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Assessment of Risk Management at the Design Stage of Construction Projects in Afghanistan

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Abstract

In this study, as identified above, the identification of the critical factors afterwards how the management and prevention of possible risks in the design phase of the construction project are investigated, rather than the problems and shortcomings encountered in this phase of the project. Successful completion of this research will help us identify hazardous items in the design phase of construction projects, and what steps should be taken to eliminate or minimize these risks.

Index terms— risk, construction, risk management, afghanistan, risk control, riskology.

1 I. Introduction

he importance of this issue is heightened when the Afghan government has prepared long-term plans for the development of approximately one million affordable housing units with appropriate living standards. Due to the findings of the Ministry of Urban Development and Independent Bureau of Local Authorities, Kabul Municipality and UN Habitat Research, Afghanistan's urban population has been increasing from 20% to 24% due to urban migration in the past two years. In the absence of housing, about 1.5 million have been observed over the years. Kabulas the largest center of internal migration represents 10% annual growth over the past decade, also, sources indicate that 78% of citizens seeking housing are in critical condition, according to the above report, housing problems are one of the most serious social issues in Afghanistan, especially in Kabul. So it is imperative that you pay close attention to this issue and develop comprehensive plans for addressing and resolving this issue and manage it properly. In Afghanistan, risk management will be one of the steps that will help to make these programs a reality. Given the importance of this issue, it requires a comprehensive research to identify the sources of risk and how to manage it realistically, the questions of this research are divided into two types of open and closed questions. These two types of questions are considered as questionnaire and interview form. The questions addressed in the questionnaires are quantitative and closed-ended questions that were scored by the participants. Points are given, that is, by choosing 1 of 5 options, From 1 to 5, respectively, from 5 to 1 enormous.

Identifying the sources of risk Get comprehensive solutions Prevent similar occurrences in future projects Accelerate the design phase of future construction projects b) When is Risk Analysis needed? Risk assessment is useful in many situations. For example:

1. When planning a project, to help predict and neutralize potential problems. 2. When you are deciding to go with a project. 3. When you plan to increase the level of safety and potential risk management in your workplace. 4. Be prepared for events such as equipment and technology failure, theft, employee illness, or natural disasters.

2 c) How to use Risk Analysis?

To apply the risk analysis, follow these steps:

1. Identify threats 1:1 the first stage of risk analysis is to identify existing and occurring risks. Risks that may be encountered. Abstract-In this study, as identified above, the identification of the critical factors afterwards how the management and prevention of possible risks in the design phase of the construction project are investigated,

rather than the problems and shortcomings encountered in this phase of the project. Successful completion of this research will help us identify hazardous items in the design phase of construction projects, and what steps should be taken to eliminate or minimize these risks.

So the value of the risk of increased rent equals: $0.8 \text{ (probability of occurrence)} \times 500000 \text{ (fee happen)} = 400000 \text{ (Risk value)}$.

3. How to manage risk 3:1 once you have identified the value of the risk you are facing; you can look for a way to manage it. (Mehta Arjmand, 1396). 4. Divide the risk 4:1 You can also divide the risk with people, Groups, Organizations or other third parties as a result of the possible risks.

3 Accept risk 5:

1 Your last choice is risk acceptance. This is usually the best option for situations where risk cannot be avoided or mitigated, When the potential risk loss is less than the cost of insurance to prevent risk, or when the potential benefit is at the risk of accepting the risk.

6. Risk control 6:1 if you have chosen a risk-taking solution, there are ways to reduce the impact. Past experiences are effective ways to reduce risk. Experienced managers do risky things in smaller and more manageable dimensions. You can use the results of previous tests to identify the location of the risk and take preventive action before performing large-scale work.

Research Methods: We are trying to clarify the facts and find ways to bring us closer to the goal. The research method of this article is divided into two sections.

4 Questionnaire 2. Interview

The two sections are divided into 5 departments and projects with 60 expert participants. Participants in the two sections of the questionnaire and interview presented their opinions separately. The data were analyzed using SPSS software. Choosing this app to get right and accurate statistics and numbers is intended to make the results work and useful.

1. Which of the following is the main cause of the crisis (risk) in the design phase of construction projects? 1. Questionnaire: The questions raised in the questionnaires are as follows.

The lack of a specific timeline for the regular development of design 24

Poor control of the design flow and its development 2. Which of the following is the most critical factor in the risk-taking phase of project design? Failure by donors to read interior design processes 9

The emergence of the deteriorating security situation 10 Political changes 1. What causes the design process in construction projects to be compromised? 2. What suggestions do you propose to prevent or minimize the crisis during the design phase of construction projects? 3. How to manage the crisis in the design phase of construction projects?

Table ?? The main research issues are as follows:

What causes the design process in construction projects to be compromised? These two divisions are made up of a total of 60 special partners.

This analysis was performed using Statistical Package for Social Science (SPSS) software. Variable statistics using SPSS software are distributed in the following table and chart.

5 Lack of Unit Management in Projects 2. The lack of coordination of the project team

6 Interview:

The questions in the interview section are as follows:

Table ?? Table ?? It is also considered for each factor of the table, which totals 24 tables, then check the validity of the questionnaire was using Cronbach's alpha coefficient. $\alpha = \frac{1}{k} \left(1 + \frac{\sum_{i=1}^k s_i^2}{s^2} \right)$

In this formula (k) the number of questions, and (s^2) is the variance of each question. The Cronbach's alpha coefficient is used to measure the one-dimensionality of attitudes, judgments, and other items that are not easy to measure.

7 Scale Mean if

8 II. Conclusion

Considering the statistics of the risk among the 24 risk identified by the researcher in the design phase of construction projects and distributed to questionnaires specialists in related fields, there are 6 types of high risk that are listed below:

? Lack of unit management in the project ? Lack of transformation management (inability to lead new talents in the project) ¹

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 For example: When you cover your office building or

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 company property list with insurance of the third party, or when you partner with another organization

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Lack of unit management in the project lack of coordination of the project team Lack of cooperation from related departments or presidency Lack of work ethics (managerial) Internal competition (Negative competition) Lack of transformation management (inability to lead new ways in the project) Appointing non-technical people in charge The planning team imbalance in knowledge Management weaknesses in not recognizing project strengths and weaknesses Appointment of people with low knowledge level Change and renewal of plan Lack of planning and communication in the project Lack of office facilities to carry out project work Sophisticated design and detail (Details) inadequate about it Delay in drawing and issuing drawings

16

Lack of risk management in projects

17

Conflict in project priorities

18

Poorly organized office project

19

Involvement in many projects at the same time

20

Vandalism, disruption and unforeseen side effects

21

Lack of attention to cultural issues and social norms in building design

22

Inadequate design and plan information for accurate estimation and planning

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Figure 1: Table 1

2

No.	Value	Very LowMedium Much				
	Number	low				
		1	2	3	4	5
1	Waste of time					
2	Monetary inflation					
3	The rising prices of materials (market risk)					
4	Exchange rate fluctuations					
5	Delays in project					
6	Canceled project					
7	Poor management's perception of the country and lack of confidence from donors in the future					
8						

Figure 2: Table 2

4

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Frequ ency	Percent	Valid Percent	Cumulative Percent

Figure 3: Table 4

	Lack of Work Ethics (Managerial)	Frequ	ency Percent Valid Percent Very low 2 8.7 8.7 Low 7 30.4 30.4
	Poorly organized office project		81.61
Year	Involvement in many projects at the same time Vandal-		82.52
2023	ism, disruption and unforeseen side effects		81.74
4	Lack of attention to cultural issues and social norms in		82.13
Volum	Internal Reliability Excellent Good acceptable Ques-		Cronbach's alpha coefficient ? ? 0.9 0.9 > ?
Xx	tioned Poor unacceptable building design Inadequate		
XIII	design and plan information for accurate estimation and		
Is-	planning The lack of a specific timeline for the regular		
sue	development of design Poor control of the design flow		
I V	and its development		
er-			
sion			
I			
)			
GlobaL	Lack of unit management in the project The lack of	Item Scale Variance if Item Deleted 223.5	
Jour-	coordination of the project team Lack of cooperation	Deleted	
nal	from related departments or projects Lack of work	81.00	
of	ethics (managerial) Internal competition (competition	81.52	
Re-	Negative) Lack of transformation management (inabil-	82.09	
searching	ity to lead new ways in the project)	82.39	
in		81.83	
En-		81.09	
gi-			
neer-			
ing			
(E			
	Appointing non-technical people in charge		81.04
	The scheme imbalance in knowledge		81.96
	Management weaknesses in		
	not recognizing project		81.26
	strengths and weaknesses		
	Appointment of people with low knowledge level		81.65
	Change and renewal of plan		82.04

Office of poor organization	Lack of unit management Project team miscoordination Risk factors at the	Year 2023
Management weaknesses in not recognizing strengths and weaknesses	design stage Lack of transformation management Appointing non-technical people at the helm	() E
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Figure 5: ?

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