

Can Project Managers' Emotional Intelligence Contribute to the Success of Construction Projects?

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Abstract

Today, the challenges faced by a construction project manager are to improve the level of efficiency and overall productivity levels while at the same time maintaining harmonious relationships with stakeholders. They need to be able to communicate and interact at an all level and know how to use tools and methods to improve outcomes. Although Emotional Intelligence is an individual capability concerning a project team, it can provide a level of motivation and energy for the entire project team to detect and avoid any sign of project failure. To be aligned appropriately, a good project manager should be able to evaluate and track potential risks and make clear plans and manage the project. This article examines Emotional Intelligence as one of the drivers for the project manager's achievement and shows how to combine Emotional Intelligence and effective project management. If Emotional Intelligence focuses mainly on the level of communication within management staff, the ultimate goal of project management is to avoid defects during and after project, efficient time management, overall cost-controlled, and comprehensive project planning structured thoroughly into achieving a successful project. The question is, in the end, "Can project managers' Emotional intelligence contributes to the success of construction projects?" By combining several critical aspects of Emotional Intelligence, this paper proposes a more comprehensive approach to how construction project management is managed in the future.

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1. INTRODUCTION

When planning to start a new project, members of the group who have specific expertise from various backgrounds are usually choosing and invited to join the team. The role of the team members will be identified and distributed, the machinery appropriate in the project identified, the methods described and the work schedule is structured to

ensure success and achievement of successful goals. The function of planning, implementing, monitoring, completing, and handing over the completed project to the owner is identified as a project management process (Oliveira & Rabechini Jr, 2019). A successful project is a combination of a specific task that pre-set to produce a particular final product, services, or experience to satisfy the customer's requirement. It has a defined set of

process activities from beginning to closing the project activities (Al-Aghbari, 2018).

Project management is the idea of delivering products or services to fulfill the organization's needs and wants (Pinto, 2012). There are various methods, ways, and platforms that the project can succeed, and multiple methodologies, frameworks, technologies, and processes have been set up to facilitate project completion (Kerzner, 2013). Success in construction project management is closely related to the management style of a project manager. A project manager is a significant figure for any project management and is a substantial stake in determining the success of a project. It is said that the Emotional Intelligence (EI) level of a project manager greatly influences the management style and consequently becomes the determining factor in the success of the project (Mersino, 2013). This paper will discuss literately on how the EI level of a project manager contributing to construction project success.

2. METHODOLOGY OF LITERATURE REVIEW

This literature review paper will provide the reader with some insight into nature and the problems faced by the construction industry and the Malaysian construction industry in particular. From there, this paper will look into the definition and the current issues of construction project management that been recently discussed in the construction circle and the overview of project success criteria. Recent scholarly studies on general project managers' EI have been investigated to find affiliation and similarity to the construction project managers' performance. This is the latest and most actively investigated issues by scholars and industry players to prove that EI on construction project managers has the impact and one of the most significant factors affecting construction project and project management success, will be outlined. This paper will also discuss and summarize the needs and benefits of developing a new EI model, especially for use in construction project management.

2.1 Construction Industry

One of the largest, sophisticated, and most people-intensive sectors is the construction industry. However, the construction industry remained one of the most criticized areas compared to others, particularly with regard to its employment practices (Gunathilaka, S., Tuuli, M. M., & Dainty, 2013), due to its loss to adopt progressive human resource (HR) practices and operate in a fragmented, project-based, highly subcontracting environment (Hanafi & Nawi, 2016a). This industry is a labor-intensive and low-tech sector; most often resulted in people being the most valuable resource deployed. Nevertheless, care for the workforce is somehow often neglected, and people treated as one of the secondary aspects of the construction process and a cost to be minimized with low priority (Ibrahim, Roy, Ahmed, & Imtiaz, 2010).

The construction industry is a place where different cultures, religions, nations, and educational backgrounds meet with one frequent target to achieve within a specified period. All of them are gathering for the ultimate goal of seeking livelihoods for their children and wives, whether they come with them or are left behind in their hometown. A diverse group of people with different backgrounds, expertise, and often different behavior and working styles are brought together for a short duration, but expected to establish a cooperative working relationship. These groups of people are expected to deliver projects that complexity is evermore increasing and under ever more stringent time and cost constraints (Ibrahim et al., 2010). This scenario is best to describe the nature of the construction industry's working environment. In addition to this industry is notoriously well-known for its 4D which stands for "Difficult", "Dangerous", "Dirty" and "Demeaning" working environment (Davis, 2017), besides the culture of high workload, time pressure, cost pressure, poor work-life balance with long working hours, low job satisfaction, job insecurity, and heavy responsibility primarily to the key personnel.

The construction industry is also amongst the sectors that facing the skills shortage the most in Malaysia, so the government was forced to import skilled and unskilled laborers from neighboring countries such as Bangladesh, Myanmar, Indonesia,

and Nepal (Mohd Rahim et al., 2016). The problem of import workers in terms of the number of employees and the lack of skills they have often encountered by most construction industries around the world and has resulted in cultural disturbance to the community and led to misunderstandings and difficulties in interacting with workers and project managers. It is, therefore, perceived that the high EI could contribute to closing the gaps in workplace communication. It can be said that this will be a factor that contributes to the success of a particular construction project.

However, the role of the construction industry in driving the economic growth of the country is undeniable. This industry contributes a significant portion of a country's economic growth by providing a wide range of job opportunities and feeding upstream and downstream sectors within its chain. No matter how the financial situation faces by a country, construction activities must go on to sustain the national GDP.

3. THE TREND IN THE MALAYSIAN CONSTRUCTION INDUSTRY

Building industries in Malaysia have played an essential role for centuries in contributing to economic activity by providing to the gross domestic product (GDP). Building industries have engaged a large proportion of the working population, accounting for about half of the capital generation, and are closely interrelated with other segments of the economy (Adnan, Hashim, Marhani, Asri, & Johari, 2013; Davis, 2017).

The Malaysian construction industry (MCI), in addition to the similar general situation mentioned above, has its own set of problems and a unique situation. Although MCI contributes only 4.2 percent of RM43.11 billion in 2014 to national GDP, RM46.63 billion or 4.5 percent of national GDP in 2015, and RM50.09 billion or 4.5 percent of national GDP in 2016 (Central Bank, 2017), it remains one of the largest and the most crucial job creation industries. It engaging more than 1.278 million people representing about 9.23% of the total workforce in the year 2014, 1.31 million people representing 9.31% of the entire workforce in the year 2015, and 1.262 million people representing

8.9% in 2016, according to the latest Bank Negara 2016 Annual Report (Central Bank, 2017). It has registered a remarkable growth rate at 11.6% in the year 2014 against the overall economic growth rate of 6.0% and continued to grow at 8.2% in the year 2015, and 7.4% in the year 2016 (Central Bank, 2017), as shown in table 1.

Projects awarded in the year 2015 was RM141 billion, and increased to RM229 billion in the year 2016, with 77.8% coming from the private sector, and over RM40.1 billion worth of overseas projects were secured on the same year (CIDB, 2017). In the Malaysia Budget 2018, RM46 billion has been allocated for Development Expenditure in the year 2018, which is expected to continue stimulating the construction industry directly and the supporting sectors indirectly (Ministry of Finance, 2017).

Table 1: An Annual Growth Rate of the Malaysian Construction Industry against Malaysian GDP Source: (CIDB, 2017)

Year	MCI	GDP
2013	10.6	4.7
2014	11.7	6.0
2015	8.2	5.0
2016	7.4	4.1

In the construction industry, it is more difficult to achieve or maintain strategic management to quantify their current achievement due to the different qualities and complexity of construction organizations (Elwakil et al., 2009; Yadollahi, Mirghasemi, Zin, & Singh, 2014). There is evidence that the construction industry in Malaysia perceived and implemented efficient construction project management in their organizations, but they did not document it and realize the impact on a construction project towards success. (Norizam & Malek, 2013).

In discussing the current trend in the construction industry, Malaysia is not left behind in the pursuit of empowering the construction industry in line with the development of the global construction industry. Some of the latest trends in the worldwide construction market also prevail in the local industry as well. In this case, CIDB has seen,

played a role so effective in championing and strengthening the Malaysian construction industry through its Construction Industry Transformation Program (CITP 2016 - 2020). Several construction terminologies, were several years ago rarely pronounce and awkward heard such as BIM and IBS have now become the norm in the daily talk of the players in the Malaysian construction industry. Some of the subject matter discussed specifically here, seen more focused on project management than of construction techniques, which will not be considered in-depth in this paper.

The Industrialized Building System (IBS) is practical approaches in the industry as a solution to the increasing demand for housing and other building products (Jabar, Ismail, Abdul Aziz, & Aziz, 2014; Mohd Nawi, Othman Mydin, Abdul Nifa, Osman, & Anuar, 2015). While the government has worked hard to encourage the use of IBS, there are some issues that delay the use of this method, such as lack of knowledge and training for contractors, a monopoly by IBS providers, and design consultants (Hanafi & Nawi, 2016). Furthermore, the proses of defining construction components as the qualification as IBS are still unclear, and there is still a lack of standardization for IBS components in the Malaysian construction industry.

At the same time, IBS is a modern construction method where components in construction such as columns, beam, staircase, and many more are built by the IBS provider, transport, and installed on the construction site. These activities are monitored by both the IBS provider and the main contractors. It can be seen that harmonious communication is a vital element in doing a successful project. This will require highly interpersonal communication skills between two parties' project managers to get a construction task complete not only in time but also according to the specification agreed. Project managers have to portray communication skills to ensure work progress in the other parties' construction site, advanced vertically. Technology or tools alone will not take an organization from start to finish, but performing various communication functions can have a significant impact in ensuring a project's success (Butler & Chinowsky, 2006). In construction, there is a real

need to examine how individuals, teams, and the project structure influence behavior to achieve realistically the improvements that are targeted within the industry.

On the other hand, Building Information Modelling (BIM) is a new technology that newly introduces and developed rapidly by all significant construction players around the world and used in the planning, design, construction, and facility management. BIM allows users to create a visual simulation of a project and provides a digital prototype of the building before a construction project begins. Indeed, this system is developed to integrate all elements of the construction process to meet project requirements. This fact is in contrast to the traditional CAD 2D, which consisting of graphic entities (i.e., triangle, square, and circles) that result in poor final result understanding, illustration, and documentation to the non-technical end-user (Harris, Che Ani, Haron, & Husairi Husain, 2014).

The value of BIM is that bridging the gap to make mistakes in the planning stages and reduces the requirement for work on and redundancies, which ends up in value savings. It conjointly provides the project team with easy retrieval of data, and at the same time, will increase coordination of documents besides guaranteeing the constructability of the design plan, which lends itself to improving the productivity level within the industry. Successful BIM implementation requires all parties to fully understand the need and expectations of the client from the completed project. From here, all parties involved in a various stage must possess basic requirements such as the determination to complete the project, reliable integration, collaboration, and coordination among numerous disciplines. This collaboration within not only the project team but also, the integration with the operations of a building, such design team, project managers as well as facility management (CIDB 2016).

High coordination and comprehensive and consistent information dissemination such as all upcoming construction activities, price of materials and machinery, the budget amount, and other essential construction metrics that could be used to generate robust results to guide in decision-making

within the construction industry needed to make this program a success.

Potentially, EIskill in project managers, together with technical skills, in conjunction with other assessment tools, could be used by construction organizations to significantly improve the selection criteria of construction managers and their construction teams (Love, Edwards, & Wood, 2011; Mersino, 2013). This factor is one of the motivations this research has to determine the influence of the EI in the selection of project managers in managing construction projects.

4. LEADING CAUSES OF PROJECT DELAY AND COST OVERRUN

However, the Malaysian Construction Industry (MCI) is always plagued by the severe problem of time and cost overrun. This problem apparently was observed more severe in Malaysia, where a study conducted by Shehu, Holt, Endut and Akintola Akintoye, (2015) revealed that 79.5% of the 308 projects investigated from the public sector experienced delay and 92% of the projects in the Central and Southern Regions of Peninsular Malaysia suffered time overrun, while 89% of the projects experienced cost overrun. The latest example of the project delayed and incurred cost overrun in Malaysia was the Kuala Lumpur International Airport 2 project (known as KLIA2). This mega project was delayed for almost 33 months due to several issues in project management. KLIA2 initially targeted to open in September 2011, but eventually opened in May 2014, and incurred a huge cost overrun from original RM1.6 billion to the final cost of RM4 billion (Moon, Abd-Karim, & Mohd Danuri, 2018).

Another well-known project was the Malaysia External Trade Development Corporation (MATRADE) building project that was delayed for nine years, and 70% cost overrun (Ain, Nasaruddin, & Rahman, 2016). These findings and examples have shown that time and cost overrun have been severe issues faced by the Malaysian Construction Industry and tarnishing the image of the profession, as no other businesses allow such a high rate of failure in terms of professional performance and delivery. This will acquire high

excesses, either waste taxpayers' money for delaying the public projects and increased the cost of development, which will be eventually borne by the consumers or purchasers for private projects. In their study, Sambasivan and Soon (2007) found out that the top 3 most important causes of delay perceived by project clients, consultants and contractors were: poor planning, substandard site management, and insufficient experience by contractors.

In the similar study by Abdul Rahman et al. (2012) on construction projects in Malaysia, reckoned that project management style, together with how contract being administrated, as well as proper site management, were amongst the top-ranking significant causes of project failure. This was echoed by a study carried out by Moon et al. (2018), which deduced that human skill and competencies factors such as technical competence, commitment, and communication among project stakeholders should be given more attention, and more time should be allocated for training on project management. These have further strengthened the findings of an earlier study conducted by Yong and Mustafa (2013) that human factors should be given more emphasis in an effort to heighten the success rate of future construction project implementation. Esa, Abdul Samad, and Alias (2014) also found that the competency mentioned above of a project manager is a critical element affecting project success, eventually, will indirectly improve organizational performance. It was also observed that successful construction organizations nowadays concentrate on making sure that their project managers obtain the core competencies necessary to succeed in performing their duty (Esa et al., 2014). Furthermore, these studies have also confirmed the earlier findings from the international studies that; human factor, especially pointing to the competencies of the most important persons in any projects, i.e. the project managers, is of paramount importance and a vital element in projects success (Mohd Isa, Abdul Hamid, & Leong, 2018; Mohd Rahim et al., 2016; Ramiah, Kuppusamy, & Gharleghi, 2018).

These high failure rates in both time and cost overrun problem faced by the MCI has severely tarnished the reputation of the industry, and have

caused very damaging impact to the confidence level of foreign investors toward Malaysia. The root cause of the problem, therefore, must be investigated and subsequently corrected. To face the challenges of globalization, MCI must improve to achieve higher project success rate, compete through constant improvement in productivity, with more value-added operations & enhanced quality (Hickson, 2014). A higher project success rate helps to improve organizational performance as well as national competitiveness (Wagner, 2016).

Construction project management demands a thorough understanding of the construction phase and design process and efficient construction method as well as knowledge of modern business management. The construction project has a finite time frame and budget to observe and a strict outcome-oriented planning process for project completion with particular objectives predetermined (Project Management Institute, 2008). Every construction project has its own' specifications in terms of the size, scope, technicality, and location, but overall, project management has much a universal rule with another project type.

5. PROJECT MANAGEMENT

By 1990s, the corporation has started to realized and understand the importance of implementing the project management approach in their project was a necessity, not a choice to stay competitive in the market (Prabhakar, 2009; Tunner, 1993). The question now is not when and how to adopt a project management approach, but rather how fast the procedure could be implemented? PMI has outlines project management as the art and knowledge in influencing human, managing, and coordinating the resources throughout the project life cycle by consuming several advanced management skills and techniques to accomplish prearranged objectives. This comprised of the scope of work, allowable budget, duration to complete, and acceptable quality and end-user satisfaction. It is the application of knowledge, skill, tool, and technique to strategies the relevant tasks to meet the project requirement.

Project management is a unique, comprehensive,

exciting, and dynamic undertaking (Kerzner, 2013). It requires understanding aspects of management science in constructing such as adhering schedule, assigning resources, monitoring, and controlling project deliveries. Project management is a new and challenging skill of blending between hard science and soft science and the art of management (Pinto, 2012). To be successful in project management, a clear justification and definition of the project must first be clearly understood by the team layer and proceed according to a detailed strategic plan and deliver demonstrable outcomes.

The project management methodology is to a certain extent accepted in modern management communal. It is essential in managing resources to produces fruitful objective and efficient results by the technique of reform management team and implementing the exclusive and up-to-date management philosophy, with the determination of getting greater control and use of comprehensive resources available (Kerzner, 2013). It has progressed from a general management philosophy limited to a restricted functional area to have to an important project management system affecting every department and project unit of the construction company (Munns & Bjeirmi, 1996; Wagner, 2016). Project management has progressed into a phase where it becomes an essentials process in control where companies exercised business reengineering seriously rather than merely a project management process. More and more companies are now apprehending the importance of project management as part of the business process and become mandatory for survival in the industry (Kerzner, 2013).

The Project Management Institute (PMI) defined project management as the ability to collect as many talents as possible together and make use of current application of knowledge and experience, various human and technical know-how, along with appropriate tools and techniques to undertake series of activities to meet project requirements. This can be proficient through the application and integration of the project management practices of initiating, scheduling, implementing, monitoring and controlling, and closing. PMI also noted that managing a project includes identifying project requirements, gathering team players and resources,

establishing clear and achievable objectives, balancing the competing demands for quality, scope, time and cost, and adapting the specification, plans, and approach to different concerns and expectations of the various stakeholders (PMI, 2004).

The main concern of the project management field is how to translate the success of the construction project into literature. For some quarters, it is a success when a project has been completed over time, cost, and quality that has been agreed upon; on the other hand, the success of a project goes beyond that. This contributes to two main tricks for this concern about how success is evaluated (success criteria), and factors contributing to project success (success factor). On the one hand, the efficiency of the project manager itself is a successful project delivery factor and another; project managers need to have competence in the field that has the most impact on successful results, either technical skills or individual skills (Crawford, 2002). Human resource management and corresponding soft skills or capabilities are essential for successful project management. One of the skill steps that has been used in recent years is the concept of emotional intelligence (EI) (Barry, Plessis, & du Plessis, 2007). Project managers have to shoulder a massive responsibility in ensuring the project's success and completed according to planning within the period, budgeted cost, and acceptable quality.

The project manager, therefore, plays an important role and walk between the fences of these several organizations. The term "interface management" are consumed frequently for this function, which some parties describe it as managing the relationship within the corporation. An effective project manager, as an individual must have extremely communication skill, highly interpersonal skill, management skills as well as technical know-how. Nevertheless, becoming a construction project manager entails learning another field such as psychology, human behavior, organizational functioning, interpersonal interactions, and communications effectiveness (Kerzner, 2013).

6. EMOTIONAL INTELLIGENCE

The subject of "Emotional Intelligence" (EI) is not a new thought in the academic world. This subject has its ancestries in the twentieth century when Edward Thorndike is a social scientist who works on Social Intelligence, concentrates on human competent social behavior. Later In 1935, Edgar Doll designed the first tool for measuring smart social response in small children. Thorndike and Doll's works inspired David Wechsler to works further in this matter and include two subscales, "Understanding" and "Picture Settings" in his test of Cognitive Intelligence. This early conclusion has emerged as a foundation for definitions and arguments on EI to form a solid foundation for EI's emergence and development. From here, EI has been getting a lot of attention since then and has become the topic of discussion for members of the social scientist across the globe. From 1990 research on EI has thrived to some discoveries, which led to the development of different models and measures of EI (Laura Wilcox, 2017). The influence of EI in numerous parts of our daily life has been researched, and the result proved empirically by multiple research efforts that publish in the various journal. Nowadays, EI has become an essential mantra for present-day organizations and become the favorite subject for social scientists. This article is an effort to find a way to consolidate Evolution, Conceptualization, and Measurement of EI to the project managers and to identify its most appropriate measure and apply to the construction industry.

As outlined by psychologist John Mayer (1990) at the University of New Hampshire and restated again in Psychological Inquiry journal (J. D. Mayer, Salovey, Caruso, & Caruso, 2004), EI is "the ability to accurately perceive your own and others' emotions, to understand the signals that emotions send about relationships, and to manage your own and others' emotions". EI is one way to approach, recognize, understand, and choose ways to think, feel, and act. It forms a method of interaction with others and in the meanwhile, understands the situation itself. It defines how and what conditions have been studied, emulated, and it allows a priority to be set, determining daily action and acting wisely on the environment accordingly (Bradberry, Travis, 2016; Mayer, J. D., Salovey, P., Caruso, D. R., & Sitarenios, Mayer, Salovey, Caruso, & Sitarenios,

2001; J. Mayer, Salovey, & Caruso, 2004).

Emotional intelligence predicts people's ability to regulate them, manage other people, and achieve success. It is responsible for as much as 80% of the "success" in our lives (Bar-on, 2006). Salovey and Mayer, (1990) define EI as the subset of social intelligence that implicates human capability to observe one's own and others' feelings and emotions, to differentiate amongst them and to apply this information as a guide to one's thinking and action, adapt the situation and followed by activities.

Previous research shows a link between EI and career success. Not everyone is born with it, but unlike IQ, EI can be acquired and improved with practice. Scholars have widely recognized EI as a critical feature of effective leaders, who classify "emotional intelligence" as one of their six primary leadership schools. According to a report in the World Economic Forum in Davos Switzerland in 2016, EI is listed among the top 10 skills that will be in demand by all employers by 2020 (Cadie, 2016). Besides, there is a strong relationship between emotional intelligence and different leadership styles, which can produce a project outcome. EI is not only adopted as an element in the leadership style that the level of the emotional intelligence rate also plays a role in the leadership style of a successful leader. As a critical factor of leadership, a reduced level of emotional intelligence can directly contribute to poor leadership. Fortunately, this characteristic of leadership can be learned (Chopra & Kanji, 2010; Sadri, 2012).

6.1.1 Measures of EI

Social scientist has created a variety of instrument to gauge the EI over the previous decade, in the various organization is available in the market. Because of deep interest in the importance of measuring a person's EI level, some measurement methods are created. This method of measurement is continually changing from time to time and is designed according to the tendency of the researcher to research. The Consortium for Research on Emotional Intelligence in Organizations (CREIO) has listed a few

instruments, which are developed over years of researches on human EI, supported by a subsequent body of research. Listed measures are:

1. Bar-On Emotional Intelligence Quotient (EQ-i)
2. Emotional Competency Inventory 360 (ECI 360)
3. Genos EI Assessment Scale (GENOS EI)
4. Mayer Salovey Caruso Emotional Intelligence Test (MSCEIT)
5. Schutte Self-Report Inventory (SSRI)
6. Trait Emotional Intelligence Questionnaire (TEIQue)
7. Wong's Emotional Intelligence Scale

In social science that studies the method of measuring EI, the measurement method has evolved rapidly. From time to time, they regularly update their EI test methods according to the new environment and the latest academic findings. Users who want to use this test method should make a careful choice based on their suitability and their working environment so that the results will give an accurate picture and can apply to the industry. Different industries need different assessment methods. The attention of researchers was drawn to the comparison of measures of EI, in search of the best and well-suited instrument to use on construction project managers.

7. DISCUSSION

7.1 Contributions

Given that there are not many previous studies conducted on the emotional intelligence of construction project managers in Malaysia, this study is expected to be able to contribute both; knowledge in construction project management as well as the practical implications concerning EI.

7.2 Knowledge contribution

This study will extend the understanding and empowerment of existing project management bodies, particularly on the competence of Malaysia's construction project managers, which have so far been left untapped. The project

manager's EI that has been identified as one of the most critical success factors in successful project management has been studied extensively, especially in most developed countries, but has not been intensively studied in our country.

This subject is crucial and needs to be emphasized in strengthening knowledge of project management. By identifying the EI of project managers who are most needed to successfully implement projects in Malaysia, government bodies such as CIDB can build a module of their coaching emphasis on the background of EI. The results of this study will be able to develop a model for EI as a valuation for Malaysian construction project managers. It is critical that the construction industry strengthened and provide qualified project managers to meet the industry's real needs.

7.3 Practical contribution

Higher project failure rates in terms of time and cost in the Malaysian construction industry have resulted in many adverse effects including high wastage, more capital investment that should be, wastage of public funds, delayed planning as late in property ownership and infrastructure use, polluting the reputation of construction practitioners so they have to drag the court. These factors are all terrible for the industry, and it shakes the confidence of foreign investors to invest in Malaysia. This point is not something that we should feel comfortable, but it must be resolved to find solutions to the fact that Malaysia's construction industry is trusted and respected not only locally but also around the world.

7.4 Future research

The results of this study will be able to develop a model for EI as valuation measures for hiring Malaysian construction project managers, to make a more detailed measurement and valuation mechanism are designed with significant industry players, concerning local scenarios and meet industry requirements. It will be used as a guideline and standard for training, evaluating, validating and recruiting qualified project managers, as part of our efforts to ensure we have the best professionals who manage and run not only local projects, but

internationally as well. This effort is in line with the aspirations of the Malaysian government in strengthening the local construction industry and seeking international opportunities in promoting a competitive workforce, which also suited to face a challenging future, to solve the biggest problem that hit the industry.

8. CONCLUSION

The process of appraisal and certification of any body of knowledge or standards is indispensable in the creation and recognition of the professional profession. In addition to the knowledge and application of related project management tools and techniques (PMTT), soft skills or interpersonal skills, leadership, and contextual competence are also crucial in ensuring the success of the project. Generally, the common goal of all project management standards is set to achieve the success of the project. However, it relies heavily on a set of different competencies; technical, contextual, and emotional competencies, PMBOK emphasizes the repetition of processes, and draws on project portfolio renewal and configuration, while APM puts heavy emphasis on business case management, design and technology management, and interpersonal skills. All these candidates need to cautiously succeed the precise balance for practical projects.

Formulating the standard of competency assessment is not an easy task; one should ensure that the rules are tested honestly and in line with the educational system before being considered as a solution for the industry. Thus, any standards developed must take into account the relevance of time, place, cultural aspects, weaknesses, and construction industry requirements. Therefore, performance-based efficiency frameworks formulated according to construction industry requirements, together with the elements of EI can address the unique weaknesses and include aspects of sustainability in project management to become future evidence to be developed.

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