

# INVESTIGATION ON CAUSES OF DELAYS AND COST OVERRUNS OF CONSTRUCTION PROJECTS IN AFGHANISTAN

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## ABSTRACT

*The research indicates a big role of delay and cost overrun during the execution of construction projects in Afghanistan. However, in Afghanistan, due to a number of hurdles, a majority of construction projects are not completed in the required time, unfortunately. This research paper illustrates the investigation of the reasons why cost overruns delay construction projects. Problems were investigated via questionnaires, interviews physically with the person, On-site interviews with officials of the survey planned focusing on the main factors which could affect the budget delay in time overruns. A Questionnaire survey was filled with around 91 responders and found the three most perilous factors of Time Overrun are: (1) Challenge of security during the implementation of projects, (2) Corruption, (3) Difficulties in the financing of the project by the contractor, furthermore, find three most critical factors of Cost Overruns are: (1) Meager site management and administration, (2) Accidents during construction, (3) Wrong selection of technical staff.*

**Keywords:** Project Delays, Project Cost Over-Run, Project Time Over-Run.

## INTRODUCTION

Construction projects can be successful when perspectives such as the scope of work, targeted time, quality, management, the experience of the project, and construction budget are taken into consideration. This study will mainly explore the causes of delays and cost overruns factors, in Construction Projects, as 9 out of 10 construction projects create delays and cost overruns. Cost overruns can be as much as 183 percent higher than the budgeted amount. Afghanistan needed a route to economic prosperity after decades of conflict, including modern highways, bridges, and power plants, as well as the capacity to sustain them. Construction projects are the major reason for the development of Afghanistan. Cost overruns and delays of a construction project in Afghanistan is a big problem facing construction Companies' workers and project employees with it. Generally, megaprojects experience delay and cost overruns.

Kamal Khan dam was a big example of cost overruns and delay construction projects in Afghanistan. Kamal Khan is a hydroelectric project and irrigation dam on the Helmand River in the Chahar Burjak area of Nimroz province in Afghanistan. It was planned to be built in 1974 but due to the above-mentioned perspectives, the project was suspended. Afghanistan's government has been working for the last 10 years to rebuild the dam. It was rebuilt in three phases, the first and second phases of the dam were surveyed, designed, and land acquisition, which began in 2012 to 2015 with an 80 million dollar budget. Once again, it was delayed due to a lack of budget. The last and third phase of construction of the dam began in 2017, four years, after

which finally, in 2021 it got completed. The Afghan National Water Authority (NWARA) claims that the dam will irrigate about 1,75,000 hectares (432,434 hectares) of agricultural land. In addition, its reservoir has the capacity to store about 52 million cubic meters of freshwater. The overall cost of construction of the Kamal Khan dam is more than 111 million dollars. Besides governmental consumption on development projects, in capital and some provinces, people need houses. In 2014-15, 729 buildings were constructed valued USD169.6 million, and 523 buildings were on the phase of construction and the construction industry presents 7 to 10% of Gross Domestic Product (GDP) in the latest years stated by Ministry of Commerce and Industries. On the other hand, the Government of Afghanistan is not succeeded in building huge projects, for example, Sharake Jadid construction projects which will provide residency for three million persons. Master plan of this project was prepared with help of French, German and Afghan engineers which cost \$60 million in 2008 and every unit of residency will cost 1000 thousand dollars, about 10 Ministry and governmental organization made association named Adara Mostafa Kabul Jadid, this administration is responsible to work on this projects but there is no sign of any development of this project Figure 1.

**Project Type:** Types of projects are very important, most likely public project aspects delays and cost overrun more than private projects.

**Project Location:** Location of the project has an initial role in the successful completion of a project, like in this study location is Afghanistan because it is a country which has been at war for more than four decades, that caused the demolition of the entire infrastructure of this country, The construction industries play a major and crucial role in the economy's growth in Afghanistan. Also, the construction industry is the most important foundation of economic development, accounting for roughly 10% of the whole country's GDP. The building industry does have the great potential to underwrite to economic and societal development, but somehow it experiences several difficulties, including a lack of competitiveness, delays, and exorbitant prices, as well as consumer dissatisfaction issues, which have a straight impact on the economic development of the country and major investment level Figure 2.

Throughout the construction sector, be direct and foreign. Even though there have been many construction projects in Afghanistan in the past four decades, the economy is still feeble in the country due to decades of war and there is still the need for foreign funds and investments.

## LITERATURE REVIEW

Karimi et al. (2020) found that the extreme level of bureaucracy has been one of the most puzzling issues in an infrastructure subdivision in many countries. Nations are diverse in many ways, such as institutional situations, organizational principles, and administrative equilibrium, and thus, Afghanistan's substructure division is no omission. Hence, this singularity has adversely obstructed the conveyance of infrastructure plans and hampered the nation in achieving its tactical monetary goal line. The result of this study will assist the administration to take required actions for abolishing redundant paces in the procurement civic structure schemes and eventually recovering project conveyance (Karimi et al., 2020).

Heravi & Mohammadian (2021) investigated 72 urban construction projects and analyzed delays and cost in urban construction projects in Iran. The size of the project, the nature of the project, the discrepancy amid low discounts and government assessments, and the intensity of

concentration were found to be among the potential factors for the cost increase in the collected research. The main findings of the survey are: 1) Only 7% of the projects evaluated were finished on schedule and within budget, 2) About 8.5 percent of the projects under consideration were finished on schedule, 3) Costs and delays have increased for large urban construction ventures the instrument has been altered in every way. Superior to the restoration, urban road schemes have outperformed building projects in terms of cost-efficiency. Construction and rehabilitation project delays were not substantially different, and new road construction and maintenance project costs were not significantly higher (Hosaini & Singla, 2019).

(Alsuliman, 2019) studied reasons of delay in Saudi public construction projects. Data collected via questionnaire from 211 respondents; where 112 factors were distinguished that occur in all phases. These factors were divided into four main classes as (1) before tender award (2) during award (3) after award (4) general. Factors included in the first class are; no clear vision from the government side in the projects, lack of accuracy in site investigation, lack of coordination among ministries and companies, lack of accuracy in specification and drawings, lack of experienced and skilled Engineers Figure 3. The second class includes factors as; insufficient study of the site and tender form, award to the lowest bidder, insufficient analysis of competitor, an award of the project to contractors with low financial and technical potential, tenders are limited to specific contractors, tenders investigating committee are fixed and does not change. Third class includes factors as; delay in delivery of site, dispute on the site of project, government insufficient and inexperienced technical staff for overseeing, lack of project management administration, insufficient coordination among service provider involved in project, non-qualified consultant, lateness of the contractors in submitting the sales and requesting the supplies, weakness and no financial ability of contractors. The fourth class includes factors as; inexpert engineers for supervision, poor salaries and incentives for Engineers, corruption in estimating quantities, and prices (Alsuliman, 2019).

Callegari et al. (2018) conducted research on cost overrun and delays of megaprojects in Brazil. The message deduced from this study is that; bigger projects include unmanageable risks that cannot be predicted and mitigated efficiently. The Result shows that the average cost of construction project rise 97.5 % above the initial estimated cost. the construction project experienced an average time escalation of 74.28% (Callegari et al., 2018)

Reshma identified that period and cost overruns in the UAE building sector have become a critical threat in the global construction sector. This paper investigated critical factors are: 1) the design varies from the client, 2) insubstantial scheduling, 3) schedules that are unreasonable, 4) timelines for completion, 5) delay in obtaining government permits, 6) Consultants' wrong method of time estimates, 7) Incorrect cost estimate, 8) The client's client decision-making process, and 9) Improper process of procurement (Callegari et al., 2018).

Raj Kapur Shah, investigated the causes of delays in Australia. He found that major cause by conducting three case studies on different parts to outline a relative analysis of construction delays and to categorize the variables into various importance levels of impact on project delays from state to state. According to the findings of these three case studies, the maximum important forces in Australia are: 1) Preparation and timing flaws, 2) Design processes, 3) Efficient supervision and consultation mechanism, 4) Payment certificate delays, 5) the most influential factors that are underestimating project costs, project difficulty, and project duration (Johnson et al., 2020).

Senouci, Ismail and Eldin explored while delay and cost overrun in Qatari public construction projects, therefore the researcher scanned extensively review of international and regional publication to distinguish fairly the problem and data was gathered from 122 public construction projects. ANOVA and regression analysis were done in this work to identify the relationship of cost overrun with the contract price. Consequently, cost overrun for building projects escalated with agreement charges but cost overrun for drainage projects diminished with an escalation of agreement prices (Niazi & Painting, 2017).

Msafiri investigated and analyzed the factors of construction time overruns in Kenya and discover that the key reasons for delays are: 1) Customer payment, 2) Poor decision-making, 3) Corruption in the customer organization, 4) Claims, 5) Insufficient schedule preparation, 6) Rain, 7) Site conditions (Shah, 2016).

Sweis (2013) examined that many construction projects in various developing countries are written off as overruns in time. The data are collected in two types. The overrun variables were taken out from the literature and from a detailed inspection of the observation of 30 engineers and then graded permitting their Severity Index (the product of Rank Index and Occurrence Index) (Frimpong et al., 2003). After directing the investigation on both the data, outcomes revealed that only one factor is responsible i.e., weather conditions. The outcome indicated that the major 10 elements significantly affecting construction efficiency in Afghanistan are; Security (Crime, fraud, and disorder), Payment delays, fraud, and a lack of drawings and measurements are all issues that need to be addressed. Poor planning and communication, as well as changes made during implementation deliveries to the construction phase, health and welfare on the job site (accidents), Raw materials of poor quality, and the shortage of materials (Sweis, 2013).

Aziz conducted research on delay factors in construction projects. This work main object was to distinguish and rank factors that initiated the delay in Egyptian construction projects on respect of relative importance. Construction project practitioners, experts were invited to participate in forming of questioner about 99 factors were listed as part of the questionnaire study in 9 categories. The questionnaire was responded by experts from the public and private construction companies Enshassi et al. (2009). For data analysis, the Relative Impotence Index was used. Factors were ranked according to their prominence and twenty most critical and twenty least critical were tabulated in this work five factors from twenty top are payment delay during project progress, bribes, insufficient planning, equipment shortage, poor site management. Five factors from the least critical are labor wounds in a site, no on-time site clearance, theft on-site, the clash among labors, wasting of time by circulation control at a job site (Sweis, 2013).

Kaliba et al. (2009) studied delays and cost increases in road projects of Zambia. Data was collected with the help of a questionnaire, interview, case study from respondents and projects, where collected data was analyzed using Weight Opinion Average Figure 4.

Where WA is weighted average,  $R_i$  is the type of response in the Likert scale, rang from 1 to 4 and  $F_i$  is the frequency of respondents. The main factors of delay in road construction projects were procurement of construction materials, project drawing change, poor coordination between parties, disputes and difficulties between contractors and clients, staffing problems in the project, poor overseeing of projects work on-site and changes in specification. For cost escalation, main causes were; changes in project scope, protection and mitigating cost of

environment, technical challenges, inflation and government pressure, bad weather or climate condition (Sweis, 2013).

### **A Comprehensive Review of the Literature Forty-Nine Factors' Reasons for Cost Over-Runs**

These variables are shown in seven groups. As presented in Table1.

Item	General Factors of project Cost overrun	Relegate
1	Lack in decision making process by the client	Client
2	Slow payment of completed work by owner	Client
3	Inflation and Escalation of material price change in project by owner	Client
4	Method of economics and payment	Client
5	Lack of coordination and poor communication with other parties	Client
6	Financial difficulties of owner	Client
7	Unfinished design at the tender time	Client
8	security challenge during the implementation of projects	Client
9	Weak site supervision and management by contractor	Contractor
10	Poor experience of Contractor	Contractor
11	Financial difficulty faced by contractor	Contractor
12	Poor financial control on site	Contractor
13	Corruption during award of the contract	Contractor
14	Mistakes during construction	Contractor
15	Number of projects going at the same time	Contractor
16	project location	Contractor
17	security challenge during the implementation of projects	Contractor
18	Ineffectual scheduling and planning of project by contractor	Contractor
19	Lack of financial management and planning	Contractor
20	Inappropriate construction method	Contractor
21	Delay in performing inspection	Consultant
22	Inaccurate time and cost estimate	Consultant
23	Poor Quality assurance	Consultant
24	Inadequate experience of technical consultant	Consultant
25	Delay in progress payment by owner	Consultant
26	Changes in scope of project	Consultant
27	Inadequate monitoring and control	Consultant
28	extension of time with cost claims	Consultant
29	Lack of coordination between parties	Consultant

30	Construction materials shortage in the market	Material
31	slow delivery of Construction material to site	Material
32	Non-availability of construction materials	Material
33	High transportation cost of materials	Material
34	High quality of work required	Material
35	Breakdowns of construction equipment	Equipment
36	Construction equipment Shortage	Equipment
37	insufficient operator's skill of equipment	Equipment
38	High maintenance cost of machinery	Equipment
39	High transportation cost of equipment	Equipment
40	Security challenge during the transportation of machinery	Equipment
41	Wrong selection of technical staff	Labour
42	Lack of labours at site	Labour
43	High labour cost on-site	Labour
44	Shortage of technical personnel	Labour
45	Weak motivation	Labour
46	Overtime issues	Labour
47	Accidents during construction	External
48	Effect of weather on construction activities	External
49	Corruption	External
50	Impact of cultural and social factors	External

## METHODOLOGY

To complete this study, the data gathering tool was a questionnaire. The questionnaire is further split into 5 different sections which are as follows:

Section A includes general information of respondents as concerns, professional background, Education Level, grade of Membership, construction working experience, type of organization (Kaming et al., 1997).

Section B contains the factors that subsidize to reasons of delay in construction projects in Afghanistan,

Section C determines the factors causal reasons of cost over-run in construction projects in Afghanistan.

Section D contains the Effectiveness of delay and cost over-run in the construction project.

Section E determines minimizing methods of the above causes.

The Methodology is based on the quantitative method which SPSS software is used in Data analysis and outcomes presented in tables. Moreover, for statistical analysis, cloud-based software was used, as well as excel sheets and SPSS. The comparative significant index (RII) method was primarily used, and the variables were evaluated based on data collected from RII, to determine the correct consequence and find important considerations which had 69 delay

factors and 49 reasons of construction project cost overruns taken from the literature review. Factors interrogated in the study. The ordinal scale was used to calculate the data from the questionnaire. For this study, an ordinal scale was used. Conferring to the degree of contribution used, the Likert gauge of four ordinal scales from 1 to 4 is used: 1, low, 2 medium, 3 high, and 4 very high. These considerations were divided into several categories. All the indexes and factors are shown in Table 2.

**The RII will be evaluated by the following equation:**

$$RII = \frac{\sum_{i=1}^4 W_i \cdot X_i}{A \times N}$$

Where  $W_i$  comes for weighting given to every factor by defendants (reaching from 1 to 4)  $A$  is the maximum weight (4 in this situation) and  $N$  comes for the total number of plaintiffs.

S.No	General Factors of project Delay	Relegate
1	Delays in payments by the Client	Client
2	Delays in delivery of the site to the contractor	Client
3	During construction, the client made some modifications and maintained discipline.	Client
4	Delay in the process of approving and verifying the Project sample and drawing.	Client
5	suspensions of work by the owner	Client
6	The weak mechanism of financial control.	Client
7	Owner's lack of experience	Client
8	Delay in starting the process of planning, with a low amount of budget	Client
9	Poor project management practices	Client
10	Long term between design and tendering time.	Client
11	Inadequacy of cost assessments prepared by government departments.	Client
12	Change in project scope by owner	Client
13	Contradictions in the subcontractor program in the project contractor execution	Client
14	Ineffective implementation methods by contractor.	Contractor
15	Disruptions at the work of sub-contractors	Contractor
16	Lowly prerequisite of the contractor's technical staff	Contractor
17	Financial problems by contractors	Contractor
18	subcontractor failures during construction	Contractor
19	Lack of construction experience of contractors.	Contractor
20	Incomplete scheduling and planning by the contractor.	Contractor
21	Poor Coordination among contractors and other parties.	Contractor
22	Improper construction methods implement	Contractor
23	lack of technical professional in the contractor society	Contractor

24	Ineffective technical operate allocated to the project.	Contractor
25	Incompetent vendors and suppliers	Contractor
26	Wrong method of cost estimate	Contractor
27	Contractor's deprived site management and supervision skills	Contractor
28	During the construction phase, the builder faces cash flow and financial issues.	Contractor
29	Non-existence of contractors' manpower skill, knowledge and training	Contractor
30	Lack of obtainable skilled and non-skilled labour	Contractor
31	Lack of professional's management staff.	Contractor
32	Poor relationship between management and labour	Contractor
33	Deprived site management by contractors	Consultant
34	Absence of satisfactory experience of consultants	Consultant
35	Stay in swotting the design documents	Consultant
36	Unfortunate check plan by consultants	Consultant
37	Errors & disagreement in design specification.	Consultant
38	lack of connectivity and communication amongst consultant and parties	Consultant
39	unclear and inadequate detail in drawing	Consultant
40	Disputes between Consultants other groups.	Consultant
41	Late progress report of completed work.	Consultant
52	Poor material handling on site	Consultant
43	Low quality of materials	Material
44	Modifications in materials type and specifications during construction.	Material
45	Delays in the manufacture of specific building material	Material
46	Late-night obtaining of materials	Material
47	Late-night in assortment of finishing materials due to diversity in market	Material
48	Poor satisfaction and efficiency of the equipment.	Material
49	Deficiency of high-tech mechanical machinery.	Equipment
50	Incorrect selection of Construction equipment.	Equipment
51	Corruption	Equipment
52	Warlord's influence	External
53	Impacts of cultural and social factors.	External
54	Land acquisition	External
55	Natural disasters	External
56	Far-off labour permits	External
57	Market increase	External
58	Currency vicissitudes	External
59	Unsuitable type of award and bidding.	External
60	Errors and inconsistency major contract documents	External
61	delay execution final inspection and certification	External
62	delay in locating permit from municipality	External

63	Extreme weather (very cold, very hot, rain...)	External
64	Water flood during irrigation construction projects	External
65	Weak govt's regulatory mechanism for construction industrial dispute settlement	External
66	Insufficient qualifications of Workforce	External
67	The poor efficiency level of labour	Labour
68	Personal conflict between laborers and management team	Labour
69	Overtime issues	Labour

### Data Analysis and Discussion

In this research work a total number of 106 questionnaires were disseminated to construction professional participator. 101 responses out of 106 questionnaires were received which was 34 managers, 24 Engineers/Consultants, 10 owners/clients, and 23 contractors. 10 sets of receiving responses were half-finished and considered as unreliable data for analysis. As a consequence, 91 sets of responses were suitable for analysis as shown in Table 3.

S.No.	Classifying	value
1	No. of responses disseminated	106
2	No. of received responses	101
3	No. of responses was half-finished	10
4	No. of responds	91
5	Per centum of responses received	95.284
	(%)	
6	Per centum of valid responses for evaluation	85.85

### Characteristics of the Participator

The survey participants had professional experience in realizing various kinds of construction projects. The table 4 below shows the frequency, percentage, and cumulative percentages of each respondent related to general information containing age, gender, education, designation, years of experience, and type of projects, they had experienced table 5. Overall, the characteristics of the respondents indicate that they were both qualified and experienced to participate in the questionnaire table 6 (Halloum & Bajracharya, 2012).

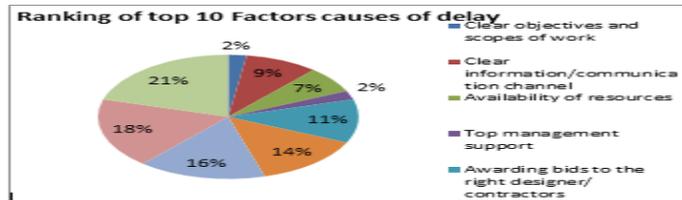
Respondents Demographic							
Age	Frequency	Percent	Cumulative%				
20-25	8	8.79			8.79		
25-30	17	18.68			27.47		

30-35	22	24.18			51.65			
35-40	28	30.77			82.42			
40-50	14	15.38			97.8			
Above 50	2	2.2			100			
<b>Gender</b>								
Male				85			93.41	93.41
Female				6			6.59	100
<b>Education</b>								
Graduate				65			71.43	71.43
Post Graduate				26			28.57	100
<b>Designation</b>								
Manager				34			37.36	37.36
Engineer / Consultant				24			26.37	63.73
Client / Owner				10			10.99	74.72
Contractor				23			25.27	100
<b>Experience</b>								
1-5 years			22			24.18		24.18
6-10 years			18			19.78		43.96
11-15 years			37			40.66		84.62
More than 15 years			14			15.38		100
<b>Kinds of Projects Experienced</b>								
Academic buildings				42			46.15	46.15
Industry buildings				7			7.69	53.84
Residential buildings				23			25.27	79.12
Warehouse/distribution buildings				19			20.88	100

4.2. Ranking of Top 10 Factors causes of delays Client, Contractors, consultants, materials table 7, equipment, external and labor Point of View shown in table 8, table 9, table 10, table 11.

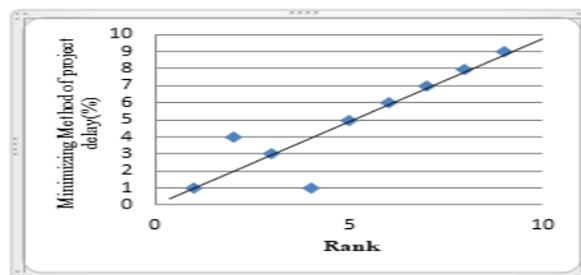
<b>Table 5</b>						
<b>RANKING OF TOP 10 FACTORS CAUSES OF DELAYS CLIENT, CONTRACTORS, CONSULTANTS, MATERIALS, EQUIPMENT, EXTERNAL AND POINT VIEW OF LABOUR</b>						
<b>Point of view of Client, Contractors, consultants, materials, equipment, external and labour</b>	<b>Percentage of Respondents</b>				<b>RII</b>	<b>Rank</b>
	4	3	2	1		
Lack of coordination and poor communication with other parties	25	32	25	9	0.701	10
Difficulties in financing project by contractor	31	34	19	7	0.745	3
Deprived communication and coordination by contractor with other parties	19	42	26	4	0.709	9
Shortage in high-quality management personnel	21	43	22	5	0.72	5

Poor material handling on site	22	37	29	3	0.714	7
Corruption	43	24	20	4	0.791	2
security challenge during the implementation of projects	45	29	16	1	0.824	1
Warlord’s influence	21	40	27	3	0.717	6
Wrong selection	32	31	19	9	0.736	4
Shortage of technical staff	25	34	25	7	0.712	8



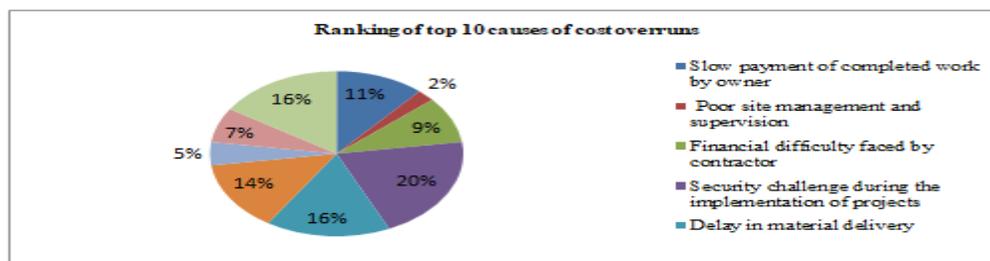
**FIGURE 1**  
**RANKING OF TOP 10 FACTORS CAUSES OF DELAY**

Minimizing Method of project delay	Percentage of Respondents				RII	Rank
	4	3	2	1		
Clear objectives and scopes of work	36	31	17	7	0.764	1
Clear information/communication channel	36	22	28	5	0.745	4
Availability of resources	37	24	23	7	0.75	3
Top management support	38	25	23	5	0.764	1
Awarding bids to the right designer/contractors	33	27	21	10	0.728	5
Use proper and modern construction equipment	25	34	25	7	0.712	6
Use of appropriate construction methods	14	45	25	7	0.681	7
Proper site management and supervision	22	33	24	12	0.679	8
Compressing construction duration	14	37	28	12	0.646	9



**FIGURE 2**  
**MINIMIZING METHOD OF PROJECT DELAY**

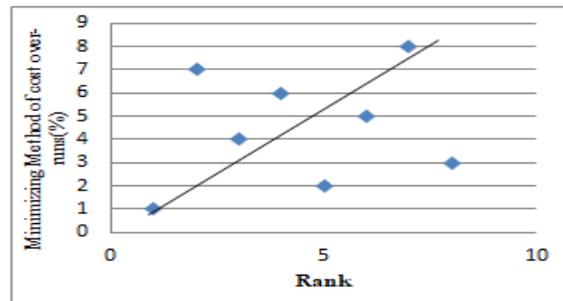
Over All Cost Overrun Factors	Percentage of Respondents				RII	Rank
	4	3	2	1		
Slow payment of completed work by owner	27	35	20	9	0.7	5
Poor site management and supervision	34	34	17	6	0.8	1
Financial difficulty faced by contractor	30	34	22	5	0.7	4
Security challenge during the implementation of projects	24	36	22	9	0.7	9
Delay in material delivery	27	29	28	7	0.7	7
Security challenge during the transportation of machinery	27	29	29	6	0.7	6
Accidents during construction	36	31	16	8	0.8	2
Wrong selection	34	32	19	6	0.8	3
Shortage of site workers	25	30	32	4	0.7	7



**FIGURE 3**  
**RANKING OF TOP 10 CAUSES OF COST OVERRUNS FACTORS OVER ALL VIEW OF RESPONDENTS**

Minimizing Method of cost over-runs	Percentage Respondents				RII	Rank
	4	3	2	1		
Appropriate planning and scheduling through the construction project	35	33	17	6	0.766	1
Impactful management to keep records of each task as well as its delivery time.	25	37	24	5	0.725	7
Before & after estimation and before purchase, material prices must be checked on a regular basis.	24	41	22	4	0.734	4
Observe the entire project overview employing effective methodology.	26	36	24	5	0.728	6
Ensure timely payment of employees and contractors, as well as site health	28	37	21	5	0.742	2

and safety						
Maintaining the project is important, but supporting the staff is essential to the project's achievement	26	36	25	4	0.731	5
The climate must be checked and tracked in advance.	18	41	26	6	0.695	8
Conferences with suppliers and contractors on a daily basis.	28	34	25	4	0.736	3



**FIGURE 4**  
**MINIMIZING METHOD OF COST OVER-RUNS**

Table 9 CLIENT RELATED FACTORS						
Client related factors	Percentage Respondents				RII	Rank
	4	3	2	1		
Lack of coordination and poor communication with other parties	25	32	25	9	0.701	1
Poor financial control mechanism	26	27	28	10	0.690	2
Owner's lack of experience	17	34	33	7	0.668	3
long term between design and tendering time.	13	40	28	10	0.654	5
several changes in owners' necessities or characterisations	14	37	35	5	0.665	4

Table 10 CONSULTANTS RELATED FACTORS						
Consultants Related Factors	4	3	2	1	RII	Rank
delay in approaching key vagaries in the scope of work	23	28	27	13	0.668	3
Poor site management by contractors	29	27	30	5	0.720	1
lack of coordination & communication	23	29	30	9	0.681	2
Non-existence of sufficient skill of consultants	14	36	28	13	0.640	4
Postponement in studying the design documents	11	38	30	12	0.632	5

Table 11 CONTRACTORS RELATED FACTORS						
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<b>Contractors Related Factors</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>RII</b>	<b>Rank</b>
Financial difficulties by contractors	31	34	19	7	0.745	1
Poor Coordination among contractors and other parties.	19	42	26	4	0.709	3
Deprived requirement of the contractor's technical staff	18	40	29	4	0.698	4
Inept technical staff assigned to the project	15	46	25	5	0.695	5
lack of technical professional in the contractor organization	21	43	22	5	0.720	2

## CONCLUSIONS

In this Research the main goal is to find the main challenges and factors causing project delay and cost over-runs of construction projects in Afghanistan. Based on the results found from respondents' through questioner, top 10 factors of cost overruns and project delay were analyzed and highest factor causing cost overruns and project delay is noted also the suitable solution found by minimizing method is suggested as below:

The highest factor causing cost overruns by related important index method ranked by all four groups of respondents such as clients, contractors, consultants and managers. The most important reasons of cost overrun are the following.

1. **Unsuccessful Site Management and Administration:** with an RII value of 0.764. On both large and small construction projects, supervision is essential to avoid incidents, planning and providing tasks, making decisions, monitoring productivity and implementation, establishing leadership and coordination, and maintaining employee involvement. As a consequence, supervision plays a significant role in the success of a typical construction project, especially in terms of maintaining that health and safety are effectively handled. The level of supervision required can be determined by the client's project management arrangements as well as risk evaluations conducted by contractors and others. But in Afghanistan most projects are cost overrun due to lack of supervision and site management. Construction leadership requires careful planning and scheduling. Engineers can complete a project on schedule and on budget by planning and coordinating construction tasks. The term "construction" encompasses not only bodily tasks counting workers, equipment, and machinery, but also the entire variety of activities involved in a construction project from conception to completion. Outcome, careful grounding and scheduling of each task are obligatory when handling resources such as men, materials, and machinery. Meanwhile, the best solution suggested for it by minimizing factor method is proper planning and scheduling throughout the construction project.
2. **Security Challenges During the Implementation of Projects:** All four groups of respondents have ranked with an RII value of 0.824 among top 10 factors, by related importance method that is the main cause of construction projects delay in Afghanistan. The Factor of security challenge during the implementation of construction project has the highest rank found by responses in Afghanistan. Since, due to insecurities in a large portion of the suburbs, the project's implementation would be affected in several cases, such as: not being able to constantly supervise the project, delay infant and material delivery, skilled workers and engineers not willing to go for the job there, and even in serious cases the project might start without completion. On the other hand, this challenge can be decreased or even removed by undertaken some initial and specific precautions such us, clear objectives which government and stakeholders should consider a security preparation before planning the project and should allocate adequate funds and security guards for the project. From the very beginning of the project each and every task should be planned carefully with considering the project local condition, in addition, social coordinators should discuss the project goals and merits with local people and authorities in charge to prevent misunderstanding and smoothen execution of the project, also to ensure that further problems will not occur during the construction phase.

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