



## Article

# Assessing the Improvement of Management Efficiency in Construction Companies

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**Abstract:** This study evaluates modern methods for improving management efficiency in construction companies in Uzbekistan, addressing the challenges posed by dynamic industry demands and evolving practices. While existing research highlights management issues in construction, limited studies focus on the Uzbek context. This research aims to fill this gap by identifying effective strategies tailored to local industry needs. Using surveys and interviews with industry stakeholders, the study analyzes current practices and identifies key areas for improvement. Results propose strategic directions to enhance operational efficiency and decision-making processes. These findings offer practical implications for boosting competitiveness and sustainability in Uzbekistan's construction sector.

**Keywords:** Construction companies, Management effectiveness, Strategic planning, Technological innovations, Efficiency enhancement, Competitiveness, Project management, Corporate culture, Economic stability, Market analysis

## 1. Introduction

The construction industry, as one of the locomotives of the global economy, has significant economic and social importance. Enhancing efficiency in this sector not only contributes to national but also to global economic stability. Moreover, modern construction companies face complex ecological and social challenges. Addressing these challenges and increasing competitiveness necessitate the implementation of effective management systems [1]. Currently, the methods of improving management efficiency in construction companies are diverse. International experience shows that the exchange of management strategies and technologies implemented in various countries significantly contributes to productivity enhancement. Therefore, assessing and forecasting the trends in improving management efficiency in construction companies is currently of great relevance.

Improving management efficiency in construction companies is crucial for the development and competitiveness of the sector. In recent years, the scale and quality of construction activities have significantly increased, positively affecting the country's economic development. However, despite the rapid growth in the sector, management efficiency issues remain critically important in many construction companies. The sub optimization of management systems, inefficient resource allocation, and problems in project management decrease corporate efficiency and hinder overall competitiveness [2].

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The construction industry, a vital sector of the global economy, also holds strategic importance in Uzbekistan. According to the State Statistics Committee, the growth rates in the construction sector have averaged 9-11% annually over the last five years, with the sector's share in the gross domestic product exceeding 10% in 2023, which is 2% higher than in previous years. Such growth is largely associated with state expenditure in infrastructure and the setting of the appropriate wheels for the private sector to start rolling. However, management efficiency problems hereby remain a cause of severe challenges in construction companies. The need to integrate proper management systems in construction

This phenomenon of globalization is becoming more vivid in the modern world affecting the activity of companies. Studies that were done in the country reveal that there is evidence that a number of organizations are not actually applying most contemporary management techniques. This situation which result in project delay, cost blowouts, and quality compromise. Moreover, this is the situation that major construction companies encounter major problems; ranging from ways to enhance management and obtain efficiency and competitiveness. Adopting enhanced advanced technologies are management techniques as applied to the economical use of time to expedite projects and shorten their durations. and thus, factors that allow for cost control and enhancement of the project costs are necessary [3].

Assessing and predicting the potential enhancing of management efficiency within our decision making for its country's construction companies and enhancing the advanced international practices. and the identification of effective and innovative practices still remains an essential practice. Also, it is possible to continue its development as the collaboration between manufacture business of Thailand and other countries and determine their possible linkage. improve pecuniary effectiveness is needed .

The aim of this research is to assess practices put in place in our country's construction firms to increase the effectiveness of management, evaluate the achievements and challenges in this area and define the measures that can be used in the future by using some sort of comparison with other countries experiences [4]. Literature review. Explorations that have been carried out with the aim of evaluating and predicting the level and trend of management efficiency in construction firms provide a collection of theories and practices. For example, the use of efficiency when asking solutions to management is understood in different ways between economic theories.

Taylor's scientific management theory is applied in most construction organizations. Taylor introduced techniques of organizing the corporate structure for the purpose of achieving the optimum productivity by means of work simplification and the training of worker to achieve higher level of productivity. Contrary to the theory of constraint, this theory assists the building construction sector in streamlining activities and reducing project duration. Henri Fayol divided management into five main functions: planning, organizing, staffing, coordination and controlling. Effective performance of these roles in construction organizations guarantees that projects are accomplished on the right time and cost.

Max Weber was an advocate of bureaucratic management model where management must be transparent in their organizations. Within the construction industry, firms that are based on this theory have well-coordinated paperwork procedures and top-down organizational structure, which keep things more precise and explain the nature of the project [5]. Since construction companies are involved in a highly competitive industry, application of practices based on Porter's competitiveness model and Kotter's change management theory form the basis of developing strategies for enhancing efficiency in the companies.

A systematic approach enhances the growth of extensive analysis in management. According to this theory, construction companies co-ordinate various projects for

achievement of organisational goals, provide optimum resources and control problems. Widespread postmodern management theories, which include system theory, total quality management, and the change management theory, including Kotter's eight-phase change model, recommend integrated and adaptive approaches in construction management projects. These foster teamwork, systems approach thinking and the enactment of change solutions within the organisation [6].

TQM is especially important to the construction domain because it requires controlling quality throughout the entire process – from the beginning to the end. TQM embraces customer requirements, incremental improvement to organizational work processes and prevention of defects. Lean Construction is an extension of the concept of "Lean", which deals with efficiency both in terms of resources as well as work processes to be carried out most effectively and efficiently by the workers on a construction site. Lean principles are also common in project management and deadlines management.

They are especially useful in large and complicated construction projects due to the principles formulated in the methodologies. These approaches enable the project teams to be adaptable as well as improving on the value of communications with the clients during the project. The nature of business organization's corporate culture and its effects on management efficiency is another important aspect of the contemporary theories. Culture influences such factors as, practices at the management level, practice within the organization and motivation practices within the team thus enhancing work output.

Foreign literature, in particular, offered numerous empirical findings on ways to enhance the management efficiency in construction firms. For example, Kaizen and JIT (Just-In-Time) are some of the appropriate methods, which has been used to enhance the handling of construction projects in Japan. Likewise, the efficient management practices adopting ecological sustainability in Scandinavian countries are vital for high efficiency. In Uzbekistan there is some research and scientific studies on enhancing management efficiency in construction companies. For instance, the investigations made at the Tashkent State Technical University suggest the adoption of new IT technologies to increase effectiveness of resource management in construction firms [7].

Every theory and practice describes distinct ways to improve management effectiveness of construction enterprises. It is therefore decisive that these theories are best applied to the construction sector of a given nation or state in order to boost the competitiveness of a certain undertaking or firm. While comparing the views of various authors a number of issues concerning the application of management models can be estimated as questionable. For example, cultural and institutional factors should be taking into consideration when using these models. However, it is often the case that the effectiveness of the methods under discussion proposed in academic literature may not give enough concrete details, which remains a topic for further research and implementation in applied practice [8].

## **2. Materials and Methods**

The research used logical comparison method of generalizations, scientific discourse, systematic approaches, statistical and comparative analysis. Besides, to analyze the qualitative data, the content analysis and thematic analysis methods were applied. Analysis and results. In this case, there are several important factors that should be taken into account when considering the methods of evaluating and predicting the improvement of management efficiency in construction companies. This includes among them; Financial management, human resources management and Technological advancement – which are key in the implementation of construction projects [9].

### 3. Results and Discussion

One of the most important areas in improving the organizational efficiency discovered in the construction firms is the management of resources. This involves the proper allocation of one or several resources like money, resources, time or workforce for a number of projects [10]. For instance, the application of the project management software adoption is common among developed countries for enhancing top management of construction firms. Controlling resources is further facilitated easy to use modern project management software like the Microsoft Project or Primavera. These programs enable one to determine the amount of resource to allocate to a project, to monitor the usage of the resource as well as make necessary changes.

Evaluating the projects and planning the resource acquisition and allocation demands an evaluation the significance of each project as well as the resources that would be necessary. It is possible to decide on funding programs that require it since one gets to see which areas must be funded. Also, flexible planning methods enable the use of resources in the way that the plan takes into consideration events that may affect the usage of resources and this is essential in managing projects. This method makes it possible to replace resources as soon as there are limitations to their availability [11].

Implementation of same machinery for similar types of work, or utilization of specialized human resource on different projects are optimal in resource use. Strong management of materials and supplies helps to achieve most project deadlines and remain on budget. Relationships with suppliers should be good and suppliers should be made reliable. Resource management regarding a variety of courses enables the ongoing construction processes during unexpected occurrences. Through the appropriate utilization of resources, construction firms can effectively plan their projects, minimize spending and satisfy clients needs [12].

Where efficiency in management is concerned financial management is of significant importance because the foundations for project and financial success and company development are established herein. Strategies for enhancing the working of construction firms in the area of operating a financial controllable are summarized in Table 1 below.

Table 1. Key strategies for optimizing financial management in construction companies\*

Strategies	Outcome
Budgeting and forecasting	It is crucial for a proper definition of the budget for each project and updating it in a strict timetable. essential. This process identifies the project's financial plan as it determines where the cash flows from and to. The primary KPIs include the cost and selling, operating, and net income.
Cost control	Strictly controlling project costs prevents overspending and is necessary for efficient financial resource management. This includes using cost tracking systems and preparing regular reports.
Financial analysis	Analyzing financial reports helps determine the financial health of the company and where improvements are needed. These analyses are vital for enhancing the profitability and financial efficiency of projects.
Liquidity management	Efficiently managing cash flows prevents financial obstacles during construction processes. Companies should forecast cash flows and be prepared to engage financial reserves when necessary.
Financial risk management	Construction projects can be high-risk; thus, identifying financial risks and taking preventive measures is crucial.

	This minimizes losses from contract failures, financial crises, or other uncertainties.
Presentation of financial reports	Preparing transparent and accurate financial reports and regularly presenting them to relevant parties. This keeps stakeholders informed about the financial status of the project and strengthens trust.

\*Developed by the author

Human resources management (HRM) also plays a crucial role in enhancing management efficiency in construction companies because the industry requires highly skilled workers, and the success of projects largely depends on the quality and motivation of these workers. Implementing effective human resource management strategies in construction companies is essential [13].

Selecting the right specialists and the recruitment process are critical for construction companies. During this process, employers must use clear and measurable criteria to identify candidates with the necessary skills and experience [14]. Improving workers' professional skills and training them in modern construction technologies and methods enhances the competitiveness of the company. Such training programs also serve to motivate workers and increase their loyalty to the company.

Maintaining good labor relations between workers and employers enhances the overall efficiency of the company. This includes fostering open communication, fair working conditions, and mechanisms for resolving issues [15]. Using various incentives to boost workers' motivation is important. These include financial incentives, professional growth opportunities, and employee appreciation events.

Ensuring worker health and safety is crucial in the construction industry, as it protects workers from professional diseases and injuries and leads to increased productivity [16]. Accurately maintaining personnel data and managing career growth and development within the company ensures transparency and efficiency. Implementing these strategies supports the workforce, enhances their efficiency, and contributes to the long-term stability and development of the company (Table 2).

Table 2. Assessing overall efficiency and potential growth opportunities in a construction company\*\*

Indicator name	Measurement unit	2023	2024	Forecast (2025)	Change (%)
<b>Financial indicators</b>					
Annual Revenue	million UZS	15000	18000	20000	+11,11
Profit	million UZS	2000	2400	2800	+16,67
Costs	million UZS	13000	15000	17200	+10,26
Liquidity Ratio	-	1,4	1,5	1,6	+6,67
Profitability	%	13,33	13,33	14,00	+5,00
<b>Operational Indicators</b>					
Number of Projects	pieces	25	30	35	+16,67
Timely Completion	%	88	90	92	+2,22
<b>Resources</b>					
Material Utilization	%	95	97	98	+1,03
Energy Efficiency	%	85	87	89	+2,30
<b>Human Resources</b>					
Number of Workers	kishi	250	270	290	+7,41
Skill Level	-	high	high	high	-
Employee Retention Rate	%	90	92	94	+2,17



Technological Updates					
Application of BIM Technology	%	50	65	75	+15,38

Application of BIM Technology      %      50      65      75      +15,38

\*\*statistical data developed by the author

The research involved studying 50 construction companies in our country. Surveys and interviews gathered data revealing the challenges and opportunities in improving management efficiency in these companies [17]. Our analysis showed that 80% of the companies urgently need to automate management processes. The most recommended methods to improve management efficiency included using modern IT solutions for data analysis and decision-making [18].

Results based on implementing Lean Construction and Agile methodologies in companies showed a significant improvement in project management efficiency. In these companies, work processes became 30% more efficient. Among the limitations existing in many construction companies were inconsistencies in databases and outdated management systems, identified as the main issues [19]. Among the studied companies, successful practices included training programs aimed at motivating employees and enhancing their skills. These practices led to an overall improvement in company efficiency [20].

#### 4. Conclusion

The findings of this study underscore the critical role of implementing modern management methods and technologies in enhancing the efficiency and overall performance of construction companies in Uzbekistan. Key determinants of organizational success, such as employee skill development, motivational frameworks, and activity-based cost indicators, have been identified as pivotal for profitability, cost control, and financial stability. Emphasizing sustainable project management practices, efficient resource utilization, and the integration of information technology for predictive analytics further highlights pathways to competitive advantage. Additionally, promoting environmentally friendly strategies and adapting to international construction trends emerge as crucial for long-term stability and global market competitiveness. These insights have significant implications for policymakers, industry leaders, and academics, suggesting that a concerted focus on innovation, employee development, and strategic planning is essential for sustainable growth. Future research should explore the integration of artificial intelligence and digital transformation in construction management to further refine efficiency and performance metrics.

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