A STUDY ON EXPLORING COST COMPONENTS OF CONSTRUCTION INDUSTRY WITH SPECIAL REFERENCE TO QOBALT SOFTWARE TECHNOLOGIES PVT, LTD

Mr. Balaji HV

Dr. Shreelatha H R

PG Research Scholar, Department of Management Studies,

Global Academy of Technology, Bengaluru – 560 098

Associate Professor, Department of Management Studies,

Global Academy of Technology, Bengaluru – 560 098

Abstract: This study aims to explore the cost components of the construction industry, with a specific focus on Qobalt Software Technologies Pvt, Ltd. The construction industry is known for its complex cost structure, involving various elements such as labour, materials, equipment, and overhead expenses. Understanding these cost components is essential for effective budgeting, cost control, and decision-making within the industry.To explore the method of managing various cost in construction industry. And To Provide the Result of the Study to Qoubalt Software for Developing Software that will Suite Construction Industry. The study utilizes a comprehensive research design, combining qualitative and quantitative approaches. Primary data is collected through interviews and surveys the analysis of the data involves identifying the major cost components and their relative importance within the construction industry. Additionally, the study investigates the cost drivers, challenges, and potential opportunities for cost reduction and efficiency improvement. The findings of this research will provide

Key words: Cost components, Cost estimation, Cost tracking, Cost monitoring, Decision-making

INTRODUCTION

One of the major challenges in any construction project is tracking expenses and risk while staying within budget. Finding ways to perform all of these things efficiently makes a tremendous difference when it comes to completing a project on time and on budget. Streamlining your cost management procedure is one of the most crucial efficiencies you can achieve to position yourself for successful project outcomes. This could have an impact on your team's productivity, the bidding process, change order management, and ultimately, your bottom line. Here's a look at all things construction cost management, including what it is, why it matters, how to improve it, and how having the appropriate processes in place can set you up for success.

STATEMENT OF PROPLEM

There is a lack of research on exploring the cost components of the construction industry and how software solution like Qobalt can help in reducing costs. Therefore, this study aims to investigate the cost components of the construction industry and understand how Qobalt software technologies Pvt Ltd can help in reducing costs for construction industry.

OBJECTIVE OF THE STUDY

1. To explore the method of managing various cost in construction industry.
2. To Provide the Result of the Study to Qoubalt Software for Developing Software that will Suite Construction Industry

REVIEW OF LITERATURE

1. (C. K. Tembo, 2022)One of the most crucial factors in determining a project's success through cost management is cost. There are different stages of cost management that call for the use of cost, design, time, and information-related parameters by qualified and experienced people. Due to the subjective and inaccurate character of the methods, expert judgement and meetings are both used for planning in the construction industry

2. (OSOBAJO, 2022)The study's conclusions indicate that numerous research on CE in the construction sector have concentrated on resource consumption and waste management. Research on CE impacts in areas such as supply chain integration, building designs, policy, energy efficiency, land use, offsite manufacturing, cost reduction and cost management, whole life costing, and risk, health, and safety is scarce, as is evident from the research on CE in the construction industry.

3. (Toosi, 2021)The strategy that is suggested in this paper can be used to locate, budget, monitor, and review the conditions of competitors. Making better and more meaningful management decisions, taking corrective action, and reporting. This suggested approach facilitates in accordance with the routine of project planning and control procedure and is simple enough for project managers and project control professionals to understand. The suggested solution lessens project managers' reliance on numerous reports of project control and accounting at various periods with various languages and knowledge

4. (Liang Chen1, 2021)The emergence of the big data era will lead to the development of a new management model for the construction sector and the widespread use of numerous developing technologies, which will present both opportunities and obstacles for everyone's progress. Big data may help businesses monitor the market and make decisions, as well as efficiently address the issue of overcapacity.

5. (A M Faten Albtoush, 2020)According to the literature analysis conducted for this study, the following criteria have the most impact on cost management: Poorly defined scope, inaccurate activity cost estimates, and poorly defined work breakdown structures A scheduling change, unrealistic deadlines stipulated in contracts, a lack of effective project budget updates, Lack of sufficient project manager training and experience not using management software and project management tools like Primavera.

RESEARCH DESIGN

Type of research: The practise of summarising and presenting data in a form that describes its fundamental properties or characteristics is known as descriptive analysis. This kind of research seeks to offer a clear and succinct overview of the data, highlighting any potential patterns, trends, and distributions.

Source of data

Primary data is defined as information gathered directly from a source for a construction industry research effort or investigation. This kind of information is unique and hasn't been published or examined by anyone else before.

Data analysis methodology

- The collected data is analysed using Microsoft Excel and SPSS software
- The data has been analysed by using statistical tool Chi square Test and Simple percentage analysis is used to analysed data

HYPOTHESIS

- H0: There is no Significant Association between Business model Applied for construction industry and method used for cost estimation
- H1: There is a Significant Association between Business model Applied for construction industry and method used for cost estimation

DATA ANALYSIS AND INTERPRETATION

Contingency Tables								
Contingency Tables								
		D						
A		**Which business model are you applying?**		**2**		**1**		**Total**
which method is used for cost estimation		1		0		0		1
5		0		2		14		16
4		0		0		2		2
3		0		1		21		22
2		0		0		9		9
1		0		1		0		1

Total		1		4		46		51	
x^2 Tests									
		Value		**df**		**p**			
x^2		64.5		10		< .001			
N		51							

Interpretation:

The chi-square test is a statistical method in order to determine whether there a significant association between two category variables. The test statistic (2) result for the chi-square test employed in this study was 64.5 with 10 degrees of freedom. Given that the associated p-value is less than 0.001, the association between the variables is very significant. As a result, we reject the null hypothesis and come to the conclusion that there is a very strong association between the two category variables under analysis.

Conclusion:

The study's goal was to examine the cost elements influencing the Construction industry and determine how Qobalt Software Technologies Pvt. Ltd. may contribute to cost savings. Several significant findings were achieved through descriptive analysis and primary data collecting from a sample of 50 respondents utilising judgemental and snowball sampling procedures. There is a gender gap in the construction business, as seen by the preponderance of male respondents. Additionally, the majority of responders had earned their diploma, demonstrating that sector professionals had reasonably high educational qualifications. Expert judgement was the method for cost estimation that is most usually employed, followed by examination of historical cost data. This demonstrates how the building business relies on experience and historical data to estimate prices. The majority of respondents chose construction management as their preferred business model above design-build and design-bid-build models. This shows that the industry has a strong preference for management-oriented methods.

Respondents largely relied on historical rates and average rates for the project's lifetime when determining resource rates. The consideration of actual vendor bids was significantly less. This implies the value of using historical data and project-specific variables to set resource rates. Land and labour were recognised as direct expenses in the building sector in terms of cost components, whereas development fees and transaction costs were recognised as indirect costs. The majority of respondents thought the management reserve was a fund created by the project owner. However, a sizeable portion also thought it. by the contractor be set aside. This demonstrates some disparities in perspectives on and methods for managing reserves. Cost overruns were found to be mostly caused by scope creep, followed by inaccurate spending tracking. This emphasises the difficulties in properly controlling project scopes and tracking expenses.

When handling debits against vendors, the majority of respondents preferred deducting the amount from subsequent payments to the vendor. This strategy was considered to be standard among contractors. According to the study, based on the contractor's preference, the debited amount would either add up to the current budget head of work activity or be taken into consideration under a different budget head. The construction industry's most popular technique for cost monitoring was activity-based costing, which comprised using value engineering. This implies the significance of these techniques for efficient cost monitoring and management. The results produce the realisation that construction industry faces a variety of difficulties related to cost, and that Qobalt Software Technologies Pvt. Ltd. may be able to assist in decreasing costs through their software solutions. The Study provides insightful data for practitioners, business experts, and Qobalt Software Technologies Pvt. Ltd to comprehend cost patterns and pinpoint areas where software solutions might help the construction industry cut costs.

REFERENCES

1. C. K. Tembo, F. M. (2022). An appraisal of cost management techniques used in the construction industry. International Journal Of Construction ManagemenT, 1-11. doi:10.1080/15623599.2022.2132355

2. OSOBAJO. (2022). A systematic review of circular economy research in the construction industry. Smart and Sustainable Built Environment, 11(1), 1-45. doi:10.1108/SASBE-04-2020-0034

3. Toosi, H. (2021). A New Cost Management System for Construction Projects to increase Competitiveness and Traceability in a Project Environment. 24(1), 31-47. doi:10.6018/rcsar.357961

4. Liang Chen1, *. a. (2021). pplication of Big Data Technology in Cost Management and Control in Construction Project. Conference Series, 1881(022036), 1-6. doi:10.1088/1742-6596/1881/2/022036

5. A M Faten Albtoush, S. I. (2020). Factors Effecting The Cost Management In Construction Projects. IJCIET, 11(1), 105-111. Retrieved 04 20, 2023, from http://www.iaeme.com/ijciet/issues.asp?JType=IJCIET&VType=11&IType=1