

A REVIEW PAPER ON STUDY OF FACTORS INFLUENCING QUALITY IN CONSTRUCTION

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Abstract- Quality is one of the important aspects of all projects. Quality in construction cannot exist without a project and a construction project cannot exist without quality. The quality of a product or service can be its ability to ensure complete customer satisfaction and will depend upon the use of product. Quality is very essential in any construction project. The main objective of this paper is to study the factors affecting quality in construction. Quality is a key to the nation's economy and is generally defined as the ratio of expectation to performance. For construction projects quality means making sure the things are done according to the plans, specification and requirements.

Keywords: Quality, Customer satisfaction, Performance, Expectation and Productivity.

I. INTRODUCTION

Construction projects are highly increasing in India. The level of success of construction projects greatly depends on the quality performance. Poor design and maintenance is the major factor that affects the construction. Quality is one of the critical factor in the success of construction project. The concept of construction project development may be impaired without a good knowledge and successful management of the impact of environmental factors influencing the performance of such projects.

M.Abas described that Quality is one of the important aspects of all projects and the level of success of construction project greatly depends on the quality performance. This research is carried out to scrutinize the factors, that have triumphed and adverse effect on the construction projects. A questionnaire was developed based on identified factors to take opinion of construction experts. After their feedback a statistical analysis tool such as chi-square and weighted mean method (WMM) were used to rank the significance level of these factors.

The basic aim of this research is to identify the success and adverse factors that have significant effect on quality performance of construction projects of Pakistan. The factors were ranked based on chi-square and weighted mean statistical analysis. He found that shortage of materials and equipment, design changes, error in cost estimation, lack of budget, deficiencies in scheduling and inappropriate planning are the factors that affect the quality in construction.

Dr. Abdulsalam Zidan briefs his research on factors affecting design quality in construction. Poor design is the main factor that reduces the overall performance of the construction project. The main factors are insufficient overall design time, method of selecting the designer, lowest price offer, lack of documentation and changes in client requirements.

N.Ahzahar made a study to find the factors to building failures & defects in construction industry. He said that failures & defects are common in construction which rises cost, duration and

resources. The identified factors are climatic conditions, location of building, construction materials, maintenance, faulty design and lack of supervision.

S.Arunmozhi took a study on quality performance in building construction to evaluate the effectiveness of quality management system in construction. The reason for implementation of quality management system is

- To improve customer satisfaction in construction industry.
- To improve safe working condition.
- To reduce customer complaints.
- To reduce inspection efforts in construction industry.
- To reduce the quality cost in construction industry.

The overall factors are quality in organization, communication & meetings, inspection & testing, training and customer satisfaction.

D.Ashok Kumar says that the development of construction industry depends on the quality of construction projects. Quality is one of the critical factors in the success of the project. Improvement in quality is linked with quality management at every stage of the project life cycle.

Bruno A. Gilly in Quality control circles in construction describes that quality control circle is responsible for improving labour motivation, production and product quality. Quality circle increases coordination between the workers. By adopting QCC every employee have the role to discuss the difficulties and their ideas which will improve the productivity of the construction industries.

Czajkowska A in Management of factors affecting quality of processes in construction enterprises makes a research to identify the factors affecting quality in construction. The effects of low quality in the construction sector include higher material costs, longer times of completion of construction works due to repairs, higher labour costs, losing contacts and orders. Low quality also causes a reduction in competitiveness of the enterprise, frustration and disrespect of the customers. The paper aim is to identify and analyse fundamental, supporting and service processes in construction services in reference to improvement of the quality of these processes.

Implementation of TQM requires process approach, which is the basis for complex quality management. The processes in the enterprise and customer satisfaction require regular monitoring, analysis and taking improvement measures in order to see how customers perceive the products or services. There are several methods to measure the degree of customer satisfaction, such as interview, survey, complaints. They help implement adequate improvement measures (correction or prevention activities). Process improvement results in cost reduction, increased quality of services and quality of labour.

David Arditi took a research to identify the factors that affect the quality of building projects. He concluded that quality is affected in three phases of construction such as design, construction and operation and each phase is discussed. Proper inspection at these phases improves quality in building projects.

John Wanberg.S.M in Relationship between Construction Safety and Quality Performance, the author found that the quality performance had great influence on safety and stated that management strategies such as preplanned resources, dedicating the necessary time to complete tasks well during estimating, encouraging leadership and encouraging workers can be implemented.

Shri.B.S.Patil in his research on factors affecting the cost and quality of construction found that price of labours, equipment and materials are the most influenced factors in determining the cost and quality of construction.

G.G.Schierle in Quality control in seismic design and construction makes a research to verify compliance with seismic safety features in light residential and commercial wood construction. Lack of quality in these constructions is mainly due to design flaws and construction flaws.

Yunna Wu in Quality Management Evaluation Based on Self-Control and Co-supervision Mechanism in Public Investment Project elaborates that the research is to improve the project management performance of PIP to build a construction management supervision system. Quality self control and government cooperation mechanism is the important method used. The regulatory authorities can use the evaluation results and make a quality-control plan to ensure the effective PIP supervision.

II. CONCLUSION

Quality plays an important role in construction. Such quality is affected by some of the factors during and after construction. The factors that influence quality in construction are design codes & standards, financial issues, customer satisfaction, planning & scheduling, materials & equipment, type of organization, human resources, inspection, risks, method of execution and coordination. Thorough inspection at work place during each phase of construction can greatly increase quality in projects. Appointing a quality engineer in construction project and providing responsibilities becomes the remedy for this problem which also increases the productivity in organization firms.

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