysian Government considers the importance of the Government-linked companies (GLCs) role. Critical success factors (or CSFs) are the actions and processes that can be controlled or affected by management to achieve the goals set by an organization. Based on the responses, we have come to understand that the GLCs surveyed have the highest focus on the success factor "Client Acceptance", followed by "Communications", indicating that they are more compliant towards the best practices in those aspects. However, certain facets like "Human Resources" (resource allocation) and "Top Management Support" were found to require more concentration in order to be more compliant to the best practices, and resolve certain Project Team expectations. The findings are discussed and avenues for further research proposed.

Keywords: *Change management, Government-linked companies, Malaysia, Project implementation profile, Critical success factors*

I. INTRODUCTION & LITERATURE REVIEW

Change management is a structured approach to transition individuals, teams, and organizations from current state to a desired future state, to fulfill or implement a vision and strategy. It is an organizational process aimed at empowering employees to accept and embrace changes in their current environment. There are different streams for change management as a systematic process, a means of transitioning people, and as a competitive tactic that have shaped the practice of change management. Change can be an opportunity for some and a threat and time loss to others. When the change introduced to the organization it will impact one or more parts of how the organization operates. These parts are processes, systems, organization structure, or job roles.

Change typically results as a reaction to specific problems or opportunities the organization is facing based on internal or external incentive. While the notion of becoming more competitive, becoming closer to the customer or becoming more efficient can be the motivation to change, at some point these goals must be transformed into the specific impacts on processes, systems, organization structures or job roles. It is an assumption that resistance to change is a common and natural occurrence [2]. Major technological changes or innovations can allow for resistance, mostly when the proposed change affects

values and visions related to existing order. Changes normally benefit some people by injuring others [12].

GLCs are companies that have an essential commercial objective and the Malaysian government has a direct control stake, which refers to the government's ability to designate board of directors (BOD) members, senior management, and make major decisions like; contract awards in addition to a percentage ownership. The boundaries between the public and the private sectors are unclear and overlap in some areas. This overlap varies not just between countries, but also at a more local level. Regardless of the increase in privatization and internal markets, the public sector remains quite discrete from the private sector in many ways. Whilst there are financial controls and targets, the primary goal is not maximizing profit [8].

Critical success factor (CSF) is a term used to describe an element, which is necessary for an organization or project to achieve its mission. It is a critical activity or factor, which is required to ensure the success of an organization or a company. The term is used initially in the world of business analysis and data analysis. For example as found in many papers that user involvement in an Information Technology (IT) project is a critical success factor which will lead to successful project [11]. Critical success factors are the actions and processes that can be controlled or affected by management to achieve the goals set by an

organization. They are essential things that the company must achieve or in which areas will produce the greatest competitive edge [1]. Critical success factor a limited number of areas in which results, in ensuring a competitive performance for an organization if they are satisfying [5].

Project success is an important management issue [9], it is one of the most topics discussed and there is a disagreement concerning the criteria by which success is judged [30]. There are numbers of considerations on success factors only some of these factors are discussed and examined.

The purpose of the study is to understand the Project and Change management practices undertaken by the different Government Linked companies and the validity of the success factors in their context. It was an empirical study, which involved conducting a survey, followed by a report of the findings and derived understanding of the different criteria. The survey was circulated both by online forms, and paper based forms, but the responses were predominantly by the Paper-based Survey Forms. The survey had 30 respondents from the major Government Linked Companies from various industries, and is believed to be significant in order to understand the Change Management practices of these important companies.

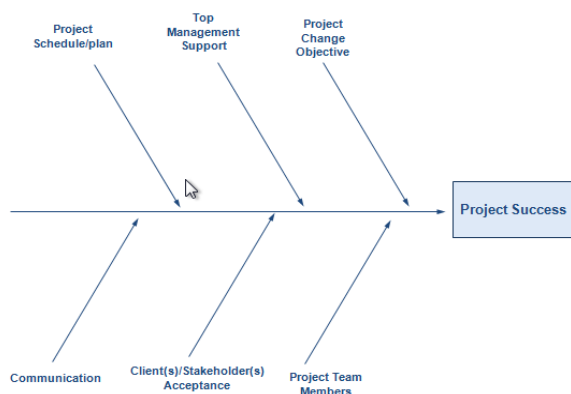


Figure1: Proposed framework based on Project Implementation Profile (PIP) introduced by Pinto and Slevin

II. RESEARCH QUESTIONS AND OBJECTIVES

In this attempt to conceptualize change management in context of the Malaysian Government-linked companies (GLCs) the following questions will be tackled: Are the Pinto's critical success factors valid in the context of the Malaysian Government-Linked Companies change management? if so which critical success factor(s) are most important ones?. To answer this research query, the study is open to gather any additional information about the subject, where participants can add comments. This part is important because there some pertinent elements might haven't

been captured in literature, while they might be very significant to the success in the GLCs change initiatives. These comments might not only enrich this study, but also provide inspiration for the future studies. By finding answers to the research questions, an objective to enrich the quantity and quality of valuable data on the subject of Government-linked companies change management will be achieved. The main objective can be truncated into smaller pieces:

- Define the notion of change management in Malaysian Government-Linked Companies environment.
- Examine construct validity of the PIP by administering a survey to several project managers and project team members from different government-linked companies.
- Perform statistical operation on the gathered data to determine the significance of the chosen success factors and the correlation between variables.
- Correlation between identified independent variables (Critical factors) and project success.
- Record any ideas and concepts gathered from the study participants.

VI. METHODOLOGY

The paper was conducted with primary focus on the empirical study of survey using questionnaire formulated from the core success factors of Change Management as described by multiple Academic papers. The survey questionnaire will be distributed in both Electronic form and Paper form. The electronic version has been developed through Google Docs format, which would record the data in a spreadsheet for further analysis and statistical reporting. The distribution list and participants are predominantly Information Technology and Project Management professionals from different Government Linked companies in Malaysia. Experience in Project Management is key in contributing to successful use of the Survey. The government-linked companies in Malaysia are important driving force for most of the new and innovative projects in Malaysia. The GLCs account for a majority of the critical projects in Malaysia, and are an important driving force for the economy. Therefore, we believe the information obtained will contribute to sufficient insight on the change management practices and address the success factors for arguably the most important organizations of the country.

VII. RESULTS ANALYSIS

The details of the respondents were collected in the survey to understand their responses better. The names of the companies were not collected or sorted for confidentiality reasons. The companies would not

be able to respond impartially without ensuring confidentiality. The details collected of the respondent were their length of service in the IT industry, the experience in Project Management overall, the number of successful projects handled, if the respondent had any formal training, and the number of IT staff in their department. The total number of respondents was 30 and the details of their responses follow:

Table1: The Length of service percentage for the respondents

LENGTH OF SERVICE	< 3 Years	3 to 5 years	5 to 12 years
Percentage of Respondents	70%	27%	3%

Table2: The Experience in Project Management percentage for the respondents

Experience in Project Management	< 3 Years	3 to 5 years	5 to 12 years
Percentage of Respondents	90%	7%	3%

Table3: The Number of Successful Projects handled percentage for the respondents

Number of Successful Projects Handled	< 3	3 to 5	5 to 12
Percentage of Respondents	73%	18%	9%

Table4: Project Management Formal Training percentage for the respondents

Formal Training in Project Management	Yes	No
Percentage of Respondents	53%	47%

Most respondents did not have a large portfolio of successful project. 73% of the respondents had experience of less than 3 successful projects. However, most of the respondents had formal training in Project and Change Management, either after joining the organization or prior to joining their respective organization. This indicates that the respondents are aware of the general terminology, and frameworks of Project and Change management, and

is capable to respond to inquiries related to it.

The number of IT staff in the department of the respondents' respective organizations was somewhat more dispersed. Half of the participating respondents had between 1 and 5 IT Staff in their department. 43% respondents had between 5 and 12 IT staff, followed by only 7% respondents had between 12 and 25 staff at their respective departments. Although the GLCs are large companies with a large number of staff base, the values represent the number of staff in the specific department that the respondent is serving in, and in some cases it is the respective branch, and not the head quarters.

Among the companies surveyed 39% of the respondents were from a CMMI Level 5 company, which suggests the quality of the companies and how sturdy and streamlined their processes are in the Capability Maturity Model Integration standards. 23% of the respondents were CMMI level 4 companies, followed by 19% each for both CMMI Level 3 companies and unclassified ones.

Among the different Project Methodologies, most of the respondents used In-House or Custom methodology. This was probably because the methodologies may not be suitable for the internal environment of the respective companies. Many executives also use a combination of different methodologies to suit their respective environment. The Prince1/Prince2 is the popular methodology next to their own In-House methodologies. A Table of the results is given below:

Table5: Project Methodology used and the number of respondents for each

Project Methodology Used	Number of Respondents
PMBOK	5
PRINCE1/PRINCE2	6
In-House	10
Combination	5
None	1

The different knowledge areas represent the fields of focus or concentration among the companies. Companies or the departments within them organize seminars and workshops based on their core focus in a Project Management Knowledge area, and therefore. Among the various important knowledge areas of Project Management, "Project Cost Management" has been voted to have the highest significance. Understandably at the initiation of any project in a GLC, the project budget is usually fixed, and staying within budget may be an important requirement to the respondents. "Project Quality Management" is chosen to the second most significant knowledge area, as it determines a successful execution of the project itself, while trying to ensure a viable, usable output.

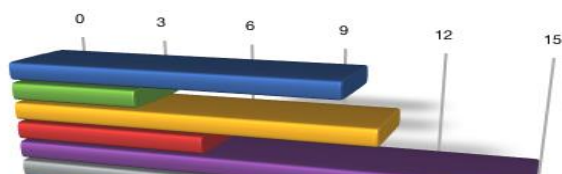
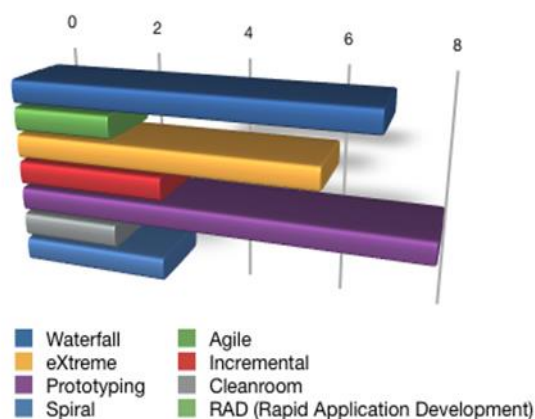


Figure 2: The use of different software methodologies

The questionnaire queried about the use of different popular software development methodologies to find out their uses in the GLCs. Based on the responses, Prototyping is most used in the GLCs. Although Prototyping is expensive and time-consuming, we believe the top managers of GLCs are more inclined towards seeing a somewhat working version of the developed software before taking the plunge, probably in order to preserve final quality of the project outcome. Waterfall is the second highest used software development methodology, followed by eXtreme, while the otherwise popular Agile and RAD (Rapid Application Development) methodologies are at the bottom of the list, depicting that those methodologies have not gained a very high credibility among the GLCs to date. More interpretations may be acquired by further studies in this aspect.

**Figure3: The use of different software methodologies**

The factors for Success as devised by Pinto's framework are the core of the study. We have tried to assess the validity of the frameworks in the context of the Malaysia's Government Linked companies. We have based our study and questionnaire on Six Success factors in order to accommodate within the timeframe and also to keep the questionnaire more palatable for busy executives. Our findings based on the Success Criteria:

VIII. PROJECT CHANGE OBJECTIVES

The factor determine how important are defining the core objectives while managing change in an organization. It focuses on the issue that, if the objectives of the change are clear to all the stakeholders, and Change Management actors, and the people who would be effected by the change, as well as all the PMO staff. It's also an issue of effective pre-change communication to bring everyone on the same page, so as to address issues with possible resistance.

Almost 66 % of the respondents have responded positively on the practices related to "Project Change Objectives", indicating the same percentage of respondents believing their organizations doing practices that make the project change objectives clearer to the business executives or the project team. A staggering 80% has indicated that managers and the project team members foresee the same beneficial consequences, indicating that the vision and mission of both the company and of the project are well communicated and well understood, however, a lack in communication of the project change goals is noticed as only 50% responded positively towards the aspect.

IX. TOP MANAGEMENT SUPPORT

The framework defines Top Management support as a very important factor for Project Success for multiple reasons including: The fact that the Top Management is able to motivate the Project Team members to undertake the project with better ownership; the top management is able to allocate resources and funds as and when necessary when changes occur and the project does not go according to plan; the Top Management personnel may use their experience to avert crises that the Project Team may face and contribute with valuable knowledge and external resources if the need arises etc. In addition to that, the Top Management may also contribute by sharing responsibility with the Project Team, and act as a resource.

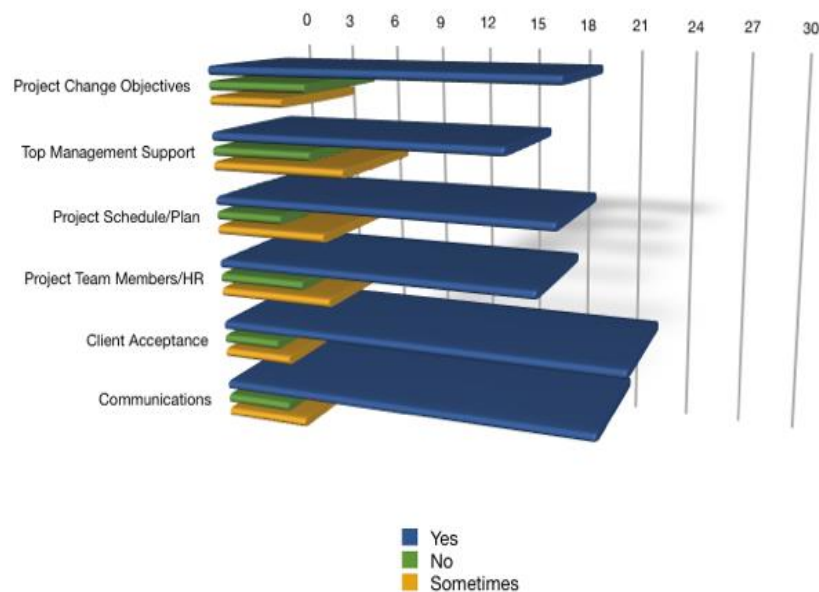


Figure 4: List of Success Factors and the number of respondents

Based on the survey, 55% has responded positively to their experiences related to Top Management support. In the Malaysian GLCs the Top management support may be considered somewhat reserved, and the respondents seem to feel there could be more Top Management support. The respondents indicated low upper management support in allocating resources they feel are required to implement the project, and the sharing of responsibility by the upper management may have been much higher.

X. PROJECT SCHEDULE AND PLAN

The project plan is defined as a list of all the activities, resources, schedules, and projections, and is an integral part of the study of Project and Change Management. It is also a crucial success factor that may make or break a project. Among the responses in the survey, 65% voted positively, indicating towards their experiences regarding the Project Plans and Schedules, which may be carried out in a more compliant manner, and the Government Linked companies are giving moderate importance to Schedule and Plan of Change Management activities in the companies. In addition, as many as 73% respondents believe that the Project Team members and the Management agree on the schedule being devised, which indicates towards a collaborative pre-change environment, and most team members are comfortable with the time-frame allocated.

XI. PROJECT TEAM MEMBERS AND HUMAN RESOURCES

The team represents an important situational variable in the implementation process [6]. Assembling the right group of people for a particular project is not an

easy task. Failure often occurs when attention is not given to selection and training of the team. Often project manager or involved manager makes the decision on who joins the team but change manager might not have control over superior's choice. Change manager can choose the best people available and provide conventional training for them. Strong coalition in form of a forceful team of members who strongly believe in change and its benefits to the organization is necessary [13]. The support of the whole group is necessary, but the support of each team member to the rest of the group is the key [7].

About 61% of the respondents of the survey agreed to having been compliant with the best practices related to the management of Project Team members or Human Resources. Therefore, one would assume, the concerned practices may be less than average. Although 73% respondents agree that there are adequate training facilities for the Project Team, indicating towards the management's commitment the development of the human resources at hand, a mere 23% agree that they have adequate human resources to complete the change management tasks at hand. This assures the lack of human resources in the GLCs felt by a large number of the top companies in Malaysia. Other issues in the HR aspect can be noticed are that 53% of the respondents feel they have internal or external resources to avert crisis, indicating towards another field that may need improvement.

XII. CLIENTS AND MAJOR STAKEHOLDER ACCEPTANCE

There are many stages in project management and client acceptance is one of them, also it has to be managed like the

rest of the stages. In change management client satisfaction is a complex element. It is easier to measure the success of the project in terms of fulfilling the objectives. Any key stakeholder involved in a project should wear the hat of a client. A company that fails to take a selective approach to client acceptance will face exposure, as will the individual partners of that company. Client acceptance is an important factor in any project success.

In this aspect most respondents believe they are in a better shape, considering 76% responded positively to the vital concerns related to Client/Stakeholder acceptance. 77% of the respondents believe that the clients generally review, validate and approve the output or deliverable, representing a higher compliance towards the best practices in this aspect by the GLCs.

XIII. COMMUNICATION

Both professionals and academics consider communication as a crucial success element alike. The under-communication is often present wherever there

is a failure of a change initiative. One way communication will not suffice, constructing a two way communication channel is necessary. Communication is more than words, deeds count as well. It is agreed that there is a strong link between a favorable feedback to the change and diligent communication [3]. The internal communication within the organization is the crucial factor contributing to project success [9].

The aspects of communication seem to have higher positive responses of 71% towards the best practices, especially considering that the goals and objectives of the project are well-defined and well-communicated to the project team. In addition, 73% respondents agree that an individual is assigned to received complains and channel them to the respective authority to take corrective action, demonstrating a collaborative environment in the GLCs of Malaysia.

Table6: The correlation between the independent variables and the dependent variable

	PCO	TMS	PSP	PTM	CSA	COMM	Overall Project Success
PCO	1						
TMS	0.277946	1					
PSP	0.646814	0.612773	1				
PTM	0.268547	0.681819	0.577054	1			
CSA	0.492121	0.441096	0.402998	0.484272	1		
COMM	0.444422	0.486743	0.274615	0.499643	0.709762	1	
Overall Project Success	0.629396	0.711573	0.792275	0.797418	0.740889	0.627885	1

From Table6, we found that there is a high correlation between two independent variables the Customer and Major Stakeholder Acceptance and Communication where the value is (> 0.7). Moreover, there is a correlation between some of the independent variables (Top Management Support, Project Schedule or Plan, Project Team Members, and Customer and Stakeholder Acceptance) and the dependent variable which is the Overall Project Success.

XIV. VALIDITY AND FURTHER WORK

The study of the Government Linked Companies is a highly significant one because of the market capitalization, the exposure to critical industries, employment capacity and their overall economic impact on the country. The Khazana's investment model of "government controlled-people funded" make it important to help keep the country's wealth equilibrium intact, even while operating at a profit based capitalistic environment that proliferates economic growth.

Managing change is a very challenging task with tedious processes. Our study of the Change Management practices in the GLCs was in one hand very revealing in order to find the mindset and characteristic of the Information Technology

workforce and their practices. It resulted to some informative understanding about their practices, and some important shortfall that may be overcome with minimal effort. Based on the study, the most important factor that may need additional consideration are the aspects of Human Resources, especially the sufficiency of it.

On the other hand, we have also identified some aspects of the project that may be improved for better and more informative results. We refer to the fact that most of the respondents have been identified to be junior employees with fewer than 5 years of work experience and even less project management experience. The quality of the data can be tested for improvement by targeting respondents of higher than 7 years of work and project management experience, and correlating the information with the study. The second improvement and further work that may be carried out on the same topic is to extend the study to include more respondents. Ideally, a number higher than 100 would be highly desirable, while anything higher will definitely improve the quality and reliability of the data whereby achieving more precise interpretations.

The study will pave the way for future studies on the same topic, which may be conducted under

authoritative banners like the Ministry of Commerce or the Companies Commission of Malaysia, where the results of the study would be adopted more freely helping reshape the practices within the most important organizations of Malaysia.

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