West Africa Built Environment Research (WABER) Conference
10th Anniversary Conference, 5-7 August 2019, Accra, Ghana
Proceedings Edited by Laryea, S. and Essah, E.
ISBN: 978 – 9988 – 2– 6010 – 1
DOI: https://doi.org/10.33796/waberconference2019.58

PREMATURE PROJECT CLOSURE: THE ROLE OF CONSULTANTS AND CONTRACTORS

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All projects regardless of complexity, have a documented start and end date. However, some projects may close prematurely because the predefined construction performance parameters cannot be achieved within the defined schedule. Construction projects can close prematurely as a result of negligence by one or more project stakeholders. The study, therefore, examines the part played by contractors and consultants that leads to premature project closure. In conducting this research, primary data was collected through a questionnaire survey of the construction consultants and contractors within Gauteng Province of South Africa. Collected data were analysed by ranking the examined factors using their mean item scores. Findings from the study revealed that inefficient management, improper planning and an incoherent relationship between various consultants, subcontractors and main contractor are the major factors that trigger premature project closure. It was therefore concluded that construction projects must be meticulously planned and proficiently managed by competent professionals in order to reduce and ultimately eliminate the risk of closing the project prematurely.

Keywords: construction consultants, construction contractors, construction projects, premature project closure; project life cycle

INTRODUCTION AND BACKGROUND TO THE STUDY

Every project is required to achieve its desired end product by carrying out a sequence of interrelated activities (Dinsmore and Cabanis-Brewin, 2006). According to Elbeltagi (2009), a typical project can be classified into distinct sequential phases which are; preconstruction phase; procurement phase; construction phase and; the closeout phase, these four phases represents the life cycle of a project. Projects are set up for specific purposes which are to be achieved within a stipulated period, but not all projects achieve it set objective within the set time. The project closure phase is the final stage of the project life-cycle which is

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Olushola Akinshipe, Clinton Aigbavboa, Wellington Didibhuku Thwala, Mutshaeni Madidimalo (2019) Premature project closure: the role of consultants and contractors In: Laryea, S. and Essah, E. (Eds) Procs West Africa Built Environment Research (WABER) Conference, 5-7 August 2019, Accra, Ghana, 808-817

supposed to only occur when project objectives have been accomplished, however, projects can close prematurely during any phase of a project life-cycle. Usually, when project objectives cannot be met or there is no longer need for the project, the project will be terminated prematurely. Premature project closure can be instigated by a variety of reasons as classified by Khodeir and Mohamed (2015) into internal and external factors. The internal factors include financial; design; contractual; construction; personal and; operational factors while the external factors include economic; political; legal; public and; environmental factors. Similarly, Doraisamy, Akasah and Yusun (2014) also classified reasons for premature project closure into six distinct factors which include; client related; contractor related; consultants related; contractual relationship; Health and safety and; external factors. However, Duy Nguyen, Ogunlana and Thi Xuan Lan (2004) forwarded that some of the major success influencing factor of a construction project includes the competencies; behaviour; personality; expertise and leadership styles of the project leaders who are the contractors and consultants involved in a project. Hence, the success or failure of a construction project can be easily decided by how the contractors and consultants handle the project. Although, numerous studies have been undertaken on project failure, however, very few have examined premature project closure as it relates to the South African construction industry. This study, therefore, examined the part played by contractors and consultants in premature project closure within the South African construction industry. This is with a view to explicating the duties of contractors and consultants that could easily lead to premature project closure.

THEORETICAL OVERVIEW

The project closure phase is the final stage of a project life-cycle. All phases of a project life cycle are supposed to be well planned and exquisitely executed. However, certain circumstances can lead to unplanned project closure. According to Larson and Gray (2011), project closures can be classified as normal, premature, perpetual, failed project and changed priority. Essentially, a project is said to be prematurely closed when the predetermined project objectives cannot be met or there is no longer need for the project. Havila, Medlin and Salmi (2013) stated that not all projects begin and end well. Some projects will have to be terminated before goals and objectives have been achieved. Premature project closure can take place at any stage of a project life-cycle and can be caused by various reasons.

In recent times, the performance of project leaders and their teams has become a global issue both in research and in the industry (Jørgensen, 2018). Previous studies have emphasized that the success or failure of a construction project can be attributed to the performance; personalities; skills; and style of the project leaders. These attributes of construction contractors, subcontractors and consultants greatly impact the outcome of a project, leading to either project success or failure which can prompt premature project closure (Duy Nguyen, Ogunlana and Thi Xuan Lan, 2004). Ahadzie et al. (2008) classified performance of construction contractors and by extension subcontractors and consultants into six areas of competences which includes; job knowledge; job dedication; task proficiency; experience; cognitive ability; and interpersonal facilitation. Similarly, Meng and Boyd (2017) established five areas of focus for research on contractors and consultants in the construction industry. The classification includes; Competency (Cheng et al., 2005);

selection (Mohammadi et al., 2014); leadership style (Bossink, 2004); personality and emotional intelligence (Zhang and Fan, 2013); and role of project leaders (Sommerville et al., 2010).

To maintain a continuous flow of work, contractors and consultants must put together interdisciplinary teams to ensure that individual skills are collectively harnessed in order to make best possible decisions within a reasonable time (Janis, 1989). However, every project team usually encounter divergence of ideas in the bid to achieve its objectives and solve problems encountered along the way. These disagreements and conflicts must be handled delicately, ideas must be tested, varieties of assumptions and perspectives must be discussed to make better decisions that will ensure project success (Quinn, 1990). Members of a construction team are jointly liable for the completion of the particular task assigned to the team. Individual construction teams are usually headed by subcontractors or consultants who are responsible for the success or failure of assigned task and reports to the project contractor who is ultimately in charge of the whole project and all underlying work packages. This infers that subcontractors and consultants are directly responsible for meeting individual project objectives within specified time while the contractor is responsible for the synchronization of individual objectives to achieve overall project goals in a timeous manner (Aven, 2012; Katzenbach and Smith,1993;). Gilchrist, Burton-Jones and Green (2018) offered that One of the major constraints to construction projects success is the misalignment of project goals and the process by which these goals are to be accomplished by the project leaders. The contractor must ensure individual teams and objectives are synchronized effectively, and that everyone involved in the project is in conformity with the overall objectives. Harmonization of individual project teams and its members usually ensures smooth and uninterrupted progress of the project through all the phases of the project (Jørgensen 2018).

Teamwork is very important as individuals in a team should share a common goal and purpose in the project that has brought them together. Individual team member must maintain a certain level of interdependency to ensure project success. Teamwork can, however, lead to premature project closure if team members are not able to put aside their cultural differences and work together. Possible disrespect and mistrust may lead to a project's objectives not being met, thus closing a project prematurely (Tarricone and Luca, 2002). Effective communication among project teams and individual members allows efficient synchronization of tasks, thereby reducing the risk of conflicts and disintegration (Kennedy et al., 2011; Reed and Knight, 2010). Similarly, by the virtue of the size of construction projects, they usually involve a huge number of staffs and numerous collaborations among the different project teams and team members which often leads to conflicts. These conflicts often arise as a result of poor communication and varying perspectives on how to achieve project objectives (Wu, 2013; Wu et al., 2017).

The dynamic nature of construction invests the overall responsibility of the project in the project coordinator which is usually the contractor. This does not necessarily mean that the contractor could or should perform every task linked with the project. It means that he/she is accountable for the outcome of the project (Liphadzi, Aigbavboa and Thwala, 2015). Project coordinators must ensure that they do not engage in fraudulent activities so as to reduce risks of Premature project

closure. Fraud can arise as a result of evasion of progress billings as well as manipulation of project records which can disrupt cash flow among contractors, subcontractors and suppliers and ultimately interrupt the smooth progress of the project. Furthermore, Fraud can also be in form of wasteful spending that could lead to the abandonment of construction projects (Arni, Nurul and Tan, 2013). Liphadzi, Aigbavboa and Thwala (2015) emphasized that construction project leaders are ultimately accountable for their project team performance as well as the achievement of desired project objectives. Consequently, Project teams tend to perform better when they work under contractors with reputable skills and efficient management styles. Sebestyen (2017) stipulated that during project execution, it is important for project contractors to note that too much deviation from the original designed plan can drastically increase the risk of project failure since the success of a project is usually attributed to good planning.

The theoretical overview has reviewed variety of studies on project life cycle and premature project closure. It can be deduced that previous studies have been carried out on how contractors and consultants can contribute to success and failure of construction projects. The major factors highlighted and discussed in the review include; labour selection and management; conflict management; tasks management; project management style; design synchronisation and accurate implementation; work progress interruptions; financial management and fraudulent practices; teamwork and interpersonal relationship; job knowledge; job dedication; task proficiency; experience; and competence.

The review exposed that previous studies have explored how contractors and consultants can contribute to success and failure of construction projects, however, little attention has been paid to premature construction project closure in the South African context. The current study seeks to explore how contractors and consultants can contribute to premature project closure from the perspective of the South African construction industry.

RESEARCH METHOD

The study is descriptive in nature as the study seeks to examine the part played by contractors and consultants in premature project closure in the South African construction industry. Kothari (2004) pointed out that the quantitative method is used to find out people's opinion, attitude and behaviours. Hence the quantitative research model was used for the study. This study was carried out in the Gauteng Province of South Africa and used construction professionals including Architects, Civil Engineers, Quantity surveyors, project managers, contracts managers and construction project managers as the source of primary data. Gauteng province was deemed suitable for the study because it houses two megacities in South Africa (Johannesburg and Pretoria). It is also the seat of the executive capital of the country. As both cities are constantly developing megacities, numerous construction projects are ongoing which makes construction professionals in the province suitable for the study.

A close-ended questionnaire was designed and distributed to relevant professionals in the construction industry with the aim of establishing the role of contractors, subcontractors and consultants in premature project closure in construction projects. This was achieved by requesting construction professionals

within the study area to rate the individual attributes of contractors and consultants on how they could easily lead to premature project closure. One hundred and twenty questionnaires were distributed, but only eighty-two were received back and deemed usable which formed the bases of data analysis for the study. In order to determine the level of importance of each rated factor, the five-point scale from the questionnaire was converted into Mean Item Scores (MIS) for each of the rated factors.

The collated data were tested to check the reliability with the aid of Cronbach's alpha test. The test returned values of 0.939 and 0.949 respectively for the contractors and consultants related factors measured in this study. This indicates that the collected set of data is reliable since Cronbach's alpha test scores a set of collated data between 0 and 1, where 1 means the data has maximum consistency (Akinshipe and Aigbavboa, 2018), hence the data were deemed very reliable.

The study was limited by inadequate previous studies on premature project closure in the construction industry. This was managed by using literature on construction project failures and life cycle of construction projects in relations to premature project closure. Furthermore, due to cost implications and time frame of carrying out the research, Only Gauteng province was covered by the study.

FINDINGS

Background data collected revealed that 47.56% of the respondents are Civil Engineers, 21.95% are Construction Project Managers, 12.20% are Quantity Surveyors, 9.76% are Architects, 6.10% are Contracts Managers and 2.44% are Project Managers. Distribution of the respondents based on the length of work experience in the construction industry shows that 64.63% has 1-5 years of experience, 30.49% has 6-10 years of experience while 4.88% has above 10 years of experience in the construction industry. 61.11% of the respondents worked in the private sector, 32.94% of the respondents worked for both private and public sectors while 6.15% of the respondents worked in the public sector.

Table 1: Contractor related factors which may cause premature project closure

Contractor-related factors	Mean Item Score	Std. deviation	Rank
Management of labour	3.83	0.625	1st
Relationship between main and subcontractors	3.76	0.779	2nd
Conflict management skills	3.74	0.814	3rd
Site management	3.70	0.781	4th
Level of experience	3.70	0.812	4th
Management of subcontractors	3.65	0.807	6th
Adequacy of planning	3.65	0.912	6th
Construction methods used	3.60	0.768	8th
Payment to subcontractors	3.49	0.892	9th
Management of finances	3.39	1.003	10th

Table 1 ranks contractor related factors that contributes to premature project closure. From the table, it can be deduced that the dominant factors initiated by contractors which are most likely to cause premature project closure includes; Management of labour; Relationship between main contractors and sub-contractors and; Conflict management skills with mean item scores of 3.83; 3.76

and; 3.74 respectively. Closely next to these three are Site management and Level of experience with mean item scores of 3.70 each.

Table 2: Consultant related factors which may cause premature project closure

Consultant-related factors	Mean Item Score	Std. deviation	Rank
Conflict management skills	3.80	0.728	1st
Relationship between consultants	3.79	0.733	2nd
Consultants level of experience	3.76	0.779	3rd
Support from the client	3.76	0.810	3th
Design changes	3.74	0.750	5th
Contractual changes	3.74	0.767	5th
Effective contract management	3.73	0.754	7th
Site inspections	3.73	0.861	8th
Accuracy of designs	3.67	0.861	9th
Effective project planning	3.59	0.666	10th
Financial management	3.40	0.901	11th

Table 2 ranks consultants related factors that contribute to premature project closure. From the table, it can be deduced that Conflict management skills and Relationship between consultants are topping the table with mean item scores of 3.80 and 3.79 respectively, closely followed by consultants' Level of experience and Support from the client with mean item scores of 3.76 each.

DISCUSSION

Miles (1996) agrees with the findings of the current study by emphasizing how labour should be taken seriously as it is often overlooked by main contractors, leaving subcontractors and consultants to do all the work with no coordination. Buildrite construction (2016) also agrees with these results as it forwarded that labour and relationship between contractors can make or break a project. Furthermore, sub-contracting and external consulting are rife in the construction industry, but this does not mean main contractors should ignore labour and let subcontractors and consultants do all the work on their own.

Verma (1998) laid emphasis on the importance of conflict management skills when working in teams consisting of individuals from different societies, cultures and fields of expertise. To support that, Doraisamy, Akasah and Yusun (2014) submitted that poor conflict management skills, mismanagement of subcontractors and lack of motivated site workers are part of the major reasons why premature project closure occurs in construction projects.

Furthermore, Abbasi, et al. (2014) submitted that level of experience, adequacy of planning and management of finances have greater influence on premature project closure. Doraisamy, Akasah and Yusun (2014) also affirmed that consultants' level of experience may contribute greatly to premature project closure in construction projects. Sarda and Dewalker (2016) also supported the findings of this study as it highlighted the importance of having experienced consultants as a means of ensuring successful completion of a project. However, Masurkar and Attar (2014) emphasized the importance of conducting site inspections, just to make sure everything is done according to specifications, stating how it is one of the most important activities to perform during a construction project.

The study revealed that poor management of any aspect of a project will likely cause the project to fail, thereby leading to premature project closure. An aspect of a project that could be mismanaged by the contractors and consultants includes finance; labour; conflict; site; contracts; relationship among different subcontractors and consultants; as well as modification of project designs.

Labour management is a very important aspect of construction project management. And since the overall responsibility of the project falls on the contractor, he/she is ultimately responsible for the management of all labour involved with the project. As observed by Wu, et al. (2017), success in construction projects largely depends on engaging a huge number of specialized project teams who are experts in handling individual task. Managing and coordinating a huge number of human resources can be a herculean task, but project contractors must devise necessary techniques to efficiently operate all human resources.

Relationship and conflict among project teams, consultants and subcontractors are to be managed by the contractor. Furthermore, the relationship or lack of relationship between the main contractor, subcontractors and consultants may lead to communication barriers, thus causing instructions to not be conveyed correctly. When information is not conveyed properly among construction team members and project leaders, important elements that are supposed to influence project decisions are misplaced or misinterpreted. This will, in turn, increase the risk of project failure that will ultimately lead to premature project closure.

Conclusively, the empirical and theoretical findings of this study revealed that poor management of the individual aspect of a project will likely lead to premature project closure. Therefore, contractors and consultants must ensure that the site; finance; labour; conflict; relationships; contracts; and modification of project designs are efficiently organized and managed all through the project life cycle to ensure successful completion.

CONCLUSION

Every construction project must have a definite closing point. Whether the project is successful or not largely depends on the stage the project is closed. This study was aimed at exploring the part played by contractors and consultants in premature project closure within the South African construction industry. The empirical and theoretical findings of this study revealed that poor management of the individual aspect of a project will likely lead to premature project closure. It is therefore recommended that contractors and consultants engaged in a particular project must ensure that the site; finance; labour; conflict; relationships; contracts; and modification of project designs are efficiently organized and managed all through the project life cycle to ensure successful completion. All aspects of project planning and management should not be taken for granted as they all interrelate to achieve the project objectives. Little negligence can lead to not achieving the stipulated project goals which will cause the project to close prematurely.

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