FACTORS EFFECTING THE FAILURE ANALYSIS OF CONSTRUCTION PROJECTS

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ABSTRACT

Objective: Aim to bring out the contributions of the major factors that are leading to failure of the construction projects around the city thus providing a better understanding of aspects to be considered while initiation of a construction projects. Methodology: The survey was planned taking into account the all basic elements bringing about the disappointment of development undertakings. The positioning depended on a sliding scale from 1 to 5, where 1 was the slightest and 5 was the most genuine. Findings: This analysis attempts to elicit the perceptions of construction professionals by revisiting some of these critical factors causing the failure of construction projects. A triangulated data collection approach involving some questionnaires was administered to construction professionals to elicit their perceptions on the 20 factors causing the failure of the construction projects. Applications: This is applied to bring out the contributions of the major factors that are leading to failure of the construction projects around. Thus providing a better understanding of aspects to be considered while initiation of a construction projects in future.

Key words: Construction Company, sliding scale, construction project, failure factors, Indian construction.


1. INTRODUCTION

Recently emerging construction projects have been showing detrimental progress. This study or analysis gives an insight to the causes of failure of these projects on a deeper perspective not just confined to the peripheral factors. The analysis performed would be on the data of the projects provided by various construction projects1. The data obtained from the projects which were constructed by renowned players across the Geography.
The achievement and disappointments of organization is not to a great degree troublesome furthermore cause huge impacts in an economy. Development organizations are helpless against insolvency because of divided nature of industry, high vulnerability, high rivalry, hazard included and impressive changes in development volume. To perceive potential organization achievement and disappointments at the soonest opportunity is imperative.

Much can be scholarly through the disappointment of structures as opposed to investigation of structures; the correct valuation for the reasons for disappointment helps us to refocus on our applied comprehension of basic conduct. We could then evaluate our logical models, which are key for effective outline practice, and help us to practice appropriate designing judgment.

To have the capacity to finish a fruitful development Failure Investigation, a specialist ought to choose steps and methodology that will perform two things.

- Figure out what happened and why (considering different components prompting what happens)
- Give recommendation on the best way to keep it from happening once more.
- This analysis attempts to elicit the perceptions of construction professionals by revisiting some of these critical factors causing the failure of construction projects.

2. METHODOLOGY
The questionnaire was designed based on the extensive literature review and encompassed all the critical factors causing the failure of construction projects. Ranking of 20 critical factors categorised into the following five groups as follows: the respondents were asked to provide the ranking of each of the 20 critical factors that may lead construction projects to failure. The ranking was based on a sliding scale (based on the severity of extent) from 1 to 5, where 1 was the least serious and rank 5 as the most serious.

Survey administration the questionnaire and responses were distributed and received via papers. The targeted key respondents were drawn from the construction industries including officials in government; managers; consultants; designers and site supervisors working for construction companies.

Pie charts are plotted using the averages of values generated from the LIKERT scale. The pie charts depict the contributions of each

Factor in the failure of a project. Based on the factors contributing more towards the failure of the project. Recommendations will be provided to mitigate the factors while execution there by making a project successful. The detail methodology was given in Figure 1.
3. FACTORS CAUSING FAILURE

Organization achievement and disappointment is not greatly troublesome to an industry but rather additionally cause huge impacts in an economy. Development organizations are dangerous to liquidation because of the divided way of industry, high vulnerability, high rivalry, hazard included and impressive variances in development volume. It is essential to perceive any potential organization achievement and disappointments at the soonest.

3.1. Factors that are causing the failure of various projects:

The data will be collected with the help of questionnaire consisting of the below factors.

1. Poor design capacity and frequent design changes
2. Financial difficulties of contractor
3. unsuitable construction methods
4. Incompetence of project team
5. Poor site management and supervision
6. Slow payment of completed works
7. Financial difficulties of owner
8. Corruption
9. Bureaucratic administrative system
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10. Interest and inflation rates
11. Lack of accurate historical information
12. Unpredictable government policies and priorities
13. Lack of experience in complex projects
14. Inadequate legal framework
15. Incompetent subcontractors
16. Slow site handover
17. Defective works and reworks
18. Owners’ site clearance difficulties
19. Lack of capable owners
20. Improper planning and scheduling

We can broadly classify the factors into these major heads, Results and analysis are shown in Table 1

<table>
<thead>
<tr>
<th>S.No</th>
<th>Particulars</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>KNOWLEDGE AND TECHNICAL ISSUES</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Poor design capacity and frequent design changes</td>
<td>1.4</td>
</tr>
<tr>
<td>i</td>
<td>Influence Of Obsolete or unsuitable construction methods</td>
<td>1.2</td>
</tr>
<tr>
<td>ii</td>
<td>Lack of accurate historical information</td>
<td>1.2</td>
</tr>
<tr>
<td>iv</td>
<td>Lack of experience in complex projects</td>
<td>1.1</td>
</tr>
<tr>
<td>V</td>
<td>Influence Of Incompetent subcontractors</td>
<td>2.3</td>
</tr>
<tr>
<td>vi</td>
<td>Defective works and reworks</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>MANAGEMENT ISSUES</td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>Incompetence of project team</td>
<td>1.5</td>
</tr>
<tr>
<td>li</td>
<td>Poor site management and supervision</td>
<td>1.9</td>
</tr>
<tr>
<td>lii</td>
<td>Influence Of Bureaucratic administrative system</td>
<td>2</td>
</tr>
<tr>
<td>Iv</td>
<td>Slow site handover</td>
<td>2.2</td>
</tr>
<tr>
<td>V</td>
<td>Lack of capable owners</td>
<td>1.9</td>
</tr>
<tr>
<td>Vi</td>
<td>Improper planning and scheduling</td>
<td>1.8</td>
</tr>
<tr>
<td>3</td>
<td>FINANCIAL AND ECONOMIC ISSUES</td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>Financial difficulties of contractor</td>
<td>2.8</td>
</tr>
<tr>
<td>li</td>
<td>Slow payment of completed works</td>
<td>2.9</td>
</tr>
<tr>
<td>lii</td>
<td>Influence Of Financial difficulties of owner</td>
<td>2.5</td>
</tr>
<tr>
<td>Iv</td>
<td>Interest and inflation rates</td>
<td>2.4</td>
</tr>
<tr>
<td>4</td>
<td>SOCIAL AND LEGAL ISSUES</td>
<td></td>
</tr>
<tr>
<td>i</td>
<td>Influence Of Corruption</td>
<td>1.3</td>
</tr>
<tr>
<td>li</td>
<td>Unpredictable government polices and priorities</td>
<td>1.3</td>
</tr>
<tr>
<td>lii</td>
<td>Influence Of Inadequate legal framework</td>
<td>1.5</td>
</tr>
<tr>
<td>iv</td>
<td>Influence Of Owners’ site clearance difficulties</td>
<td>1.2</td>
</tr>
<tr>
<td>5</td>
<td>NATURAL PHENOMENON</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Table 1 Results and analysis

4. KNOWLEDGE AND TECHNICAL ISSUES

- Poor design capacity and the frequent design changes
- Lack of experience in executing complicated projects
- Poor performance of contractors/ sub-contractors
- Lack of knowledge and ability in managing construction projects
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4.1. Management Issues
- Disregard of the significance of project planning process and poor project planning
- Lack of a systematic approach to manage the project and entire organisation
- Improper planning and scheduling play a major part in misleading the costs of activities that result in huge expenses.

4.2. Financial and economic issues
- Lack of financial capacity of owner
- Economic volatility and high inflation
- The delay in payment

4.3. Social and Legal Issues
- Corruption and bribery in construction projects
- Influence of Unpredictable government polices and priorities
- Influence of Inadequate legal framework
- Influence of Owners' site clearance difficulties.

The following factors are being considered for analysis of failure in various construction projects going. The data will be collected with the help of questionnaire consisting of the above factors. The Rating of Factors contributing to failure are tabulated in Table 2. Contribution of various factors towards failure is shown in Figure 2.

Table 2 Rating of Factors contributing to failure

<table>
<thead>
<tr>
<th>S.No</th>
<th>Factors</th>
<th>Contribution Towards Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Knowledge And Technical Issues</td>
<td>9.2</td>
</tr>
<tr>
<td>2</td>
<td>Management Issues</td>
<td>11.3</td>
</tr>
<tr>
<td>3</td>
<td>Financial And Economical Issues</td>
<td>10.6</td>
</tr>
<tr>
<td>4</td>
<td>Social And Legal Aspects</td>
<td>5.3</td>
</tr>
<tr>
<td>5</td>
<td>Natural Phenomenon</td>
<td>1.2</td>
</tr>
</tbody>
</table>
Factors Effecting The Failure Analysis of Construction Projects

5. CONCLUSIONS

From the analysis of the data received from various construction projects going around the following results were interpreted, While a project is being initiated or executed the company or the project manager has to keep the following points to ensure the project runs without any problems during the various phases. This accounts to about one-quarter of the failure i.e., 25% of failures occur due to the knowledge and technical issues such as Poor design capacity and the frequent design changes, Lack of accurate historical information, Lack of experience in complex projects, Influence of Incompetent subcontractors, Defective works and reworks. The firm has to keep in mind the sub contractors whom the work is being assigned to and their area of expertise. As the incompetent sub contractors contribute as much as 6% to the failure of project. The company has to have a very thorough check up of the contractors by checking the contractor’s previous works and his conduct certificate. Management of any firm forms the skeleton of the company. An improper and incompetent management always end the project in huge losses. So a firm needs good management for any project to succeed and it should be led by qualified professionals. While analysis the management issues we have considered the following aspects Influence of Incompetence of project team, Influence of Poor site management and supervision, Influence of Bureaucratic administrative system, Influence Of Slow site handover, Influence Of Lack of capable owners, Influence Of Improper planning and scheduling. The management has to take care of slow site hand over and poor site management. They contribute to about 11% towards the failure of a project. The site management for any company plays an important role in curbing the cost and reducing the damage to the property. This can be achieved by employing best techniques. The cost or the money involved in executing a work decides the progress of the work. The firm will try to minimise the cost to be incurred while executing a project. Various factors shape the financial status of a project. We have considered the following aspects to determine the aspect that plays the spoil sport. Various factors such as financial difficulties of contractor, slow payment of completed works, financial difficulties of owner, Interest and inflation rates were taken for the study. Through the analysis of all the above factors it is evident that “Slow payments from

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the Client” and the “Financial difficulties of the contractor” are contributing to as much as 15% towards failure. These following factors have to be taken into consideration and before starting a project the company has to keep in mind the financial aspect such as the capital needed and sources of finance. If the contractor is unable to finance the project the works will run behind schedule which ultimately cause cost over runs which on the whole contributes to the failure of any project. The success of the projects does not depend only on the internal factors but also on the external factors which is beyond the control of the firm. Factors such as Corruption Unpredictable government polices and priorities, inadequate legal framework, Owners site clearance difficulties. The factor that is mainly contributing towards the failure of the projects is inadequate legal framework and it contributes as much as 4% towards the failure. so the firm entering into the contract has to be aware of all the legal aspects pertaining to the contract or else it leads to the termination of contract which induces heavy loses towards the contractor as well as the client.

REFERENCES


