

Analysis of Traditional Way of Construction of Projects in the Construction Industry of Afghanistan

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Abstract

We analyzed the body of knowledge on the topic of analysis of Traditional way of construction of Projects in the construction sector of Afghanistan. Although, there has been demand for infrastructure development and service delivery both developed and developing countries. The traditional way of construction of projects continue to be used in Afghanistan which results in cost and budget overruns, delays in delivering projects, abandoned projects for lack of finance, lack of quality and increase in the level of corruption among heads and leaders who see to the implementation of construction projects. The method that is used in the research study was more of qualitative approach and data are collected through interviews and documents to obtain enough findings for the study. There are a total of 16 respondents interviewed; data collected were based on the premise of implementation of traditional project management methods in the construction industry. The Traditional construction of projects did not create deliverables in an appropriate and fruitful way. There should be another alternative to construction of the project which could reduce the challenges to the barest minimum. Furthermore, it is believed that the research argues for a change in the standard way of construction of projects. Hence, effective project planning, controlling and monitoring should be established to enhance project performance in order to minimize or avoid lack of quality deliverables and delay of projects. These moves could help boost up the growth of construction industry of Afghanistan.

Keywords: Traditional way of construction; Deliverables; Industry; Afghanistan

Introduction

Project management as a discipline has for some decades been spreading in construction industries and getting enlarged and becoming acceptable as a way of planning and managing work in organizations [1]. Historically, construction has been related to the level of a country's developmental progress. As such its success and failure inadvertently becomes national issues and problems [2]. Recently, as individuals have been receiving knowledge of managing projects, there is dramatic growth in the membership of professional bodies including Project Management Institute and managing projects [3]. The consequences of projects undertaken by some governments without partnering and partnership are not encouraging and there are a few disappointing results of project deliverables due to the fact there are delays, abandoned, cost and budget overruns in the construction of projects.

Statement of the Study

The traditional way of handling construction projects has been around for more than decades in the construction industry and is still the basis on which construction business relies. The way that projects performed has, however, modified. The gap between an old perspective on handling construction projects and a new way of conducting them creates uncertainty and anxiousness within the business and its employees. Individuals in the real estate market nowadays are at periods conscious that they are operating in a way that is not always relating to the managing perspective causes confusion. To examine and define the way projects are handled and performed nowadays may convenience the doubt and misunderstandings. Another option might be to examine the possibilities of using an already established and tested management approach, which is the topic of this paper. Whichever solution one chooses to pursue there is a need to question the traditional way of construction of the building industry and look at the possibilities of the future.

Research Objectives

The aim of this study is to achieve the purpose of the survey and answers the relevant questions; the effort made in an attempt to respond to some questions about the traditional way of construction of projects in Afghanistan.

The following issues should address:

1. Is the traditional method of construction of projects satisfactory in Afghanistan?
2. Are the expected results of the projects produced in a timely, cost-effective manner in Afghanistan?

Significance of study

The research output is supposed to provide useful knowledge on how traditional way of construction of projects carries out in the construction industry of Afghanistan. When projects constructed, managed and delivered within budget, at the time specified and of good quality, the owner's objectives achieve. The research output is expected to provide useful knowledge and insight of traditional way of construction in industry of Afghanistan. The authority often stops a project during the construction which may be due to lack of finance but continues later only to realize that there has been cost overruns, delays, and corruption among some senior officers who see the implementation

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of the project. It is expected that the study will bring to the fore the challenges that managers in construction industry face in their effort to implement project management approaches and how they can be solved. For other researchers and postgraduate students, the findings of this study could provide for them a source of references.

Literature Review

The illustration in this area explores the entire construction industry. It is then simplified down to the types and sources of development from international and local research in the past. Consequently, the evaluation is a focus on the results and suggestions in implementing traditional way of projects in construction projects.

Construction as an industry

The literatures presented here is analysis of traditional way of projects in construction industry of Afghanistan. Building construction includes construction of office and commercial buildings, airport terminal buildings and public buildings such as schools and hospitals. Heavy engineering construction includes factory and plant buildings, bridges and tunnels, whilst industrial construction includes oil refinery, piping, cables and electricity.

Those who play important roles in the construction industry can be divided into three levels of professional types [4]. The first level consists of quantity surveyors, architects, engineers, land surveyors, and project consultants and government authorities. The second level is made up of project managers, site supervisors, material suppliers and machines operators. And finally construction workers, plumbers, electricians, welders, plasterers, carpenters and steel workers constitute the third level [5]. On the other hand it is defined that the construction industry is divided into four categories: residential construction, building construction, heavy engineering construction and industrial construction. Residential construction is further explained as single family homes, multi-unit town houses, garden apartments, high-rise apartments and condominiums.

Recently organizations and governments are engaged in projects. It has been widely spreading and cutting across all professions and that confirmed the prediction made that in the 21st century the project-based management would erode the traditional functional management [6]. Project management which used to be seen mostly in construction industries is now taught in schools and universities. A decade ago, little was taught but now it has changed and almost in all kinds of disciplines in the educational faculties, also assists to plan, organize, direct and control activities so that the objective for which projects were established could be achieved.

A project is defined as a "complex, non-routine, one-time effort limited by time, budget, resources and performance specifications designed to meet customer needs" [6].

Projects that are in place have elements why they are designed. Projects are not as simple as it is to be designed because they do not transpire in regards to its consistency. A task is a significant process which has some functions and among them is that it has a recognized objective. The objective for which a venture is performed and has not been done before must be specified. The company that is engaged in executing the project has to be ended after the project has been finished. A job has to be applied within some variety and boundaries regarding the employees to be used, sources accessibility and length. The characteristics and dimension projects may vary from one another but may have the same goals, looking at the meaning above.

Project objectives could be seen in terms of performance, time and cost. When a project is to be established, it has to be made known the nature of the deliverable to be produced [7]. As technical progression keeps on improving day in day out, the outcome of project is significant in terms of achieving the success and timely deliverables. To be able to offer it, time is essential and that planning is a necessary tool in projects which cannot be ignored. Planning is essential to the success of project as experience and data obtained from the projects of the project could be used in new projects. When delivery time set for the completion of the project is delayed, it could have a negative effect on the result which gradually impacts quality and stability of the scope.

Cost as a purpose needs to have properly seemed at Project supervisors, who do not take into consideration the available financial and sources in generating the work deliverable, do have cost and budget overruns which consequently customize the quality as well as of the project. The Figure 1 below reveals how the primary goals aim at and play a role in the success and result of the project which consequently has to fulfill the needs of the customer.

The goals have to be reliant on the other and balanced. However, there could be in circumstances where one purpose needs more interest than the other, especially where choice has to be given to the objectives. Certain projects are for instance required at the right time and project deliverables may not carry out the requirements when they are created at different times other than what has been organized. For example, projects performed to be used during business events at specified year will be a failure when they are offered after that period. Projects are completed in a period filled with concerns. The project manager in order to have an effective deliverable needs to take safety measures to fulfill those threats to be able to fulfill his client, client or the stakeholders.

Industries, organizations and institutions including governments have different specifications when it comes to delivering contracts. It is, therefore, significant to be familiar with some types of techniques and designs in project agreement supply. Effective tasks supervisors fulfill the requirements and meet the ambitions and goals of the owner or the client in their agreement and all those happen when the right designs are chosen. In the Construction Industry Institute at the University of Texas at Austin, a Project Delivery and Contract Strategy (PDCS) Research Team published procedures in October 2003 that enabled capital projects to be used on projects by selecting an integrated project delivery and contract strategy (Construction Industry Institute, 2003). The aim of that was to enhance maximum achievement of owner's objectives. This brings us to the fact that projects and managers are successful when the deliverables satisfy the needs of the end user [8]. A selection factor that would be recognized for project to be considered should be based on the owner's objectives. As a project is deemed to be successfully completed, any other factors that will contribute to

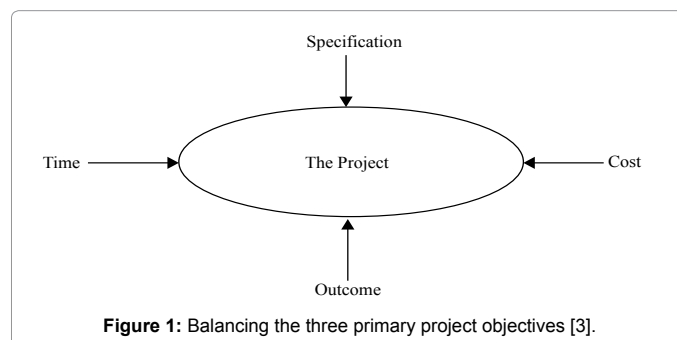


Figure 1: Balancing the three primary project objectives [3].

successful project execution should be noted in the selection factors. The Research Team provided 12 integrated project delivery contract strategy alternatives with their compensations packages and any alternative chosen will derive a default compensation approach which clearly identifies the contractual relationship, however, when there is a more preferable approach which is suitable to the project that is initiated than the default, then the latter is taken.

Project delivery Contract strategy assists the proprietor to have a set of project delivery methods which he may follow for providing tasks. It increases the proprietor to achieve the work goals. A change to the procedure may include an expanding or a reducing of delivery options such as significant variations to both the work procedures and the current business structure. These improvements include many different factors of the owner's obligations, for instance, providing selection techniques, standard contract certification, project organization and employment, data or information switch and emails techniques which allow the proprietor to determine new working connections with companies, providers, and professionals.

Research Methodology

The examination of a traditional way of construction of projects in the construction industry of Afghanistan has been focused on the management perspective which is directed towards the traditional way of projects such as construction projects and delivery methods.

Research method

The technique that is used in this research is more of qualitative approach, and it will concentrate more by dwelling on qualitative research than quantitative as the research study is concerned with words rather than numbers and figures.

The research question sought to analyze and understand what is happening as well as acquiring new knowledge on the traditional way of construction of projects in the construction industry of Afghanistan through a rigorous assessment. According to Bryman and Bell Research design is a structure that guides the execution of a research method and analysis to responding the research study questions. Bryman and Bell go further to describe research design as a framework used in collecting and analyzing data.

The interview method is selected as the primary data collection source. It is in line with Yin's advice that interviews are essential sources of evidence for case studies since interviews with well-informed respondents as in this case study can provide insights into a situation. A secondary source of data collection was the use of documentation available from the case firm.

Data collection method

Data were collected as a case study from an accredited construction company. The aim was to look at the traditional way of construction of projects in the construction industry of Afghanistan.

There are total of 16 respondents; they were interviewed at the pre designated locations. Out of these samples, 14 are from the local authorities and the other 2 respondents are from government departments. The illustration of interviewing process is organized in the following manner.

Interview

The study adopted a face to face interview with semi structured open ended question as method of data collection. The advantages of

this method are plenty. One of the advantages is that the researcher can ask the respondent a series of questions pertaining to the topic of the study [9]. The process of interview requires listening and understanding skills and at the same time respecting what people says in a systematic way [4]. As such, the other advantage is that by performing face to face interview confusion and misunderstanding can be avoided [10]. At the same time ambiguous answers from the respondents can be dealt with on the spot, thus vague question can be avoided. During the interviewing process, answers from the respondents were recorded immediately in an interview sheet and tape recorder. Each interview session is estimated to take about 35 to 45 minutes.

Method of analysis

There are two stages of method of analysis. The first stage was to prepare data while the second stage was to analyze the data. Data preparation involves several processes and steps including editing, coding, interpreting, and summarizing [11] while data analysis involved the gathering and collection of information from the interview which had been formed into real data that can be analyzed and interpreted. Miles and Huberman [12] described method of analysis as the process of analyzing the raw data while Corbin and Strauss [11] mentioned that data entry is the process of conversion of the information obtained from primary sources into a medium for viewing and manipulation. Also, a segmented analysis is employed to examine, analyze and interpret the data to responds to all of the 3 research questions.

Research findings and analysis method

According to Hatch [13], data analysis is a systematic search for meaning. It is a way to process data so that what has been learned can be communicated to others. Data preparation involves several processes and steps including editing, coding, interpreting, and summarizing while data analysis involved the gathering and collection of information from the interview which had been formed into real data that can be analyzed and interpreted.

Miles and Huberman described a method of analysis as the process of analyzing the raw data while Corbin and Strauss mentioned that data entry is the process of conversion of the information obtained from primary sources into a medium for viewing and manipulation the phenomenon being studied. In this study, the phenomenon referred to looking at the traditional way of construction of the project [14].

Completion time of projects

In the aspect of time of completion of projects, it was found out that the time for the construction of all constructed and built structures was quicker than expected unlike the traditional way of construction of projects. The reason was in the project model the private contractor makes the provision of finance. Onex Group contractors provided the investment which helped to solve the problem of project delay right from the beginning of the construction. According to the interviewees, in the future, the state and the institutions will be flexible with the time spent because safety and quality of the deliverable are their ultimate aim. In the end, it meant that they would not stress much for projects to be always delivered on time as it was specified but all the same, be made sure that quality of projects would be more important than time to complete it as planned.

Opposite of the completion time of private construction projects, which is declared above, the government based projects usually, take more time to implement construction projects. The causes of

consuming time in government based projects are many, and I tried to provide some of the reasons as below:

Financial problem

It is almost desperate to extract money by the contractor from the related government sectors to run the construction activities one after another because:

- The financial system of government not quite well developed, corruption exists and monitoring of project progress by related industry is not done by time to approve the contractor invoice.
- **Involvement of the third party in project implementation:** In most of the rural development projects like National Solidarity Program, the government involves the community to monitor the implementation of their project. The community does not just oversee the project while they select the project type, location. Moreover, the budget of the project transforms to the community development councils account by the government then they withdraw the cash and give to the construction contractor after a long administration process. Since most of the city's people are illiterate, the government hires a local or international None Profit Organization as a Facilitating Partner (FP) to help the community in administration and technical issues. Therefore, the FP is the fourth party that involves in the implementation of a development construction project. High level of management and cooperation between mentioned parties are needed to make a transaction for implementing contractor. And in most of the time, they lack such assistance because every institution has its interest.

Lack of standard design and technical drawings: There are plenty of evidence exists that a project is once started to construct by the government then stopped because the design does not meet the real project needs and the environment. For instance, a year ago the TASADI Bridge which is located in Balkh Province on Balkh- AIBAK Highway started to expand to meet the growing traffic current. The project has begun a foundation and supporting walls constructed then the activities are stopped after a monitoring by Ministry of Public Works. The reason was that the designs are not met the requirement of the mentioned bridge and now one year past while still the project is incomplete

Utilization of funds and resources

When I asked about the mechanisms the contracting authority put in to ensure that the resources and funds were fully utilized, they replied that resources and Funds were used to avoid Instability of money and corruption. In addition to the effort of checking corruption in the system, drawings made by the private companies are verified and followed up. The private contractors are motivated to fully utilize the resources and funds at their disposal in the form of compensation. The Private sector companies are compensated especially when the road construction reduces the number of accidents. The accidents could be reduced by:

1. The provision of safe maintenance of the projects.
2. Erecting proper signs and markings.
3. Putting salts on the road during winter to serve as good friction.
4. Making sides of the road clearer see oncoming vehicular movements from a far distance.

After looking at those techniques very seriously, I noticed that they had assisted in reducing the barest lowest the amount of corruption, which is recognized to happen in Revocation of projects Related to projects that come to a halt or stop. The interviewees said that whether it was fabulous plans by the condition, they were often designed and completed. Further, its better ways of project construction is that private company finance the project and receives payback after completion and handing over of the project to the state as it is the state that always owns the facility.

Quality standards of projects

When the query was asked about how the level of quality of projects among the traditional construction of projects could be judged, the interviewees responded that the standards of quality were the same but challenges lie ahead in projects has a limited amount of control, unlike the own state construction. According to one of the interviewees, there was a sharp curve immediately after a tunnel on one of the private partners should have dug the sides of the road for oncoming traffic to be seen at a far distance but they failed to do that when contacted them. The matter was reported to the management but due to the bureaucratic nature of the system and as the public partnership was something new initiated by the state, the leaders of the state kept quiet without confronting the contractors to straighten the curve to avoid an accident. According to the interviewee, it could pave the way for an accident to occur. One of the projects is compromising the level of quality. Moreover, due to the absence of an accountable system of hiring technical persons to implement the construction projects, the low-quality particular individuals are recruited to handle the state projects. The inexperienced or not sound educated engineers usually delay the development process and sometimes results in poor quality of deliverables. For instance, the mining engineers were hired to implement civil engineering construction projects at National Solidarity Program

The mining engineers or other majors rather than civil engineering take some short time civil engineering courses and they manage to get a job as a civil engineer.

a) Corruption

In Afghanistan's construction industry is one area which everybody in the industry knows about, but nobody wants to go there. Mostly, anyone has taken the trouble to consider what goes on in the construction process, from project inception to project handover, know that the process is prone to abuse.

While mechanical damage such as wrong specifications, construction details, and front end or back end loading of estimates may be detected and corrected, corruption is subtler and not easy to identify and correct. But the issue is not whether it is secretive in nature and difficult discovered. Rather the issue is that stakeholders know how rampant it is but chooses to keep silent.

On the other hand, projects construction by the state involves mismanagement of the government in power. From Pong et al. reported "material procurement" as one of the causes of construction delays and mismanagement. In trying to purchase materials to construct projects, contractors, and government agencies falsify accounts and documents relating to procurements which lead to corruption.

b) Security

Security issues have prevented most of the projects from being completed and most difficult challenges that stakeholders face in implement construction projects on specified time. One of the top

leading causes of construction delays in Afghanistan is security that followed by inadequate qualification of the contractors' technical staff, poor site management and supervision by the contractor, ineffective planning and scheduling of project by a contractor, and difficulties in financing project by a contractor. The security concerns in some parts particularly in south and south-east of Afghanistan has delayed projects and increased costs.

Discussion of the views

Because data and information had been collected during the case study and face to face interview, I began to carefully analyze the views as presented to be able to come out with results. As the opinion of respondents and interviewees were examined systematically, it assisted me to test the validity whether those would support or contradict the result of the research.

Cost and budget overruns

During the research study, the results received from the respondents regarding cost and budget overrun was that cost overrun could occur in the traditional construction of projects. It confirmed those projects which were undertaken in the institution where the case study was conducted could overwhelm the cost and budget.

Extra findings

The issues that the interviewees found it strange and could not understand why those should happen were identified as misallocation of full utilization of resources (level of corruption), abandoned projects and stopping a project. The state has set up rules, procedures, and standards that do not allow much instability of funds. The funds are entirely used to get the project done, and the likelihood and possibility of projects coming to a halt or abandoned are low. The government has contingency plans to deal with projects that are not progressing steadily. In addition, the model of the private partnership requests private companies or private contractors to finance the project and be paid for the work that is completed. Every contractor would like to deliver project deliverables as quickly as possible to be able to win other projects.

Quality deliverables

The quality standard in the traditional projects was considered as the most significant factor in the study because the change in the normal way of construction should bring something new into projects. Projects are supposed to be longer lasting, and users of the final project deliverables expect a higher level of satisfaction in the public good they consume than getting previously in others. When in their views the interviewees were asked to rate in order of importance the issue of cost, time and quality of projects, the level of quality was first on the scale of preference followed by cost and time. Though time and cost of the projects are as important as the quality is concerned in management of projects, quality of deliverables decrease most of the time as a result of absence of high-skilled designers, detailed drawings, corruption in implementation stage (the contractors use low-quality products like oxide steels rather than clean steels, poor mix of concrete and so on). This reasons put the attention and worry of clients on receiving high standard products.

Summary and Conclusion

The results of the above study ultimately described after which the research questions previously asked in the objectives of the survey.

It will be looked at very critically out of the overall conclusions that were raised; lack of quality was the only one that was supported and confirmed under the traditional projects constructed in Afghanistan, who then supported the case study. None of the five remaining overall conclusions was underpinned by the same kinds of projects in question. It showed that users and consumers attach great importance to the quality of projects under normal circumstances.

Corruption and Stopping ongoing construction were contradicted (denied) in the traditional projects in Afghanistan. In the traditional way of construction of projects, the state has the necessary plans, rules, and regulations in place to check every project under construction and also have contingency measures against any unforeseen circumstances. Action against the level of corruption, stopping ongoing projects have been developed to deal with such issues as soon as they occurred. The private companies that are awarded the contract should design, build the facility needed, finance the project and operate it for some time (normally for 25 years) until it is handed over to the state. As a result of the provision of finance by the private partner, projects are carried out from start to completion and are neither abandoned nor stopped. Private companies are paid based on work that is completed. Funds do not pass from one hand to the other and eventually reduce the level of instability of funds.

Cost and budget overrun were unclear under the traditional projects in Afghanistan. There was no available evidence to prove that previous projects solely under the Afghanistan government were cost overran which called for the change in the standard way of construction of projects by the leaders in Afghanistan. Even though the private company would bear the risk of cost, miscalculation and lack of adequate studies on projects contracted could bring adverse effects on their operations.

Delays were partly supported in the traditional projects. Users and consumers of the public have the view that projects may be delayed provided quality of projects is the last priority and aim of every contractor or constructor. The quality of the project is sometimes compromised when contractors rush to get things done quickly. Delays may be expected in the future to check those infrastructures on the road (bridges, culverts) that are not often seen as a driver of a bus, train, car or any means of transportation that lies on the road does not see clearly.

In conclusion, a traditional way of projects – Supported: Lack of quality deliverable; Partly supported: Delay of projects; Contradicted: Corruption, security, stopping ongoing projects; Neither supported nor opposed: Cost and budget overrun.

Contribution

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, its 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. Hence the developers can observe as soon as

these rules set by the authorities. Failure to accomplish that with the aid of the said parties will result in having to undergo the effects of project postpone and economic loss.

The third contribution of this paper is to the construction industry. As discovered, education level, knowledge and ability of construction workers and the contractors are important with the intention to deal with the changes and challenges within the industry itself. By using having a high level of education, the contractor can be able to deal with technology application within the industry.

Recommendation

Afghanistan is a developing country and the authorities have always been searching for funds from the international community for improvement functions. It should engage in private partnerships to alleviate the problems of constructing specially in High Education in which the state has been losing thousands of dollar through corruption, Project delays, lack of quality projects and abandoned projects The authorities must permit certified private partners to bid for the activity and those who have got the excellent trendy and fulfill the necessities laid in the agreement be presented the contract. The authorities need to be transparent in awarding contracts and avoid presenting contracts to functionaries and favorites who have no qualification and experience in construction industry.

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