

A Review on Investigation into the Causes of Delays and Cost Overruns Construction Project in Afghanistan

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Abstract - It is widely accepted that a project is successful when it is finished on time but unfortunately, due to many reasons, in Afghanistan a large number of construction projects fail to meet their original contact time. Construction delays are the most serious problems which send bad signals to foreign investors thereby slowing down the national development. A comprehensive survey; therefore, on time performance of various construction projects was carried out to identify the critical factors that cause construction delays in Afghanistan. As in many developing economies, productivity is an issue of particular importance in Afghanistan. This is considered as one of the strategic goals of the Afghanistan National Development Strategy (ANDS) to carry out the country's development cycle further than the post-conflict situation. From in-depth literature studies, eighty three causes of delay were identified. Questionnaires were then developed and sent to 60 carefully selected construction industry stakeholders including: clients, contractors, and consultants in Afghanistan. The findings show that the main critical factors that cause construction delays in Afghanistan are: security, corruption, poor qualification of the contractor's technical staff, payment delays by clients, and poor site management and supervision by contractor. This paper also explores and provides some recommendations to reduce the impact of delays on construction projects in Afghanistan.

Key Words: Afghanistan, Cost Overruns, Construction, Project delays.

1. INTRODUCTION

Delay is a major problem in construction industry. Trauner et al. (2009) defines that construction delays make something happen later than expected, to cause something to be performed later than planned, or to not act timely. Delay can affect any activity of work in a schedule and results in many problems between parties. According to Al-Khalil and Al-Ghafly (1999) delays can adversely impact on project stakeholders, such as clients, contractors and designers. To the client, delay perceives loss of revenue due to lack of rentable space or lack of production facilities. On the other hand, delay can be meant to the contractor as higher overhead costs, higher material and labour costs because the project takes longer than it was planned. Having finished the projects on time (Assaf and Al-Hejji, 2006) can be marked as an indicator of efficiency, but the construction activities involves of many unpredictable factors and

variables arisen from various sources. These resources may include environmental circumstances, availability of resources, stakeholders' performance and contractual relations. Nevertheless, Trauner et al. (2009) states that it is hardly ever occur that a construction project is finished within the planned time. The factors that influence cost during the conception and design phases within the construction process have been widely investigated, primarily based on the contractor's cost-estimating practices (Akintoye 2000; Cheung et al. 2008). Hicks (1992) revealed that regardless of management competence and the financial strength of the contractor, accurate cost estimation at an early stage is the key to avoid cost overrun in projects (Hicks 1992). Cost estimation is a technical process of predicting expenditure, and success depends on accurate integration of project information, resources, and control over project implementation (Baloi and Price 2003). Factors influencing cost performance based on initial estimates have been widely published and primarily concern project complexity technology requirements, vagueness in scope, and the project team requirements (Mansfield et al. 1994; Akintoye 2000; Frimpong et al. 2003; Love et al. 2005). Empirical evidence suggests that contractors' efficiency in the estimating process and appropriate tender pricing depicts the cost performance in construction projects (Skitmore and Wilcock 1994). Therefore, contractors' ability in using sophisticated methods and their rationalizations at the tender development stage are considered crucial in achieving cost success in most projects (Green 1989). In many instances, all of these factors identified at an early stage of the construction process are described as uncontrollable risks (Akinici and Fischer 1998). Appropriate consideration of these uncontrollable risks during the initial stage of the estimating phase significantly increases the chance of minimizing any mistakes over the course of the construction phase. However, some of the key questions regarding responsibility, deliberation, and management of such risks in the construction supply chain remain unclear in the discipline domain. Identification of the cost-related risks, underlying drivers, and impediments for effective management must be assessed in the contexts of three key stakeholders: clients, contractors, an consultants. Construction industry forms a substantial portion of any nations economic output. Improving and developing of methods and techniques to increase the economic output of construction industry are significant and important for any nation. Therefore, construction productivity improvement is

one of the key focus areas of many countries and governments across the world. The characteristics of the construction industry are cost overruns and repeated delays, which are potentially more serious in developing countries than in developed countries (Mansfield et al., 1994; Altaf, 1979). Similar to other developing countries such as Indonesia (Kaming et al., 1997), Iran (Zakeri et al., 1996), Malaysia (Yong, 1987), Nigeria (Aniekwu and Okpala, 1988; Mansfield et al., 1994) and Saudi Arabia (Assaf et al., 1995), the construction industry in Afghanistan is also experiencing productivity problems. The statistics for construction industry in Afghanistan illustrates that the industry has a share of 25 percent in GDP and ranked third in the country economy. The construction industry share in GDP is reported 9.2 percent between 2008/09 and it has been growing at a rate of 10 percent between 2007/08 and 2008/09 (AISA, 2008). Despite the fact that the construction industry represents a substantial portion of Afghanistan economy, the performance and improvement in construction productivity over the past years has been underestimated. There are undue cost overruns, delays and loose of productivity associated with the delivery of major infrastructure projects such as power plants and roads. According to SIGAR (2010) the main concerns of construction activities in Afghanistan is lack of security, lack of sustainability, and lack of management capability in private and public sectors. Inadequate improvement in construction productivity leads to the increase of construction cost, consequently, cause to unfavorable social consequences and declining work for the construction industry. Despite of the vital role of construction activities in the country, little researches have been carried out on construction productivity, and management techniques and productivity improvement rarely discussed in academia. Going by the example of other countries it can be assumed that any effort directed to improving productivity will greatly enhance the country's chances of realizing its developments goals. This research, therefore, aims to identify factors influencing construction productivity in Afghanistan. The rationale of the paper is that productivity cannot be improved without identifying critical weaknesses in the existing practice. The research intends to create the foundation for further study of construction productivity measurement and improvement in Afghanistan, which aims to lead to overall productivity improvement.

1.1 Scope of Paper

Delays and Cost Overruns of construction projects is a major concern now a day in Afghanistan. Finding the reason of delay and cost overrun of the construction projects and find a best solution for the delays and cost overruns for the construction projects in Afghanistan.

2. Literature Review

(Dr. Amanullah Faqiri and Dr. Adil Rasool. 2018) This research deals with the study of construction projects risk

management practices in Afghanistan building construction projects. The purpose of this research project was to evaluate the effects of risk in construction projects in Afghanistan in consideration of different phase in project life cycle. Risk management is recognized as an important exercise in order to achieve better performance of construction projects. It is concluded that clients, builders and government bodies must work cooperatively from the feasibility stage onwards to address potential risk in time, and contractors and subcontractors with robust construction and management knowledge must be employed early to make sound preparation for delivery out efficient and quality construction program. [1]

(Ghulam Abbas Niazi and Noel Painting. 2017) It is generally acknowledged that one criterion for judging the success of a construction project is whether it is completed within budget. Due to various factors, this is often more of a challenge in developing countries where budget problems are just one factor in often poor project performance. In Afghanistan, construction cost overruns are the most substantial problem (facing all parties to a project; suppliers, subcontractors, main contractors and clients). In Afghanistan, project cost overrun is a significant challenge for construction industry. Through in-depth literature review sixty nine causes of construction cost overrun was identified. A structured questionnaire survey was used to collect data in Afghanistan. A total of 75 sets of questionnaires were distributed to selected clients, contractors and consultants, with 51 valid returns received and analyzed. [2]

(Ghulam Abbas Niazi and Kassim Gidado. 2018) Delay in progress payment by client is a critical cause of delays, and as a result many projects are behind schedule in Afghanistan. There is a serious need for the clients to devise an explicit mechanism to speed up the payment process. The qualified consultants and quantity surveyors, who are often responsible for issuing the calculating and payment certificates, should be employed to ease the process. On the other hand, Bureaucracy in government agencies also suspends the payment progress. Therefore, it is advised that the government should find a way how to narrow down the process. Ineffective planning and scheduling has also a major impact on construction delays. Effective planning and programming of a project is a must to secure early completion of the project. The planning process should be developed from start of the project until completion of a project. The planning stages should be devised very carefully, starting from strategic, tactical and operational planning. [3] (Mohammad Numan Aloko. 2018) In this study, the risk assessment process has been implemented for the potential risks that the construction industry confronts. The probable uncertainties of cost overrun and delays in building construction in Afghanistan were reviewed through the literature assessment in which 21 most critical risks were identified. After the analysis and evaluation of identified risks using probability matrix method, it was found that 20 risks

fell into the unacceptable and unwanted category. These risks need mitigation measures by executing risk treatment policy to register, monitor and review the uncertain events. The conclusions call for necessary awareness in developing the Afghanistan construction industry's capability and performance to execute risk management in their projects for mitigating against further project failure. [4]

(Nurafzal Qaytmas. 2020) In this research, the causes of delays in construction of Maimana city urban asphalt road 32.805 km projects have been identified. Numerous factors such as: insecurity, corruption, low experience of the contractors technical team, late payment of invoices by the project owner, poor management and monitoring of the site by the contractor and Contractor's joint venture can cause delays in projects. From in-depth literature studies, twenty-three causes of delay were identified. Questionnaires were then developed and sent to 50 carefully selected construction industry stakeholders including: clients, contractors, and consultants in Faryab/Afghanistan. [5]

(Sebghatullah Karimi. 2020) This research was specifically aimed to study the influence of excessive bureaucracy on level of competition and tendering process of infrastructure projects in the context of Afghanistan. To do so, 17 causes of low level of competition and lengthy tendering process have been identified through literature review and interview with construction companies. The causes of bureaucracy in infrastructure projects were categorized under two groups. 11 causes of low level of competition and 6 causes of lengthy tendering process were identified. The results were then used to develop the main research instrument, a questionnaire survey and distributed to 80 respondents. The respondents were asked to rank the importance of these factors on level of competition and tendering process. [6]

(M Ajmal Nikjow. 2018) This paper is constrained to investigating the feasibility evaluation of traditional way of projects in construction industry of Afghanistan. The primary contribution is to the educational. Indeed, it's miles a source of reference and as a stimulant for any higher institution of studying and persuade a full-scale research with a dependable finance with broader context. The academia will rely upon the findings of this paper to refer and to aid the point of views. Alternatively, contractors, engineers, architects, project managers, supervisors, and developers will use the findings of this paper to help them in their decision making manner. The second contribution is that this finding can function a guiding principle to draw coverage for all domestic developers specifically in the construction industry. [7]

(Sayed Behbood Hosaini and Sandeep Singla. 2019) This research investigates the factors, which cause delay in construction projects in Afghanistan. Delay is one of the major challenges during the implementation of the construction projects, and it is the late completion of the

activities or works of a project compared to the planned. A large number of Public Construction projects in Afghanistan are not implemented on time; due to several factors delay arises, so the construction projects fail to meet their contract time and project delay negatively impacts the development process of the country. The impact of project failure in Afghanistan negatively affects the prestige and dignity of the government organizations. Some of the project failures caused the destruction of hope of the people. Since the Afghanistan government depends on donor aid, the factors of delay mainly affect the contribution of the donor agencies in the country. [8]

(Ghulam Abbas Niazai and Noel Painting. 2017) It is generally acknowledged that one criterion for judging the success of a construction project is whether it is completed within budget. Due to various factors, this is often more of a challenge in developing countries where budget problems are just one factor in often poor project performance. In Afghanistan, project cost overrun is a significant challenge for construction industry. Through in-depth literature review sixty nine causes of construction cost overrun was identified. A structured questionnaire survey was used to collect data in Afghanistan. A total of 75 sets of questionnaires were distributed to selected clients, contractors and consultants, with 51 valid returns received and analyzed. [9]

(Ahmad Khalid Afridi. 2016) This thesis investigates the factors, which cause delay in construction projects in Afghanistan. Delay is one of the major challenges during the implementation of the construction projects, and it is the late completion of the activities or works of a project compared to the planned. A large number of construction projects in Afghanistan are facing delay during the implementation. Project delay negatively affects the prestige and dignity of the government organizations and in general, failures and weaknesses of the projects created distance between the people and the government and shows incapacity of the Government in the implementation of the projects all around the country in Afghanistan. Several similar studies from developing countries have been reviewed and a survey has been conducted for data collection from the different public organizations of Afghanistan. [10]

(Sebghatullah Karimi and Kassim Gidado. 2012) The aim of this paper was to identify factors influencing construction productivity in Afghanistan, and to rank these factors according to their relative importance from the construction stakeholder's point of view within the Afghanistan construction industry. The research confirms that Afghanistan like many other developing countries is suffering from poor productivity. These findings should enable construction stakeholders to easily identify their strengths and weaknesses and apply new techniques to reduce the negative impact of the factors, which leads to increased project productivity. The result indicates that the main 10 factors negatively influencing construction productivity in

Afghanistan are; Security (Crime, theft and disorder), Payment delay, Corruption, Drawings and specifications, Poor Scheduling and Coordination, alteration during execution Delays in materials' deliveries to, Construction method, site Health and safety (accidents), Low quality of raw materials, Materials' Shortages. [11]

3. CONCLUSIONS

- The causes of delays in construction of Maimana city urban asphalt road 32.805 km projects have been identified. Numerous factors such as: insecurity, corruption, low experience of the contractors technical team, late payment of invoices by the project owner, poor management and monitoring of the site by the contractor and Contractor's joint venture can cause delays in projects.
- It was found that the most significant causes of cost overrun in Afghanistan construction industry are corruption, delay in progress payments by clients, difficulties in finance project by contractors, security, and change order by clients the during construction phase.
- In general, failures and flaws of the projects created distance between the people and the government and shows the weakness of the government in the implementation of the projects all over the country in Afghanistan.
- The conclusions call for necessary awareness in developing the Afghanistan construction industry's capability and performance to execute risk management in their projects for mitigating against further project failure.
- It was revealed that lack of materials, which is the most important factor influencing construction productivity in the UK, Gaza Strip, and Iran, is relatively not important in Afghanistan, ranked in position of 10 of all 68 factors. Instead security and corruption coupled with lack of capacity in public and private sector, and lack of integration between design and build identified as the most important factors negatively influence construction productivity in the country. In addition, 68 factors considered in the study were divided into seven groups, which were ranked according to their importance index.
- Avoid delays in reviewing and approving design documents.
- Build up the knowledge and skills of technical staff.
- Improve coordination between parties

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BIOGRAPHIES



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