

CRITICAL TOP MANAGEMENT SUPPORTS THAT INFLUENCING THE  
PROJECT SUCCESS IN CONSTRUCTION INDUSTRY

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## **DEDICATION**

This thesis is dedicated to all individuals that have provided their continuous supports in completing my thesis report. A great appreciation to my wife, Dayangku Suraya Binti Awang Jafar that has vigorously committed a morale support and stand still right next to me to boost my motivation and inspire my utmost potential. To my supreme Supervisor, Associate Professor Sr. Dr. Mohd Saidin Bin Misnan, I would like to thank for all your tireless efforts, guidance, advice and motivation in leading my way to complete this superlative journey. Thank you for spending your time and dedication to bring me to the end of my Master journey. To my beloved parents, Danial Bin Mohamed and Jaharah Binti Aziz, thanks for your continuous prayer, trust and motivation that have made me a better person. To my children, Muhammad Salman Faris and Aisyah Husna, thanks for your great smiles and amusing behaviour that strengthening my composure and sturdiness. Last but not least, I would like to dedicate my gratitude to all my classmates, my Master Course Coordinator, Dr. Khairulzan Bin Yahya, UTM staff and all individuals resided surrounding me for your advice, supports, tolerance and empathy.

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## ABSTRACT

The misalignment between the organization and its operational objectives and strategies are resulted from several shortcomings such as unclear roles and responsibilities, limited autonomy and accountability, lack of a commercial and customer orientation, and weak of professional capacity, which put project success at stake. Top management who holds the ultimate source of authority in an organization have to be responsible for the overall business direction and success. This study was conducted as an attempt to provide solutions to overcome these challenges in project implementation. The objectives of this study are to identify the importance factors of top management support to influence on project success, to investigate the relationship between top management support and project success, and to determine the critical top management support that influencing the project success. The scope of this study was focused within Construction Industry located in Johor Bahru area. The samples of this study are constituted of people who serve in project based organization or project oriented organization, and they hold various position from top management to executive level. The research methodology of this study was designed by employing quantitative research approach, with relevant data gained from the responses of online survey form established in “*Google Form*” system. The data were analysed using three different methods which are descriptive mean analysis, correlation analysis and regression analysis for each research’s objective. The findings of this study show that top management should prioritize their strategies on three main areas namely financial system, stakeholder management and macro-economic factor. This study also discovers that top management should adopt all quality of top management supportive behaviours proportionally to ensure the effect of their actions are impactful to influence on project success. This is very true as demonstrated by the correlation results which indicate very significant positive relationships between combination of all top management support behaviours and three different areas of project success namely future preparation, project efficiency, and business adaptability and success. On the other hand, the regression analysis gives another indicator to suggest the critical top management strategies to be adopted in attempt to highly influence on project success. Top management should give more priority on development of effective communication system to improve the information transfer and message interpretation between project team and top management level. Even though a focus on single strategy may work for project efficiency’s success, but communication system alone may not be feasible to attain the project success in business adaptability and success. Top management should blend the communication management strategy with organizational structural arrangement strategy to ensure their organization and its project strategy are adaptable with the current economic situation. Another critical area of project success of future preparation seek for a wider spectrum of top management support strategies which to employ organizational structural arrangement strategy, resources management strategy, top management power strategy and communication management strategy. The last part of project success spectrum which is customer satisfaction demonstrated different outcome relative to the other project success spectrum. The results show that top management support may not provide impactful results in pursuing customer satisfaction.

## ABSTRAK

Percanggahan objektif dan strategi sesebuah syarikat adalah berpunca daripada peranan dan tanggungjawab yang kurang jelas, kuasa dan tanggungjawab yang terhad dalam membuat sesuatu keputusan, kelemahan orientasi kerja berlandaskan prinsip keuntungan dan kepuasan pelanggan, dan kelemahan dalam kemahiran profesional. Kesemua masalah ini boleh menjejaskan pelaksanaan dan kejayaan sesuatu projek. Pengurusan tertinggi sesebuah syarikat yang merupakan wakil kepada sesebuah organisasi bertanggungjawab terhadap segala halatuju dan kejayaan perniagaan syarikat. Kajian ini dijalankan untuk mengenalpasti strategi yang kritikal dalam mengatasi masalah yang terdapat dalam pelaksanaan sesuatu projek. Objektif kajian ini adalah untuk mengenal pasti faktor-faktor yang penting dalam memperolehi sokongan daripada pengurusan tertinggi syarikat sebagai langkah untuk mempengaruhi kejayaan sesuatu projek, mengkaji hubungan di antara jenis-jenis sokongan pengurusan tertinggi syarikat dan kriteria kejayaan projek, dan akhir sekali untuk mengenalpasti strategi pengurusan tertinggi syarikat yang kritikal dalam mempengaruhi kejayaan sesuatu projek. Skop kajian ini difokuskan kepada industri pembinaan di kawasan Johor Bahru. Sampel kajian ini terdiri daripada pekerja profesional yang sedang berkhidmat dalam organisasi berasaskan atau berorientasikan projek, dan mereka memegang pelbagai jawatan daripada pengurusan tertinggi syarikat sehingga ke peringkat eksekutif. Kaedah kajian ini dijalankan berdasarkan kaedah kuantitatif, dan data kajian diperolehi dari respon yang diterima pada borang tinjauan dalam talian menggunakan sistem "*Google Form*". Data dianalisis dengan menggunakan tiga kaedah yang berbeza iaitu analisis deskriptif-min, analisis korelasi dan analisis regresi bagi mendapatkan keputusan terhadap setiap parameter yang diukur. Hasil kajian ini menunjukkan bahawa pengurusan tertinggi syarikat harus mengutamakan strategi mereka dalam tiga bidang yang utama iaitu sistem kewangan, pengurusan orang berkepentingan dalam projek (*project stakeholder*), dan faktor makroekonomi. Kajian ini juga mendapati bahawa pengurusan tertinggi syarikat harus mengguna pakai semua strategi yang ada pada jenis-jenis sokongan pengurusan tertinggi secara sistematik untuk memberi kesan langsung terhadap kejayaan sesuatu projek. Hal ini dibuktikan berdasarkan hasil keputusan yang didapati dari analisis korelasi. Keputusan tersebut menunjukkan bahawa wujud hubungan positif yang sangat signifikan di antara kombinasi semua strategi pengurusan tertinggi syarikat dan tiga kriteria kejayaan projek yang berbeza iaitu; persediaan syarikat untuk masa hadapan, kecekapan pelaksanaan sesuatu projek, dan pengurusan perniagaan yang mapan dan berjaya. Keputusan kajian berikutnya yang menggunakan kaedah analisis regresi bertujuan untuk menjawab objektif kajian ketiga iaitu mengenalpasti strategi pengurusan tertinggi yang kritikal dalam mempengaruhi kejayaan sesuatu projek. Pengurusan tertinggi sesebuah syarikat perlu memberi keutamaan kepada pembangunan sistem komunikasi yang berkesan, penstrukturan organisasi, pengurusan sumber syarikat, dan pengurusan autonomi atau kuasa pada pengurusan tertinggi syarikat. Kajian ini juga mendapati kejayaan dalam memperolehi kepuasan pelanggan bukan berlandaskan strategi yang didokong oleh pengurusan tertinggi syarikat tetapi sebaliknya adalah kesan langsung daripada pengalaman pelanggan terhadap kualiti pengurusan projek itu sendiri.

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## **LIST OF ABBREVIATIONS**

CSF	-	Critical Success Factors
TMS	-	Top Management Support



## LIST OF SYMBOLS

$\alpha$	-	Cronbach's alpha
$N$	-	Number of Sample
$\bar{x}$	-	Sample's average variance
$\hat{x}$	-	Inter Sample's co-variance

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# CHAPTER 1

## INTRODUCTION

### 1.1 Research Background

There are very limited research papers addressing the critical roles of top management to influence the project success (Hao et al., 2008). Biggins D., Lawlor-Wright, T. and Truelove, L. (2015) have compiled several established literatures and studies related to project management topic for the last 50 years between 1955 until 2015. This effort was continuing the studies initiated by Kerzner (2006), Egeland (2009) and Morris et al (2011). Biggins D., Lawlor-Wright, T. and Truelove, L. (2015) have built a dataset of project management literature and plotted the frequency of the research focus area in project management field. They have sorted the studies into 16 different categories of project management topic as tabulated in Table 1.1.

Table 1.1 Research categories of project management topic

No.	Category	Topics
1	Strategic alignment	Strategy; business case; program management; portfolio management; benefits; alignment; organizational change; financial appraisal; prioritization
2	Project success	Project success; project management success; success factors; success criteria
3	Stakeholder management	Stakeholder; customer satisfaction
4	Project evaluation	Organizational learning; performance management; project review; project appraisal

Table 1.1 Research categories of project management topic (Cont.)

<b>No.</b>	<b>Category</b>	<b>Topics</b>
<b>5</b>	Planning	Planning; estimating; scope management; schedule; scheduling; PERT; critical path; critical chain; activity network
<b>6</b>	Iron triangle	Time management; Cost management; Quality; TQM; total quality management; Earned value; EVM
<b>7</b>	Project start-up	Initiation; startup; start up
<b>8</b>	Project execution and control	Reporting; change control; life cycle; lifecycle; monitoring; control
<b>9</b>	Project close	Project close; testing; commission; handover; acceptance
<b>10</b>	Risk management	Risk
<b>11</b>	Procurement	Procurement; purchasing; contract management
<b>12</b>	Soft skills	Soft skills; conflict management; leadership; negotiation; problem solving; teamwork; decision making; trust
<b>13</b>	Environment	Legal; health; safety; environment; environmental impact; sustainability; culture; public sector; private sector
<b>14</b>	Project organization	Project organization; roles; responsibilities; communication; PMO; sponsor; executive; maturity
<b>15</b>	Project management method	Project management method; PRINCE2; PMBOK; APMBOK; Body of knowledge; BOK; agile; scrum; governance
<b>16</b>	Personal development	Training; accreditation; qualification; experience; certification; competence

Sources: Biggins D., Lawlor-Wright, T. and Truelove, L. (2015).

Biggins D., Lawlor-Wright, T. and Truelove, L. (2015) concluded that there is less attempt to explore on the project success issue with only 1.3% of studies were found from the overall research documents related to project management topic. Project success is not compounded within the iron triangles' concept only (Atkinson, R., 1999) which are limited within cost, time and quality factors, but it defines broader perspectives to link the product and services value with the management's strategic value (Judgev, K. and Muller, R., 2005). The strategic value will carry clear future directions of project management to overcome the issues embedded within the project management process (Judgev, K. and Muller, R., 2005).

The issues circulated within the project management process are associated with many technical, functional or business related events during the project implementation (Amr Mossalam, 2017). It is more adverse when handling the project issues in construction industry where all these issues generally contribute to project deferment and worst to the extent of abandonment (Yap E. H., 2013). Common issues found in the construction project are hardly to be eliminated, thus it has to be dealt strategically based on project success' concept (Judgev, K. and Muller, R., 2005). Most of the construction issues are repetitive events experience whether in the same project or across other projects. These repetitive issues are deeply rooted in the construction project due to the project nature to deal with high uncertainties, different kinds of implementation, unique deliverables, and different kinds of requirement stipulated in project specification and contractual terms (Faridi and El Sayegh, 2006).

These issues then lead into a specific question to argue on the top management's support and its contribution on project's success. The question can be further extended to explore whether the project success is totally belong to the top management's responsibility or does it part of top management's contribution grasped through their support? The question here arose to address the perception issue of top management's involvement in project management. Is it really necessary to include top management's present during project execution when the Project Manager himself is available to handle the project on behalf of the company?

The limited authority empowered to the Project Manager restricts his roles to handle the issues beyond the project management sphere. A Project Manager is assigned to the project's organization structure to carry out the project management functions. The project management functions are to plan, organize, monitor and control all project's dimensions with the ultimate goals to deliver the project safely and meet its objectives (Radujkovic and Sejkavica, 2017). Even though the project management's objectives fail to be met as in the case of being over time or budget, but the delivery of the project itself is the reflection of the project success (Baccarini, 1999; Pinkerton, 2003).

This research will explore the definite roles of top management in an organization and different kind of supports generally provided by the top management group to steer the project team towards delivering the project successfully. Later, these data will be analyzed to conclude the critical top management's supports that positively contribute towards project's success. This will embark another research milestone in providing beneficial reference to the construction companies to improve their business process particularly in project management. The reference can facilitate the top management to formulate the effective strategies to improve the project management process. Indirectly, it can improve the company's operational efficiency by attending at the critical business' processes and catalyze its operation.

## **1.2 Problem Statement**

This research is initiated based on common problems found in project management practice with the focus centralized on higher management roles and its impacts on project success. The problems are supported by preceding scholars which have addressed several issues found in construction project in association of the top management support. Top management support is arguably created positive influences to the project success (Riaz, A, Noor Azmi and Muhammad Shakil, 2016). On the contrary, the excessive of top management support can distract the project direction and consequently steer to its downfall (Keil M., 1995, Collins T. and

Bicknell D. Crash, 1997). Nevertheless, there are still many scholars agreed that top management support is significantly critical for project success (Garrity 1963; Markus, 1981; Rockart and Crescenzi, 1984; Doll, 1985; Lederer and Mendelow, 1988; Schmidt et al., 2001). The support is more necessary against other project's success factors (Raymond Y. and Simon P., 2013). One of the common instances of the critical top management support is to moderate conflicts between inter-disciplines and departments. The routine project management's activities deal with a lot of conflicts, thus lacking of top management's support to moderate such confrontations will refrain positive cooperation and communication relationships between inter-departments (Rodriguez, N. G. et al., 2008). The theoretical model introduced by Rodriguez, N. G. et al. (2008) proved that the lack of communication-cooperation relationship will lead into poor performance and put the project success at stake.

In another separate issue, the construction project frequently encounters with problems which prone to create mistakes. Most organizations consistently repeating the same mistakes and wasting enormous amount of money every year (Raymond Y. and Jordan, E., 2008). The repetitive mistakes are associated with the nature of the construction projects which are complex, dealing with enormous uncertainties and confronting with large-scale changes throughout the project life-cycle (Miia and Parvi, 2018). This repetitive mistake needs immediate attention from the top management to study and formulate a strategic plan to mitigate this blunder. To formulate an effective strategic plan, the top management have to deeply understand the problems. This can be facilitated by investigating the relationship of top management support and project success. This is consistent with the role of top management as the key decision making to formulate and frame the organizational strategic plan (Hermano, Víctor and Martín-Cruz, Natalia, 2016).

An instance issue contributes to mistake during project execution is to manage the change order process. The change order process involved miraculous efforts and indefinite working hours to seal a mutual agreement with the clients to get approval on the revised scopes, extension of schedule and proposed cost impact. The ineffective change order management will result to time and cost overruns (Hao

et al, 2008). This is another common repetitive mistakes created during the project execution. Statistics shown that 55% of construction projects in Malaysia suffered from cost overruns (Shehu et al., 2014). The cost overruns are mainly resulted from the construction changes (Ng, 2015; Ghazali, 2015; Jeffrey et. al., 2017). Changes are frequently found in construction project as most of the changes come at clients' request to include the additional works and modifications during the project on-course (Ali S. Alnuaimi et al., 2010). This then followed by the inadequacy of construction manuals and procedures (Ali S. Alnuaimi et al., 2010). Many errors can be created under the change order process namely under estimate the charging cost, incomplete scopes preparation and under estimate the resources.

Another critical example related to repetitive issues and mistake in construction project is the doubt in quality of the end product. The construction industry struggles to sustain and deliver quality products to its customer (Nurul Afida and Faridah Ismail, 2013). There are many scholars have carried out studies on quality topic and recognized the critical factors behind this prolong issue (Takim and Akintoye, 2002). Walker (2002) conclude that the major factor that position the construction industry differently against others is due to its uniqueness in delivering the end product to the customer. The uniqueness are attributed into for four main uncertainties namely; (1) natural uncertainty, (2) task uncertainty, (3) organisational uncertainty, and (4) contractual uncertainty. All these uncertainties required top management's attention to develop and strategize an effective quality management plan (Foster, S. T., 2017). The top management have to revisit their current business plan to re-align with operational requirement. Restructuring the company's policies and resources are required to tailor with the project needs.

Most companies nowadays have better awareness and readiness in facing economic downturn based on the last experience facing during financial crisis in 2007-2008. The crisis has led many business leaders and the higher management teams to prepare an advanced contingency plan and be ready at any time to face the looming economic downfall by adjusting its business strategy (Jim DeLoach, 2018). The sudden change of strategies must be aligned with its operational nature as the major root cause of project failure is contributed by the non-alignment between



organization's core strategy and its project objectives (Van Der Waladt, G., 2016). PMI (2014) recorded that the poor organizational strategy adoption had resulted to on average at US\$109 million for every US\$ 1 billion spend on projects. The organization's strategies include restructuring of organization, bidding strategy, changes of policy and etc. The strategies can be effectively adapted to the organizational process and needs by recognizing the critical top management support to influence the business operation success through project implementation.

The identified problems in this study are closely linked with the established literatures. The first issue is addressing the concerns on lacking of top management support in project implementation. There are reason why does a project need the top management support. The question to be raised here is; Is there any other importance factor beside resolving confrontation in an organization atmosphere to facilitate the top management involvement in providing necessary supports to influence on project success?. The later question is to investigate what is the relationship and connection between top management supports and project success?. The last research question will conclude the enquiry to determine what are the critical top management supports to influence on project success.

### **1.3 Research Question**

The problem statements above have defined the common issues found in construction project. Apparently there are numbers of uncertainties to be explored and studied in the upcoming chapters to respond to the following research questions:

- (a) What are the importance of top management support factors to influence project success?.
- (b) What are the relationship between various top management supportive behaviours and project success criteria?.
- (c) What are the critical top management supports that influencing the project success?.

## **1.4 Research Objectives**

The objectives of this study are as follows:

- (a) To identify the importance of top management support factors to influence the project success.
- (b) To investigate the relationship between top management support and project success criteria.
- (c) To determine the critical top management supports that influencing the project success.

## **1.5 Scope of Research**

This study concentrated and confined the subjects of examination on the top management support factors, relationship between top management support and project success and critical top management support on project success. The scope of study is limited within construction industry mainly performing maintenance of oil and gas facilities projects in Johor Bahru area. The respondents are coming from various organization from main contractors to other support service companies that actively participating in oil and gas projects with minimum five (5) years of relevant track record. The selection of respondents was carefully reviewed by considering their background, position, and experience in project management practice.

## **1.6 Significant of Research**

This study was initiated to focus its principal findings to determine the critical top management support that influencing on project success. The related problem statement which expanded into research questions and objectives are consistent with the preceding scholars. Henard and Szymanski (2001) have suggested to continue the same study by collecting the input from the project manager's perspectives instead of thoughts from the top management to provide stronger evidence to prove that there is positive impacts of top management support on project success.

This study adopted the established research framework on top management support and project success topics by referring to previous researchers and relevant with this study's purpose. This study's outcomes could provide a useful source of information that may benefit other scholars or companies that practicing project management to formulate plan and prioritize line of actions in attempt to improve their organizational performance by focusing on achieving project success. This study implied ideas by highlighting the critical top management support necessarily to influence on project success, and guide organizations to give more attention on limited numbers of areas that justifiably critical instead of attending to all problems at one time. This idea will improve management efficiency whilst preventing from diversion to other less impactful areas.

The proper understanding and deliberation of the subject matters in top management support and project success areas will provide better judgement in drawing policies and strategizing effective line of actions to tailor with the organizational and environment needs. The impactful implementation of policies and strategies will help the organization to stay competitive and adaptable with the market. A clear and well defined strategy can foster positive motivation among the employees to put efforts towards achieving project success (Seiler, S. et al, 2012). The positive motivation will increase the chances of project success rate.

## **1.7 Summary**

This chapter described the early stage of this research process by explaining on the problems' background, followed with problem statement before breakdown into several research questions. The research questions are associated with areas to be explored in answering to the research problems. Those questions were tailored with the study's objectives to navigate the right course of actions in achieving the main purpose of this study. The objectives include to identify the importance of top management support factors, to investigate the relationship between top management support and project success, and to determine the critical top management support that influencing project success. A clear boundary was set to focus on the scope of studies within a construction industry where the population are resided in Johor Bahru area. The purpose of this study was properly justified by presenting the impact and significant of the study's outcomes to the public.

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