



## Success Factor for Project Management on High Rise Building Project

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**Abstract:** Success of each project and efficiency is required to achieve a greater advantage over the firms in construction industry today. Effective project management overcomes these types of challenges. Each big construction project company strives to achieve the most efficient and effective project management processes. The success factors which are important for project management in high rise building project success. However the main issues that can lead the project to fail are lack of communication among the project team. This study identifies the project management practices in high rise building, success factor for project management on high rise building and un-success factor for project management. The methodology of this study used questionnaire method and the targeted are contractors' firms in Johor Bahru with sample size of 200 respondents. This study used descriptive statistical analysis which is frequency and mean by SPSS software. The dominant practice from the analysis for the first objective is comprehensive understanding of the work and process. While, the dominant success factor from the analysis for the second objective are project manager ability to coordinate and motivate team. Finally, the dominant factor from the analysis for the third objective un-success factor which is financial difficulties faced by the contractor. Further study can be performed regarding this topic in different ways or methods such as other provinces or cities of Malaysia; another type of construction projects, such as highways construction project, dam construction project, using another grade of contractors such as G6, G5 and etc.

**Keywords:** Construction, high-rise building, project management, success

### 1. Introduction

The present high-rise building projects in Malaysia as well as in Korea are experiencing extremely of trial-and-errors. The reason can be prolonged beyond external matters like the shortage of the experience and technology. This means that is not easy to understand and implement exactly throughout the whole process from the planning to the maintenance. Some local high-rise building projects were planned by big-sized of construction companies of Malaysia and commenced after careful review and adjustment of risk management in their own approach, in considerable time, however they did not seem to show enough performance corresponding with original plans and aims (Kuo et al., 2013). Standard with clear qualification is identifying a capable manager or supervision the factor. The method to guarantee that building of high rise characteristics are managed in professional way has yet to be recognized. According to surveys implemented in Johor, Kuala Lumpur, Penang and Selangor have a management factor in charge of high-rise buildings due to lack of standard rule and competence in high-rise management (Ta, 2006).

Most projects around the world keep failing, causing organizations to lose millions of dollars (Al-Zayyat et al., 2010). This enduring challenge has let too numerous project management professionals to try to study the success factors for project management on high rise building that need to be addressed in order to produce successful high-

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rise results of project management. Literatures race out on success factors of project management for particular industry sectors or specific country situation, and also very few experiential studies on the success factors for project management of particular organizational operational units (Norman, 1993).

Several of the high-rise construction projects in Malaysia especially in project management reputed the constraints, particularly for quality management, time management and cost management. In general, those projects were not equipped duly rendering to the project managers, the project stages and stakeholders have shortage of knowledge for the management area. As a conclusion, based on (Ta, 2006), (Ting, Khoo & Wong, 2009), (Ibrahim et al., 2010) and (Norman, 1993), show that the issues of project management for high rise building is a crucial. Therefore, this research study and examines the success and un- success factors for project management on high rise building project.

The success factors for project management and the team's competences on project expertise areas of management in handling the high-rise construction project is very important of research. The following research questions are formulated to achieve research of objective:

1. What is the current of project management practices on high-rise building project implemented?
2. What is the success factors for project management on high-rise building project identified?
3. What is the un-success factors for project management on high-rise building project identified?

Appreciate how the managers are responsibility the project management purposes in high rise building project. The research aim is to achieve evaluation on the causes of project success and un-success. This aim is envisioned to be attained with the following objectives. The main objectives of the research are:

1. To study project management practices on high rise building project.
2. To examine the success factors for project management on high rise building project.
3. To examine the un-success success factors for project management on high rise building project.

These findings will lead efforts to recover the performance of the high-rise building construction industry and will be valuable to the construction actors. Consequently, the findings strength inspires the practitioner to emphasis on project management problem that capacity has happened in their current or upcoming projects. Meanwhile, this study is predictable to deliver better habits and methods in carrying construction projects by diminish the main reasons on project management. An important variable which influence success factor of project management on high rise building construction project and produce the statistical result can be identified. The result of the study provides a guideline to the parties that involve in high rise construction project.

This research concentrates to study a project management practices on high rise building project, examined the factors of success for project management on high rise building project then examine un-success factors for project management on project of high rise building. This study considered the public companies in construction industry in Johor. These contractors' companies were categorised by grade. In total there about 400 G7 construction companies registered with CIDB in Johor state alone (CIDB, 2016). Therefore, the sample size is 200 respondents and the sampling method that have used is random which are 30 presents from overall population and the minimum of 60 returned questionnaire from 200 G7 construction company registered CIDB in Johor (Blair, Czaja & Blair, 2013). These companies are selected because it can deal with such project, has unlimited target in terms of the finance and closed to my place and easy for me to visit them and sent the questionnaire to them.

Based on issues that raced out by Ta (2006), this research effort is concentrated on recognizing the factors that consequence on the success for project management on high rise building in Johor, Malaysia. The methodology of the study was conducting by the quantitative method throughout using SPSS software to analyse data. However, the respondents in this study are project manager, professional engineer, and contractor and construction manager at those companies so as to assist the factors that disturb the project management success in high rise building and help to identify the critical factors that can cusses cost and time overrun in project management (Al-Zayyat et al., 2010).

## 2. Literature Review

This part comprises of a comprehensive review of literature relating to the factors of success for project management in high rise construction project and evaluation & definition of success management practices in high rise building project. Construction projects success is an important issue for most of the governments, users and communities especially in Malaysia. However, there are significant challenges in modern construction projects for both the contractors and clients to deliver the project successfully due to increasing complexity in the involvement of stakeholders and design. In the project management literature, many researchers have extensively discussed the success of the project. Most of the researchers in success project have been concentrating on dimensions in how it is measured and other specific factors affecting the success of construction project.

Construction project of high rise buildings had long been required by human existences and has been comprehended. The understanding and development of high-rise buildings has been conceivable due to the progression of the engineering area such as the beginning of steel, elevators and high strength concrete along with the augmented buying power and human desire. The tower construction projects were first instigated in Chicago in the early 20th century and has been led by countries similar the United States and Canada. Then, many tower buildings

have been constructed in South East Asia countries such as Hong Kong, Singapore, Malaysia and China (Kwon, et al., 2004).

The idea of high rise otherwise strata living in Malaysia is not current scenario. It has been presented in the seventies and in Penang Island, the tower housing recognized as the "Rifle Range" was presented in the early seventies (Al-Zayyat et al., 2010). However, the management of tower or high-rise residential system practiced in the country is motionless original and not methodical. Not only is the request for high-rise living growing, the demand from house buyers today is also shifting.

Project management is additional comprehensive management method, and then it is only conceivable when the contractual preparation involves the main contractor to achieve all the work in the project, whether by their individual workers or subcontracting toward professional subcontractors. The core responsibility of the project manager is to manage and organize the project works so that it is accomplished on period, through good quality and rational cost (Harrison et al, 2017).

According to Kyu (2015), successful projects are much supplementary hard than just meeting cost, time, and performance specifications. In fact, client's satisfaction through the outcome has a lot to prepare with project success or failure. Pinto & Slevin (1998) found two different components of the project's success. Project management success is focused on the project process, particularly the successful realization of cost, time and quality. It will also consider how the project management process is performed. Meanwhile, product success involves the impact of the final product of the project. There should be a clear distinction amongst creation success and project management success in instruction to properly classify and assess project management success and creation success by way of they are dissimilar from each other.

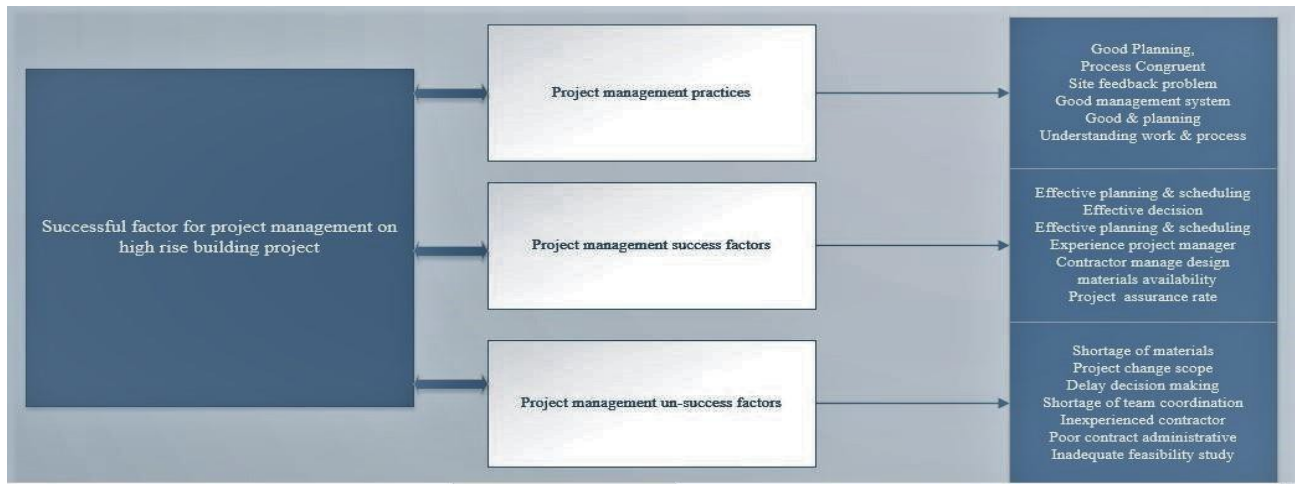
Researcher agrees with Pinto & Slevin (1998) project success concept. That is mean the most important factor in project success be contingent on successful project management. This successful determination consists of two parts. The first part is the process of project management, identical process of project initiating, process of project planning, process of project implementation, process of project monitoring process and project closure. The second part is the project knowledge areas management, such as project integration management, project scope management, project time management, project quality management, project cost management, project communication management, project risk management, project procurement management and project stakeholder's management. Therefore, successful project management will support ensuring the success of the project's products to ensure the success of the project.

Preceding research has endeavored determine reasons for the difference between the tender sum and the final account. This segment recognises the factors that impact cost overruns in high rise buildings. Four factors were identified from the current research results by Mulenga & Bekker (2015) and Taye (2016). These are; design changes, increase of labour due to lack of technology, insufficient planning, erratic weather environments; and variations in the building materials cost. To widen the study, it was absolute to accompaniment the above list of factors with other factors garnered from the closing account reports. Those were then separated into two groups of critical factors and other factors, which are frequently overlooked, but apparent to be of equivalent significance (Mulenga & Bekker, 2015).

There is type of critical factors list such as imperfect design at the tender time; supplementary responsibility at owner's demand; variations in owner's brief; nonexistence of cost planning or monitoring throughout pre and post contract phases; site/poor soil settings; modification of major cost and interim sums; re-measurement of temporary works; logistics due to site location and deficiency of cost reports through construction phase. There is type of list of critical factors which are typically unnoticed such as delays in delivering material to the contractor during construction in delays; technical errors at design stage; contractual claims, like delay of time with cost claims; enhancements to standard drawings during construction phase; indecision by the managing team in dealing with the contractor's requests in delays; delays in costing variations and additional works; omissions and errors in the bills of quantities and overlooking items with nonstandard rates during tender assessment, particularly objects with temporary quantities.

The major variables of cost overruns have been normally acknowledged as: changeable weather, inflationary material cost, mistaken materials estimates, difficulty of project, contractor's lack of geographical skill, contractor's lack of project type practice, and non-familiarity with local rules (Kaming et al, 2010). Taye, (2016) deliberate the factors influencing cost overruns in public sector projects that costs are attributable moderately to the detail that the novel estimations were set at the then current prices, and partly to delays which improve the effect of inflation and to straight appreciation in costs ascending out of variation in scope, errors etc. Taye, (2016) stated ten factors that inducing cost overruns of construction projects. These factors are: insufficient project preparation, planning and implementation, delay in construction as the first cause of cost overruns. The second factor was supply of raw materials and equipment by contractors. The third was modification in the scope of the project. The fourth factor of cost overruns was resources constriction: funds, foreign exchange, power; related auxiliaries not ready. The delays in decisions making by government, disappointment of specific organising bodies was the fifth factor. The sixth cause was inappropriate choice of site. The seventh one was technical ineffectiveness and poor administrative structure. The labor turbulence was the eighth. The ninth factor cause cost overruns was natural calamities, poor communication,

poor contract administrative and incompetent, contractor, sub- contractor, site worker and the last one was the lack of experience of technical consultants, inadequacy of foreign collaboration agreements, monopoly of technology.



**Fig. 1 - Research Conceptual framework successful factor for project management on high rise building project.**

This conceptual framework for this research has been extend, in this study success/un- success factor for project management in high rise building has been determined after the data collection. This conceptual framework illustrates the variables for success/un-success factor for project management in high rise building project that was applied to capture the relevance data. In the conceptual framework, the relationship between variables for success factors for project management and un-success factors for the project outcome was used in this study.

### 3. Research Methodology

Research methodology adopted to achieve the study objectives associated by literature review and questionnaire survey. The literature review is done by reviewing academic research journals, textbooks, and ultimately the information available on the internet to study the success factors in construction projects, identifying un-success factor that lead project to fail and cause time and cost overrun. The questionnaire survey has been designed (i) to study project management practices on high-rise building, (ii) to examine success factor for project management in high-rise building and (iii) to examine un-success factor for project management in high-rise building. Quantitative method implemented delivery of questionnaire as the data collection process. The respondents are the construction industry players, namely Grade 7 (G7) contractors registered with the Construction Industry Development Board (CIDB). Contractor G7 was chosen because they are the main contractor with unlimited tendering capabilities. The research based on quantitative research by using questionnaire to carry out the research aims and was designed based on the research objectives. A total of 60 questionnaires were gathered from a total of 200 contractors of G7 distributed at Johor Bahru.

### 4. Result & Discussion

Data collected was analysed using the Statistical Package for the Social Science 22.0 software. Analysis method used is percentage, frequency, and means score value. There were about 200 copies of questionnaires distributed to the targeted respondents consisted of architects. The researcher managed to collect back 60 questionnaires from the respondents. This constitutes a sum of 30 % response rate. According to Fellows *et al.* (1997), the normal useable response rate is ranging from 25% to 35%. Therefore, the total response received is considered sufficient for the purpose of this research. Table 1 shows the questionnaire distributed and returned in this research. Table 4.1 shows the response rate of the questionnaire distributed to G7 contractors listed in Construction Industry Development Board Malaysia (CIDB). From 200 sets of questionnaires distribute, 60 were returned from the respondent and which constitute 30 % of the percentage response rate

**Table 1 - Questionnaire Distribution and Return.**

Description	Tota
Questionnaire Distributed	200
Questionnaire Returned	60
Percentage (%)	30%

### Test of Reliability

Reliability measurement is the examine method to test whether the quality of the data in the questionnaire is reliable or not according to produce an accuracy result. Consequently, this research applies Cronbach's Coefficient Alpha to analyse the reliability of the research (Zikmund et al., 2010). Table 2 shows Cronbach's Alpha Coefficient in order to determine the level of reliability of the variables.

**Table 2 - Cronbach's Alpha Coefficient .**

Alpha Coefficient Range, $\alpha$	Level of Reliability
0.80 to 0.95	Very Good Reliability
0.70 to 0.80	Good Reliability
0.60 to 0.70	Fair Reliability
$\alpha < 0.60$	Poor Reliability

(Zikmund et al., 2010)

Researcher uses Cronbach's Alpha to inspect the reliability test, 51 questions of the questionnaire in the questionnaire system have been involved to test the variables reliability. According to Table 2, the value of alpha is below 0.6 poor. The reliability is considered fair if the Alpha coefficient is from 0.6 to 0.7. Furthermore, Alpha coefficient from 0.7 to 0.8 shows a good reliability. Finally, a good reliability is expressed by an alpha coefficient between 0.8 and 0.95.

According to Table 3, the Cronbach's Alpha coefficient of reliability of the study, which include 46, questions taking in consideration the demographic of the respondents and the main three objectives of the study. The table shows that the reliability test has a value of 0.95, which is considered a very good Reliability.

**Table 3 - Reliability (Cronbach's Alpha) for all objectives (questions).**

Reliability Statistics	
Cronbach's Alpha	N of Items
0.941	51

### Result

#### Project Management Practices on High Rise Building Project

The first objective of this research is to study project management practices on high rise building project. The result of the data analysis was tabulated in Table 4 with the ranking of the project management on high rise building from highest to the lowest mean value. The highest ranking has the mean score value of 4.57 while the lowest ranking is 4.15 with 0.42 difference in mean score value. This ranking provides an indication of material tracking practices in the construction site that is highly used or practices to conduct project management in construction project.

**Table 4 - Project management on high-rise building analysis.**

Items	Mean	Rank
Important to emphasize good project planning	4.55	2
Manage the contractors engineering sequence & construction method	4.43	4
Comprehensive Understanding of the Work and Process	4.57	1
Different Project will demand different priorities	4.48	8
Congruent and consistent with each other phase process	4.2	3
Good workmanship in review system and feedback of the site problems hindering	4.15	9
Implementation of good design and planning	4.25	7
Implementation of good management system and competent personal	4.42	5
Important in using right material especially for the external façade	4.3	6
Average Mean	4.378	

Comprehensive understanding of the work and process is very crucial in project management in high rise building. For example, project manager parts and behaviors worried with the practical use of the project schedule as a tool-based managerial skill rather than a tool-based computer skill and project managers' motivational incentives for successful planning and scheduling teams are significant factors in the management of project planning and scheduling. This finding is in line with Kwon et al. (2004). Planning and their efficiency in transferring the information, needs and inputs are important factors too.

Contractors' efficiency in succeeding and monitoring on site teams and in undertaking their associated conflicts moving schedule progress, as well as their competence in incorporating and managing the work schedules of subcontractors and suppliers (within the main project schedule), are also seen as important considerations, this result is attaching with study Alias et al. (2014). The results suggest that project stakeholders' expertise related to planning and scheduling seems imperfect; consequently, there is a essential for more knowledge and training in project planning and scheduling concepts. Attainment of project planning and scheduling knowledge could support to recover the efficiency and effectiveness of the construction process. Generally, the findings disguised that project managers should help as front-end supporters and builders of their planning team by crucial a creative project plan that favors incorporation, learning and knowledge sharing in the project planning and scheduling context (Kaming et al., 2010).

Applying project management practice has become vital issues in Malaysia due to its successful application in various industries and proven effectiveness and flexibility in attaining project goals and objectives. Due to its nature with high risk and consuming many resources, construction industry requires better application and utilization of efficient and effective project management practice. Reviewing the use of project management standards, methods, methodologies, tools and techniques that widely applied in this industry, serves as eye openers to the contractors and another decision maker to better plan their effort toward the efficient application of project management practice. PM practice would result in concrete benefits in all aspects of project implementation if properly utilized (Joyce et al. 2011) and (Suk et al., 2014). Material collection for high-rise building design part is the most important decision to select material for tall building. This decision involves broad vision and consideration of several aspects of material and influencers that will effect on building. Engineers evaluate the performance of material in both hot and cold climate (Goncalves, 2007 and Helen, Wei & Pieter, 2012).

Uncertainty and risks growth intensely in constructing super high rise building projects, but presently projects are being implemented based on standing experience and intuition. In addition, structured risk management has not been reasonably achieved. Concentrating on the start of a project deprived of any thorough review and verification of risks in every project phase result in frequent changes of the project plan and lead to a vicious circle of cost rise, time retardation and quality deterioration so as to ensure the process at every phase necessity is consistent with each other. It is vigorous to identify the significance of risk management, to imitate acknowledged risks in the project plan, and to make a positive loop (Suk et al., 2014).

### Success Factors for Project Management on High Rise Building Project

The perception and success factors for project management were tabulated in Table 4.5 with ranking of numbering from 1 until number 12. The highest ranking is project manager ability to coordinate and motivate team with mean value of 4.58, which proves that most of the project managers do not practice coordination and motivate between the teams. While, the lowest ranking is contractor ability to manage the design with mean value of 4.25 which still located under strongly agree category.

**Table 5 - Success factor for project management on high rise building analysis.**

Items	Mean	Rank
Ability to make effective decision; relationship between team members.	4.43	9
Effective monitoring; effective communication and information by design team	4.45	8
Effective method of planning and scheduling; application of health and safety factor in organization	4.5	5
Experience and capability of project manager	4.47	7
Project manager ability to coordinate and motivate team	4.58	1
Project manager ability to take correct decision	4.55	2
Project manager ability to supervise on leadership skills in site	4.48	6
Contractor's experience	4.53	3
Average mean	4.50	

This is very challenging and calls for high level of empathy and social competence. In general, the challenging is the lower importance of subject knowledge, the higher the need for leadership skills, and vice versa. This is also a thing that depends on the type of the project. The project managers do not have administrative authority over the project team, so he or she must lead the team without formal authority and there for use leadership skills motivate the team to work in the project. The impact of the construction project managers' communication skills on the success of the areas time, quality, cost and communication management is ranked second. The project manager needs to establish cooperative relationships with the project team members ensure a good climate for communication, identify participants for the project to ensure commitment and adopt an appropriate leadership style (Goodwin et al., 2002). Competent contractor experience is an important factor affecting the project success. This can be linked to the contract-awarding procedure where the project most awarded to the high bidder, solely or through joint ventures. the competent contractors involve and awarded the large and complex projects for which they have more experience because access to such projects is prove that contractor is qualified to large and complex projects. The contractors experience comes from the various projects that have been done (Suk et al., 2014).

Moreover, chemical additives have enhanced the materials producing a wider array of properties (Calkins, 2009). The ample options of materials with varying properties have been considered as an accomplishment to the construction industry however the availability of too many options have caused complications in making the right choice. Experts and specialists are required to select the most compatible construction material to compliment the project. The material choice will determine the machinery and workmanship required and making the right choice from initiation can pave the path for a smoother delivery. This result is match with (Christopher, 2011). Site management on effective enforcement scheme, client's project financing for regular cash flow, healthy financial condition and stability of contractor, appropriate safety education and training, government's institutional and administrative influence e.g. regulations, permits, physical work environment such as weather, safety equipment acquisition and maintenance are measures that made up the group suggest measures that could only be achieved through effective site management effort on health and safety implementation. All these are key to the success of project health and safety management process. This result is in line with (Muhammad, Abdulateef, & Ladi, 2015) and (Griffith et al., 2004).

There should be a specific management group which has the integrated management competence of controlling the total process from the planning phase to the maintenance phase according thorough understanding and practices of restrictions and key construction technologies of super high rise buildings in direction to carry out high rise building projects, The organization must create a smooth information flow, collect various technical data and opinions, lead the decision making process, and to have the capability of viewing and managing the whole project in each project phase and by each participant in the project management for a successful project (Kwon et al., 2004 and Haghirian, 2011).

### Un-success Factors for Project Management on High Rise Building Project

The third objective of this study to examine non-success factors for project management on high-rise building. The result of the data analysis was tabulated in Table 4.6 with the ranking of non-success factors for project management on high-rise building from highest to the lowest mean value. The highest ranking has the mean of 4.55, while the lowest ranking is 4.18 with 0.37 differences in mean score value. This ranking provides an indication of non-success factors for project management on high-rise building in the construction projects.

**Table 6 – Un-success factor for project management on high rise building analysis.**

Items	Mean	Ran
Unskilled/incompetent site workers	4.30	10
Poor quality control and management	4.37	8
Inexperienced of contractor and subcontractor	4.35	9
Inappropriate project planning and scheduling	4.40	7
Poor contract administration	4.18	12
Inadequate project feasibility studies	4.23	11
Financial difficulties faced by the contractor	4.55	1
Shortages of materials	4.48	4
Late delivery of materials and equipment	4.48	4
Fluctuation of prices of materials	4.30	10
Lack of communication between parties	4.52	3
Lack of coordination between parties	4.42	6



Change in the scope of the project	4.43	5
Poor project management	4.53	2
Poor design and delays in design	4.48	4
Delays in decision making	4.48	4
Average Mean	4.41	

Cash flow availability is very important for a contractor to implement the construction activities. This is due to most of the main contractors outsource their works to sub-contractors, the failure for contractor to pay to subcontractors on time resulting in slowing down the progress of the work due to reduce number of workers hired by subcontractors and unavailability of construction materials. Hereafter, sufficient cash flow and financial stability of contractors is very vital in charge construction progress as planned. This finding concurrently matches with the findings carried out in different parts of Saudi Arabia construction industry by Al-Kharashi & Skitmore (2009), Frimpong, Oluwoye, & Crawford (2003) and (Sweis et al., 2008). According to the respondents, poor project management' is the most important reason for poor project time planning (Youcef et al., 2015).

Results from study confirm that project management has important role in refining time planning of project. The finding demonstrations the reason for poor project time planning is because of poor project management totally. Subsequently time planning is part of project planning, anything that influences time planning will inspiration project planning in general. Poor project management in terms of project time planning can be due to no application or inappropriate application of time planning tools, planning software or planning skills (Ramanathan, Narayanan & Idrus, 2012). Lack of communication between parties will effect in lack of project management and can cause a critical problem to the quality of product. Communication about challenging construction work must comprise numerous parties and the flow comes from all orders between the owner and the architect. Information received from them will be carried out to the main contractor and shared to both subcontractors and suppliers and to or from third party contributors. Whichever problems on site must be reported once it seems by the contractors and the suppliers to the architect and the project owner as well as lack of trust and unproductive communication between the project participants particularly when subcontractor is not integrated into the main alliance (Bassam, 2007) and (Huang et al. 2008). Poor design and lack of professionals for example, the need to construct on hill slopes at the eastern side of Kuala Lumpur, or the need to adopt innovative and new technology. Other than the inherent nature of the project, the difficulty of design and construction factor can also be due to incompetent designers who produce designs that are impractical and lack in standardization, therefore difficult to construct, or, over designing and therefore increasing the overall cost (Toor et al.2008). This finding is match with finding of Seboru (2015).

Lastly, coordination is important within multi-participant environment as in most construction projects. First attribute under this factor includes ineffective coordination among construction parties, lack of organization between design team and main contractor, lack of coordination between general contractor and subcontractors and, infective coordination among the contractors' management (Koushki, Al-Rashid & Kartam, 2005). Second attribute is related to poor coordination is at design phase between client and stakeholders can lead to serious project delay and is subjected to variation claims by the contractor (Lambeck & Eschemuller, 2009). A proper coordination system between project parties should be established to increase the project performance to prevent this problem, (Neeraj & Misra, 2007). The finding is in same with the results found in Saudi Arabia construction industry (Mahamid, 2013).

## 5. Conclusion

This paper has presented a descriptive analysis to determine the ranking of success factors as well as ranking of un-success factors faced by construction industry in Johor Bahru. A total of 16 un-success factors were analysed using SPSS software and found that 10 most significant factors causing construction delay in Johor Bahru construction industry are difficulties in financing project by contractor, Poor coordination between parties, Shortage of manpower, delays in producing design documents, improper planning and scheduling of the project, delay in progress payments, low productivity level of labour, poor communication between parties, unqualified workforce and poor contract management. However, 20 success factors were analysed by SPSS software and found that 7 most significant factors lead project to be success in high-rise building in Johor Bahru are project manager ability to coordinate and motivate team, project manager to take correct decision, contractor experience, ability to manage site fast delivery of materials and equipment's and effective method of planning & scheduling.

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