

# **A Review Of Factors Influencing Construction Performance In South Africa**

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## **Abstracts**

The construction industry is an essential contributor to the economic growth of many countries. In the construction industry, construction performance is the measure of the quality of projects delivered to clients. The performance is greatly influenced by various issues in South African construction industry. This paper is aimed at reviewing previous literature on factors influencing construction performance and methods of improving construction performance in South African construction industry. Some of the factors influencing construction performance are deprived workmanship with ineffectiveness of contractors, construction method, time management, inappropriate planning, scarcity of labour and materials, lack of resources; small stage of construction leadership ability; increase of material prices; lack of extremely knowledgeable and competent workers. However, the findings from extensive review from previous researchers of related literature are cross-sectional. Based on the previous researchers, it was discovered that such factors are varies from one aspects to others. It was concluded that, for a proper measurement of construction performance to be accomplished, all the factors influencing construction performance should be earnestly observed.

## **Keywords**

Construction Performance, Construction Industry, Influencing Factors, Performance Improvement, Construction Project.

## **1. INTRODUCTION**

Achievement of construction project is based on its performance. Construction is classified in these following stages such as pre-construction stage, construction stage and post-construction stage (Saraf, 2013). However, Construction itself is period overwhelming procedure by which the accomplishment of construction depends on its performance. Various factors which usually hinder performance of construction and cause interruption or breakdown are delays due to materials deficiency; lack of resources; little stage of leadership management skills; increase of material amounts; absence of extremely proficient and competent professionals, and deprived quality of obtainable equipment with raw material (Saraf, 2013). Though, numerous challenges have been recognized as influencing the performance, advancement with the progress of construction industry in South Africa Windapo and Cattell (2013). The literature review also recommends a diversity of mostly unexamined and different expectations as to the nature of these factors. Therefore, this study reviews various factors influencing construction performance in South Africa.

## **2. Literature Review**

### **2.1 Overview of South African construction industry**

Construction industry is an essential segment of each developing economy (Tengan, 2014). South African construction industry is considered by wide-ranging subcontracting; provisional and uncertain employment as well as deprived working circumstances Well (2000). South Africa generally, there is a lack of documented facts regarding job opportunity for labours as well as construction professionals in the industries within the construction segment. Universally many studies have been done all indicating that the construction industry has performance difficulties in most countries. Tindiwensi (2006) recognizes factors to enhance construction performance which are financial performance, superiority performance; surroundings and informal segment performance.

### **2.2 Factors influencing construction performance in South Africa**

A study by Hanson et al (2003) disclosed that misunderstanding, deprived workmanship with ineffectiveness of workers is amongst the issues influencing performance in South African construction industry. The study by Hanson et al (2003) further revealed some factors which influence construction performance which are conflict, deprived workmanship and ineffectiveness of contractors are amongst the factors influencing construction performance in

South African construction industry. However, Conflict is unavoidable in the construction among the participants industry which affect the performance of construction task. Iyer and Jha (2005) recognized some factors influencing construction performance whereby organization amongst tasks partakers was recognized as the major important of every the factors, having highest influence on construction performance.

According to Enshassiet al (2009) numerous issues as partaking influence on performance Of project price such as project director's capability, upper management sustenance, tasks manager's organizing and management abilities, supervising and response by the partakers, policymaking, organization within project professionals, clients' capability, social situation, financial disorder, and climatic circumstances.

Cheng et al. (2011) recognized some factors which usually affect the performance in the construction industry. Such factors were highlighted as construction methods, time management capabilities, and material depletion and so on.

Saraf (2013) categorized factors influencing construction performance in three perspectives such as the owner perspective, engineer and contractor perspective. In Owner perspective as factors influencing construction performance are inappropriate planning, site organization, making of decisions, scarcity of labour and technical personal quality and scarcity of materials. While in engineers perspective such factors are improper designing. Construction methods, site administration, quality and scarcity of materials. In contractors perspectives the factors were stated as inappropriate planning, site organization, construction error, defective work, lack of labour as well as technical workers, efficiency.

Project performance might be considered using an enormous quantity of performance Indicators that can be linked to a variety of scopes which are moment in time, price, quality, client contentment, client transformation, trade performance, wellbeing and security. Moment in time, cost and superiority are three major performance assessment scopes.

Olanipekun et al (2007) stated some factors influencing construction performance such as project related factors, human related factors, project management factors, clients factors, Contractor factors.

A study by Enhassi (2009) shows that the major significant factors influencing project performance are: delay due to materials scarcity; lack of resources; small stage of construction leadership ability; increase of material prices; lack of extremely knowledgeable and competent workers; as well as deprived quality of obtainable tools and raw materials.

Tengan et al (2014) stated some factors influencing construction performance such as deceitful practices and kickback, inadequate organization between stakeholders and; deprived monitoring and response as consultant related factors. They also stated that inadequate instruction on quality for staff, inadequate management leadership and

inadequate earlier practice of contractor were also recognized as contractor related factor influencing construction performance.

According to Alaloul et al (2015) construction performance position is not affected mainly by organization, together with several numbers of basics which might be correlated to numerous scopes such as construction managers' capability, upper organization sustenance, supervising as well as response by the professionals and decision-making procedure. Moreover, the coordination of construction works has important effects on numerous features of the project outcomes.

Melba et al (2015) stated some factors influencing the performance of projects such as inadequate supply of labour, incorrect planning, increase in materials cost, incorrect poor financial control on site and wrong of estimation. The study also stated other factors affecting construction performance which are deprived management and supervision; inappropriate participants; reduced relations and coordination; lack of motivation, inadequate infrastructure, political problems, cultural problems and financial conditions. Table 1 shows the summary of some factors influencing construction performance.

Table1: Summary of previous literature on factors influencing construction performance

<b>Factors influencing construction performance</b>	<b>Authours</b>
Misunderstanding, deprived workmanship with ineffectiveness of workers	Hanson et al (2003)
Project director's capability, upper management sustenance, tasks manager's organizing and management abilities, supervising and response by the partakers, policymaking,	Enhassi et al (2009)
construction methods, time management capabilities, and material depletion	Cheng et al (2011)
Inappropriate planning, site organization, making of decision, scarcity of labour and technical personal quality and scarcity of materials. improper designing..	Saraf (2013)
Project related factors, human factors, project management factors, clients factors and Contractor factors	Olanipekun et al (2007)
Deceitful practices and bribery, inadequate organization between stakeholders and; deprived monitoring and	Tenga et al (2007)

response as consultant related factors.	
Inadequate supply of labour, inappropriate planning, increase in materials cost, inappropriate poor financial control on site and wrong of estimation, inappropriate participants; reduced relations and coordination; lack of motivation, inadequate infrastructure, political problems, cultural problems and financial conditions	Melba et al (2015)

## **2.4 Methods of improving construction performance in South Africa**

The achievement of construction project is based on its performance, that is considered based on appropriate completion, within the financial plan, necessary eminence standards and customers contentment (Omran.2012). According to Olanipekun et al (2017) study stated some methods of improving construction performance which are appropriate planning, stakeholder relationship, good leadership, adequate communication, accountability, documentation, organize and administrative system, efficient contractors and workers affiliation, employee empowerment, and reducing variation can direct the performance of contractors in project delivery.

Aftab et al (2014) stated some methods of improving construction performance such as Dedicated leadership and management, Close monitoring, Improvement Method, forward understandable and complete message to worker to guarantee efficient communication, Utilize skillful workers to accomplish high-quality development, shun deprived quality of work, more modification and dual handling, Base on the quality, cost and delivery of the project, teaching and development of all partaker to support delivery process, completely make use of the construction team, utilize new construction technologies (IBS-Industrialize Building System), Emphasize client's want. Table 2 shows the previous literature on methods of improving construction performance.

**Table 2: Summary of previous literature on methods of improving construction performance**

<b>Method Of Improving Construction Performance</b>	<b>Source</b>
Appropriate planning, Stakeholders affiliation, good leadership, adequate communication, accountability, documentation,	Olanipekun et al (2007)
Dedicated leadership and management, Close monitoring, Improvement Method, forward understandable and complete message to worker to guarantee efficient communication, Fully utilize the construction team, utilize	Aftab et al (2014)

new construction technologies (IBS-Industrialize Building System), Emphasize client's need	
Quality, cost and timely delivery of project work	Kaliba et al, 2009, Rahman 2012
Teaching and advancement of all partakers to maintain delivery process	Kamaruzzana and Ali, Rahman et al, 2012
Emphasis on client's wants	Rhman et al 2012
Utilize new construction technologies (IBS-industrialize Building System)	Rhman et al 2012
Offer understanding/instruction to unskilled workers.	Fugar and Agyakwah-Baah 2010.

### **3. Methodology**

The study reviewed past literatures relating to construction performance in South African construction industry. Various sources were consulted to achieve ambitions of the study. Some of the sources are recognized journals, conference articles, thesis, government reports and dissertations. This paper will therefore report on findings from the past literatures review.

### **4 Findings**

The discoveries regarding the review of literature from empirical studies have recognized numerous factors affecting construction performance in South African construction industry. Saraf (2013) discovered that in owners perspective of factors influencing construction performance improper planning has the highest ranking followed by site management. When planning is not properly done in any construction project. It will definitely influence the construction performance. In engineer perspective the study found that improper designing has the highest ranking as a factor influencing construction performance. Followed by shortage of labour and technical personnel. While in contractor perspective, the study discovered that improper planning is the major factor influencing construction performance.

A study by Iyer and Jha (2005) some factors influencing project cost performance. Coordination among project partakers was recognized as the major important of all the factors, which has the highest influence on construction performance.

Enshassi et al (2009) stated that the highest significant issues decided by the clients, construction professionals as the foremost issues influencing the construction performance are increase of material amounts, obtainability of materials as scheduled within project period, delay due to closures causing resources deficiency, obtainability of

professionals with a level of understanding and qualifications, superiority of equipment as well of raw materials, and management services for project managers.

According to Tengan et al (2014) findings, inadequate quality training for staff was ranked first as contractor related factors influencing construction performance. It was followed by lack of management leadership. The third contractor related factor influencing was ranked by the respondents as inadequate previous experience, followed by a poor planning and control techniques. The study also found that deceitful practices and response was ranked as the first factors as consultant related factors influencing construction performance. While poor monitoring and feedbacks was ranked second, inappropriate coordination between designers and contractors was ranked third factors. A study by Melba et al (2015) found the five top factors affecting the performance of projects such as increase in material cost, inadequate supply of labour, improper planning, incorrect method of estimation, and poor financial control on site.

Olanipekun et al (2017) categorized factors influencing construction' performance into various categories. From their findings quality related factors was ranked first as the most significant factors influencing construction' performance, intimately followed by project management related factors. While Procurement related factors was ranked as the third factors influencing construction performance. This demonstrated that the precise quality by clients, procurement method used for projects, and the project management capabilities of contractors have huge impacts on their performances. The slightest significant factors influencing contractions' performance was owners' organization related factors. Other factors were comparatively significant as ranked by the respondents. This suggests that all the stakeholders in a project have an effort in determining the performance stage in the construction industry.

The study by Olanipekun et al (2017) also discovered that appropriate planning is the major method of improving construction performance. Followed by superior leadership, adequate communication, stakeholder affiliation, accountability, records, control and managerial system, efficient contractors and workers affiliation, workers empowerment, and reducing variation can affect the construction performance. This finding support the statement by Bryde and Robinson (2005) which point out that stakeholder affiliation, adequate communication, appropriate documentation, reducing variation, and appropriate planning are key methods to improve the performance of construction performance. A study by Aftab et al (2014) ranked adequate planning as the major method of improving construction performance, while dedicated leadership and management was ranked second, then Close monitoring was ranked as third, while Send perfect and broad message to worker to ensure good communication.

## **5. Conclusion and Recommendations**

This article has examined the literature relating to the study. It discussed various factors affecting construction performances in South Africa construction industry. The factors affecting construction performance are deprived workmanship with ineffectiveness of contractors, construction

method, time management, inappropriate planning, scarcity of labour and materials, lack of resources, deceitful practices and bribes, inadequate coordination between stakeholders; deprived monitoring and response. For a proper measurement of construction performance to be accomplished in South African, all the factors influencing construction performance should be earnestly observed.

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