

Factors Influencing Construction Productivity in Afghanistan

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Abstract

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. There is a lack of sufficient research on construction productivity in Afghanistan, but 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 strategic development goals. This paper describes a study conducted with the aim of identifying factors influencing construction productivity in Afghanistan. Data and information were collected through a structured questionnaire survey. Utilizing the relative importance index ranking techniques, the identified factors were prioritized for further detailed analyses. The result indicates the six most significant factors influencing construction productivity in Afghanistan are: Security (Crime, theft and disorder), Corruption, Poor Scheduling and Coordination, Construction method, Low quality of raw materials, and Payment delays. Based upon these findings, the paper recommends the key drivers for changing the productivity level in the Afghanistan construction industry

Keywords: Afghanistan, construction productivity, relative index

Introduction

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

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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 unfavourable 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.

Literature Review

The concept of *Productivity* is not new and has existed for a long time. It has been applied in many circumstances at various level of aggregation in the past two centuries, especially, in relation to economic systems (Tangen, 2005). Productivity represents one of the most important basic variables governing economic production activities (Singh et al., 2000). Therefore, improving productivity is one of the strategic goals of any profit-oriented organization in order to convert the resources effectively and efficiently into marketable products and determine business profitability (Wilcox *et al*, 2000).

Researchers directed considerable efforts for the definition of productivity and different approaches adopted for the term. Productivity has been generally defined as the ratio of total output to total input, and the capacity to produce and the state of being productive and effective (Olomolaiye et al, 1998). Productivity can also be explained as the ability to satisfy the market needs for goods and services with a minimum of total resource consumption.

A study of the factors, whether positively or negatively is necessary for productivity improvement. In order to eliminate or control those factors that affect productivity negatively and making use of those which have a positive impact (Lema, 1995). Several researchers have investigated the factors affecting construction productivity. Despite such intensive investigation, researchers have not agreed on a universal set of factors with significant influence on productivity; or any agreement has been reached on the classification of these factors. Therefore, it is argued that factors affecting construction productivity are rarely constant, and may vary from country to country, from project to project or even within the same project, depend on circumstances (Olomolaiye *et al*, 1998).

However, Herbsman and Ellis (1990) divided construction productivity influence factors (CPIFs) into technological and administrative factors. The technological factors mostly project design related factors and administrative group factors are related to the management and to the construction of project. CPIFs that can be determined at the preconstruction stage are technological factors. On the other hand, if the value of CPIFs cannot be determined at the preconstruction stage are administrative factors. Another approach to the classification of construction productivity influence factors is suggested by

Olomolaiye *et al* (1998) as external and internal factors. The later classification is adopted in for the study.

Research Design and Methodology

The survey presents 68 productivity related factors generated on the basis of a related research work on construction productivity. These factors were divided into 7 groups based on previous literature in relation to Afghanistan political, economical and social environments, as well as based on similar case studies in Gaza Strip (Enshassi *et al*, 2007), and Iran (Zakeri *et al*, 1996). These groups of factors are; external factors, procurement related factors, manpower factors, management factors, design related factors, project related factors, and materials and tools factors.

The respondents were asked to rank the factors according to the degree of influence, using Likert Scale on a scale of 1 to 5. For analysing of data by ordinal scale, an Importance Index was applied. This index was used for identifying of factors affecting construction productivity in Gaza Strip (Enshassi *et al*, 2007), Thailand (Makulsawatudom and Margaret, 2001), Iran (Zakeri *et al*, 1996), Malaysia (Abdul Kadir *et al*, 2005). The importance index was calculated by the following equation (Lim *et al*, 1995)

$$\text{Importance index} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + n_1}{5(n_1 + n_2 + n_3 + n_4 + n_5)}$$

Where;

Number of respondents who answered: n_1 very low influence, n_2 low influence, n_3 average influence, n_4 high influence, and n_5 , very high influence. Data for this study were collected through a structured survey questionnaire administrated to 50 participants. A total of 16 questionnaires were completed by 11 contractors, 2 consultants, 2 consultants and contractors, and 1 client, represented a response rate of 32 percent. Of those 16 construction stakeholders, the majority were involved in public projects and Housing (Table 1).

Table 1. Type of Projects Undertaken by the Companies

Type of Projects	Weighting	Percentage (%)
Public facilities	15	38
Housing	10	25
Industrial	2	5
Commercial	5	13
Military facilities	3	8
Total	40	100

Characteristic of Respondents

The results in Table 2 indicate the respondents working experience in the construction industry. The majority of respondents have 2 to 5 years experience and only 13 per cent have an experience of 15 years and above.

Table 2. Respondents Working Experience

Years of Experience	Number	%	Years of Experience	Number	%
2 to 5	9	56	10 to 15	2	13
5 to 10	3	19	15 and above	2	13

Due to the complexity of the term *Productivity*, careful attention is paid during the selection of construction stakeholders to ensure the reliability and validity of the data. Respondent's position in table 3 indicates that most of them understand the term construction productivity. In this research, 3 university lecturers, 2 project managers, 1 construction manager, 1 architect, 2 design engineers, 2 senior civil engineers, 1 surveyor, and others are contributed to the survey (Table 3).

Table 3. Respondents Position

Position	Number	%	Position	Number	%
Project managers	2	13	Architect	1	6
Construction managers	1	6	University lecturers	3	19
Senior civil engineer	2	13	Surveyor	1	6
Design engineer	2	13	others	4	25

Results and Findings

68 factors have been identified negatively affecting construction productivity in Afghanistan, and ranked according to their relative importance. These factors have been classified into seven groups. The Importance index (I) for all factors was calculated and then the group index was calculated by taking the average of factors in each group.

External Factors

The results in Table 4 demonstrate that 11 factors under the external factors group negatively influence construction productivity in Afghanistan. Security with an importance index of 0.9375 is ranked as the first factor that has a high influence on construction productivity, ranked in position of 1 of all 68 factors. This result is supported by UNODC and UNOPS (2007), where they found 'Security' as the first constraint, which have negatively and significantly influenced their program during the prison construction and rehabilitation in the country. Based on a survey of construction firms by The World Bank (2009b), security (crime, theft, and disorder) ranked as one of the most 6 important factors that affect construction activities in Afghanistan. The second factor that has a high impact on productivity is corruption with an importance index of 0.8714, ranked in position of 2 of all factors. This result is justified as Afghanistan in terms of its ability to control corruption, is ranked in lowest 0th – 10th percentile alongside Bangladesh, Somalia and Zimbabwe. Construction activities are vulnerable to corruption, especially the procurement process. In Afghanistan, it seems to be common practice to win a bid with offering bribe, without consideration of company's capability and capacity (World Bank, 2009a).

Table 4. Ranking Factors under External Group

External Factors	Imp Index	Rank
Security (Crime, theft and disorder)	0.9375	1
Corruption	0.8714	2
Market inflation	0.7500	3
Access to Finance	0.7375	4
Augmentation of Government regulations	0.7250	5
Judicial system for construction disputes	0.6667	6
Access to utilities (Electricity, Water)	0.6625	7

Local people cooperation (warlords influence)	0.6375	8
Inclement Weather (work stoppage of one day or more)	0.6250	9
Access to land	0.6125	10
Natural disaster (floods, hurricane, landslide)	0.5429	11

Procurement Related Factors

Table 5 shows 4 factors in the group related to procurement. *Payment delay* and *type of project bidding and award (negotiation, lowest bidder)* are ranked, respectively, in position of first and second of procurement factors with an importance index of 0.8125 and 0.7714. *Project cycle* (tendering process) was ranked third; and type of construction contract was ranked fourth.

Payment delay is ranked in position of 6 of all 68 factors affecting construction productivity in Afghanistan. This result is supported by the World Bank (2009a) that they found the lengthy and complex disbursement and payment process discourages some qualified contractors from bidding for jobs. Moreover, the payment system is vulnerable to manipulation and corruption. The process can take as long as four to five months, with technical and non-technical delays.

Table 5. Ranking of Factors under Procumbent Group

Procurement Related Factors	Imp Index	Rank
Payment delay	0.8125	1
Type of project bidding and award (negotiation, lowest	0.7714	2
Project cycle (tendering process)	0.7250	3
Types of construction contract	0.6125	4

Manpower Related Factors

Table 6 illustrates the ranking of the 16 factors in the group related to manpower. The results indicate that the most important factors negatively affecting the productivity of manpower are lack of competition, followed by lack of skill and Communication Problems with Foreign Workers. This result is supported by Rojas and Aravarekul (2003), who they found that both management skills and manpower issues are two areas with the greatest potential for affecting productivity in construction.

Table 6. Ranking Factors under Manpower Group

Manpower Related Factors	Imp Index	Rank
Lack of competition	0.7250	1
Lack of Skill (Lack of labour experience)	0.7125	2
Communication Problems With Foreign Workers	0.6571	3
Difficulty in Recruitment of Supervisors	0.6375	4
Fatigue	0.6250	5
Changing Supervisors	0.5625	6
High Rate of Labour Turnover	0.5467	7
Difficulty in Recruitment of Workers	0.5375	8
Misunderstanding among labour	0.5375	9
Labour personal problems	0.5375	10
Absenteeism at Worksite	0.5333	11

Labour disloyalty	0.5250	12
Labour dissatisfaction	0.5200	13
Changing Workers	0.5000	14
Labour Disruption (e.g. manpower shortages , strikes)	0.5000	15
Increase of labourer age	0.4875	16

Management Related Factors

All management factors have a high influence on construction productivity, and were ranked according to their importance as indicated in Table 7. *Poor scheduling and coordination* with an importance index of 0.8375, is ranked in position of 1, which has a high impact on construction productivity, followed by *financial incentives* and *lack of equipment* in position of 2 and 3 of management group. These three factors, respectively, ranked in position 3, 11 and 16 of all 68 factors affecting construction productivity in Afghanistan. The result indicates that *Poor Scheduling and Coordination* is ranked as the third important factor after security in corruption. This is to confirm that *scheduling* (programming) and *coordination of construction activities* play an important role in completion of any construction projects in time and on budget and should be on the top focus of construction firms.

Table 7. Ranking Factors under Management Group

Management Factors	Imp Index	Rank
Poor Scheduling and Coordination	0.8375	1
Financial Incentives	0.7875	2
Lack of Equipment	0.7625	3
Transportation and mobilization to construction site	0.7625	4
Lack of training sessions for labours	0.7333	5
Stoppages because of insolvency of subcontractors / suppliers	0.7125	6
Availability of project managers	0.7125	7
Inspection Delays	0.7067	8
Stoppages because of disputes with owners / consultants	0.6875	9
Stoppages because of work being rejected by consultants	0.6500	10
Misunderstanding between labour/ superintendents	0.6429	11
Stop work orders because of infringements of government	0.6400	12
Interference from other crew trades or other crew members	0.6400	13
Lack of labour surveillance	0.6375	14
Lack of periodic meeting with labour	0.6250	15
Work Overtime	0.5875	16
Stop-work orders because of site accidents	0.5875	17
Crew Size	0.5500	18
Lack of places for eating and relaxation for labours	0.5067	19

Design Factors

All design factors have a high impact on productivity, and were ranked according to their importance in Table 8. *Drawings and Specification Alteration during Execution* is the most important factor in design group, ranked in position 7 of all 68 factors with an importance index value of 0.8125. This result is justified as the alteration of drawings and specifications during execution requires additional time for adjustments of resources and manpower so the change can be met. Moreover, according to Enshassi *et al* (2007), labour

morale is also affected by extensive numbers of changes. This result is also supported by Thomas (1999), who stated that there is a 30 % loss of efficiency when work changes are being performed.

Table 8. Ranking Factors under Design Group

Design Factors	Imp Index	Rank
Drawings and specifications alteration during execution	0.8125	1
Buildability (ease of construction)	0.7875	2
Rework	0.7875	3
Specification and standardisation	0.7500	4
Supervisors' absenteeism	0.7333	5
Construction law and regulation for quality and safety	0.7250	6

Project Related Factors

The most important factor in this group was *construction method*, followed by *Health and safety* (accidents); and *Working within a confined space* (Table 9). Construction method was ranked in position 4 of all 68 factors negatively affecting construction productivity in Afghanistan. This result is supported by Thomas and Sanders (1991), who found that construction method and project features have a high impact on construction productivity. The result can be justified as *lack of labour skill*, which is ranked in position 2 of manpower related factors, highly inter-related with construction method.

Health and safety with an importance index of 0.800 ranked in position 2 of project related factors. Health and Safety ranked among the 10 most important factors negatively affecting construction productivity in Afghanistan. These results were supported by Thomas and Sanders (1991), who found that accidents have a significant impact on labour productivity.

Table 9. Ranking Factors under Project Group

Project Related Factors	Imp Index	Rank
Construction method	0.8375	1
Health and safety (accidents)	0.8000	2
Working within a confined space	0.6375	3

Materials and Tools Factors

The results in Table 10 demonstrate 9 factors in the Materials/Tools Group and were ranked according to their importance. Findings indicate that *Low quality of raw materials* with an importance index of 0.8375 is the most important of all Materials and Tools factors. This factor ranked in position of 5 all 68 factors affecting Construction productivity in Afghanistan. Delay in material's deliveries to site is ranked in position 2 of Materials/Tools Group. This is mainly due to the security problem in the country, which cause road closure to the construction site, as well as lack of adequate infrastructures can be the reason for delay in materials delivery.

Results also indicate that the Shortage of materials are not considered to be as important as other factors, and were ranked in position of 10 of all 68 factors. While, shortage of material in the Gaza Strip (Enshassi *et al*, 2007), Iran (Zakeri *et al*, 1996), Indonesia (Kaming *et al*, 1997) discovered as the most important factors affecting construction productivity. The result might be justified, due to the security and corruption

problems in the country, which are ranked, respectively, in position of 1 and 2 of all 68 factors, are outweighed by the shortage of materials.

Table 10. Ranking Factors under Materials and Tools Group

Materials and Tools Factors	Imp	Rank
Low quality of raw materials	0.8375	1
Delays in materials' deliveries to site	0.8125	2
Materials' Shortages	0.8000	3
Tools and equipment shortage	0.7714	4
High quality of required work	0.7250	5
Inefficiency of equipment	0.7067	6
Delays due to interference with other crews	0.7000	7
Incidences (e.g. equipment breakdown, planning errors)	0.7000	8
Congested work area	0.6500	9

Overall Ranks of All Factors

The result in table 11 demonstrate that 6 factors of all 68 factors identified as the most important factors negatively affecting Construction productivity in Afghanistan, which are ranked according to their importance as follows; Security (Crime, theft and disorder), Corruption, Poor Scheduling and Coordination, Construction method, Low quality of raw materials, and Payment delay. On the other hand, results indicate that Labour dissatisfaction, Lack of places for eating and relaxation for labours, Changing Workers, Labour Disruption (e.g. manpower shortages, strikes), and Increase of labourer age were identified as the 5 lowest factors negatively affecting construction productivity.

Table 11. Overall Ranking of Factors

Factors	Imp Index	Rank
Security (Crime, theft and disorder)	0.938	1
Corruption	0.871	2
Poor Scheduling and Coordination	0.838	3
Construction method	0.838	4
Low quality of raw materials	0.838	5
Payment delay	0.813	6
Drawings and specifications alteration during execution	0.813	7
Delays in materials' deliveries to site	0.813	8
Health and safety (accidents)	0.800	9
Materials' Shortages	0.800	10
Financial Incentives	0.788	11
Buildability (design of a building facilitates ease of construction)	0.788	12
Rework	0.788	13
Type of project bidding and award (negotiation, lowest bidder,)	0.771	14
Tools and equipment shortage	0.771	15
Lack of Equipment	0.763	16
Transportation and mobilization to construction site	0.763	17
Market inflation	0.750	18
Specification and standardisation	0.750	19

Access to Finance	0.738	20
Lack of training sessions for labours	0.733	21
Supervisors' absenteeism	0.733	22
Augmentation of Government regulations	0.725	23
Project cycle (tendering process)	0.725	24
Lack of competition	0.725	25
Construction law and regulation for quality and safety	0.725	26
High quality of required work	0.725	27
Lack of Skill (Lack of labour experience)	0.713	28
Stoppages because of insolvency of subcontractors / suppliers	0.713	29
Availability of project managers	0.713	30
Inspection Delays	0.707	31
Inefficiency of equipment	0.707	32
Delays due to interference with other crews	0.700	33
Incidences (e.g. equipment breakdown, planning errors)	0.700	34
Stoppages because of disputes with owners / consultants	0.688	35
Judicial system for construction disputes	0.667	36
Access to utilities (Electricity, Water)	0.663	37
Communication Problems With Foreign Workers	0.657	38
Stoppages because of work being rejected by consultants	0.650	39
Congested work area	0.650	40
Misunderstanding between labour/ superintendents	0.643	41
Stop work orders because of infringements of government	0.640	42
Interference from other crew trades or other crew members	0.640	43
Local people cooperation (warlords influence)	0.638	44
Difficulty in Recruitment of Supervisors	0.638	45
Lack of labour surveillance	0.638	46
Working within a confined space	0.638	47
Inclement Weather (require work stoppage of one day or more)	0.625	48
Fatigue	0.625	49
Lack of periodic meeting with labour	0.625	50
Access to land	0.613	51
Types of construction contract	0.613	52
Work Overtime	0.588	53
Stop-work orders because of site accidents	0.588	54
Changing Supervisors	0.563	55
Crew Size	0.550	56
High Rate of Labor Turnover	0.547	57
Natural disaster (floods, hurricane, landslide)	0.543	58
Difficulty in Recruitment of Workers	0.538	59
Misunderstanding among labour	0.538	60
Labour personal problems	0.538	61
Absenteeism at Worksite	0.533	62
Labour disloyalty	0.525	63
Labour dissatisfaction	0.520	64
Lack of places for eating and relaxation for labours	0.507	65
Changing Workers	0.500	66
Labour Disruption (e.g. manpower shortages , strikes)	0.500	67
Increase of labourer age	0.488	68

Comparing Productivity Problem

Productivity problems are differed from country to country. In order to compare the results obtained previously in other countries with the result of this study, six factors have been selected, which were also highlighted by other authors in Gaza Strip (Enshassi *et al*, 2007), Iran (Zakeri *et al*, 1996) and UK (Kaming *et al.*, 1997). It was revealed that lack of materials, which is the most important problem in the UK, Gaza Strip, and Iran, is relatively not important in Afghanistan, and was ranked in position of 10 of all 68 factors. This might be due to lack of security and lack of capacity in public and private sector which are found to be more serious in Afghanistan than the comparator countries. It is reasonable to conclude that Afghanistan and Gaza Strip have fewer problems with absenteeism, while it is ranked 6th and 7th in the UK and Iran respectively. Considering developed and developing countries separately, it was concluded that developing countries suffer more from rework at about the same level.

Table 12. Productivity Problems in Several Countries

Productivity Problems	Rank	Rank	Rank	Rank
	UK	Iran	Gaza Strip	Afghanistan
Lack of material	1	1	1	10
Interference	2	12	24	33
Rework	3	10	11	13
Supervision delays	4	6	8	22
Lack of equipment	5	5	10	16
Absenteeism	6	7	41	62

Ranking Groups Negatively Affecting Construction Productivity

The 7 groups of factors that affect construction productivity are ranked in table 13. It is noted that design factors with an importance index of 0.7666 ranked in position of 1 of all 7 group factors. This result is justified, as the separation of design and build in procurement process, which is a common practice in Afghanistan, causing alteration of drawings and specifications during the implementation of the projects. Also it was found that Buildability and rework is arising as a consequence of the separation of design and build.

Project related factors with an importance of 07583 are ranked in position of 2. This result is acceptable due to the lack of skill and lack of capacity in public and private sector, which are more serious in Afghanistan

Table 23. Ranking Factors Negatively Affecting Productivity among Groups

Factors Group	Imp Index	Rank
Design factors	0.7660	1
Project related factors	0.7583	2
Materials and tools factors	0.7448	3
Procurement related Factors	0.7304	4
External Factors	0.7062	5
Management factors	0.6721	6
Manpower related Factors	0.5715	7

Recommendations

Although, lack of security and corruption is ranked in position of 1 and 2 of all 68 factors negatively affecting construction productivity in Afghanistan but, the research revealed that most of the problems are related to Design and Project groups. Lack of Construction Company's managerial and technical capacity coupled with lack of integration between design and build found to be the most important factors negatively affecting construction productivity in Afghanistan after security and corruption. Separation of design and build in most capital projects are responsible for most of the problems causing alteration of drawings and contracts, and rework. The study concludes that the level of productivity can be improved if the construction stakeholders (Public and Private) achieve the followings:

- Fight corruption and improve security
- Introducing of new procurement method such as PPP/PFI in major capital projects in order to facilitate integration between design and construction.
- Developing of new codes for engineering design
- Enforcement of quality standards to construction projects
- Increase the level of technical and managerial skills of site managers and engineers by providing long term and short term trainings.
- Adequate scheduling and programming
- Adequate assessment of risks and constraints such as security, alteration of design and payment delay before undertaking of construction projects.

Conclusion

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;

- | | |
|--|--------------------------------------|
| 1 Security (Crime, theft and disorder) | 6 Payment delay |
| 2 Corruption | 7 Drawings and specifications |
| 3 Poor Scheduling and Coordination | 8 Delays in materials' deliveries to |
| 4 Construction method | 9 Health and safety (accidents) |
| 5 Low quality of raw materials | 10 Materials' Shortages |

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.

- | | |
|--------------------------------|-----------------------------|
| 1. Design factors | 5. External Factors |
| 2. Project related factors | 6. Management factors |
| 3. Materials and tools factors | 7. Manpower related Factors |
| 4. Procurement related Factors | |

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