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## Identifying Critical Success Factors for Achieving Scheduling Performance in Partnering Projects

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### ABSTRACT

Underperformance in term of schedule of partnering projects called for this study to proffers for improvement. 32 factors responsible for the success of partnering projects were identified through literature review and pilot interview. This paper aims at investigating which of these factors is responsible for the scheduling performance. The study was conducted through self-administered questionnaire survey and analysis of the obtained data was through multiples statistical tools such as descriptive, Kruskal-Wallis, and ordinal regression. The study discovered that acting inconsistent with the objectives, effective coordination, commitment and support of management and involvement of all the stakeholders are the CSFs of ensuring scheduling performance. The paper, therefore, recommends that all the key players should be engaged from the commencement of the project. The stakeholders should ensure adequate staff, attention, and material before embarking on the project. It was concluded that top management support contributed significantly in ensuring schedule performance of a partnering project. The results of this study would improve the delivery of partnering performance and assist policies makers in decision making.

Keywords: Partnering, Scheduling, Project, Success, and performance

### INTRODUCTION

The main pillar of the Nigerian economy is the construction sector. The Nigerian construction industry produces nearly 70% of the nation's fixed capital formation and contributes 2% of the GDP (Idrus and Sodangi, 2010). Although, construction sector accounts for a substantial percentage of the Gross National Product (GNP), total public spending, and employment generation. But problems such as cost overrun, schedule delay, low quality, and stakeholders' dissatisfaction have made the industry a place of resident. To get out of these problems necessitate collaborative means of procurement. There are various types of collaborative procurement such as design and build, partnering, and turkey type project procurement. The choice of this paper is partnering. Partnering implementation is rising in Nigeria to meet the needs of project delivery. Partnering procurement system is one of the three most used project delivery systems in Nigeria, others are traditional procurement and design and build.

Construction Industry Institute (1991) defined partnering as a long-term commitment between two or more organizations for achieving specific business objectives by maximising the effectiveness of each participant resources. Unfortunately, the performance of partnering projects in Nigeria in terms of time of delivery is nothing to write home about and discouraging owing to poor performance such as cost and time overruns. Previous studies conducted on performance improvement revealed that a number of factors called success are influencing project objectives. Chua et al. (1999) confirmed that success factors are objective specific. The literature on critical factors for partnering project reveals that very few studies relate these factors to the project performance and the limited available one do not focus on individual performance criterion rather on performance criteria.

The target of this paper is to identify and investigate the success factors for the scheduling

performance on partnering construction projects. Several authors identified measures of partnering success in which schedule is one of them, but limited studies have been carried out to investigate critical factors for delivering construction projects in Nigeria, not to talk of partnering projects. This study aims to fill this gap by pursuing these objectives: to identify CSFs for partnering project; to investigate which of the factors are/is responsible for scheduling performance, and to test if there is an agreement in the ranking of the factors. This study finding will provide a better understanding of factors critical to partnering implementation and helps practitioners involving in partnering projects to take measures to ensure better project schedule objectives.

Furthermore, lack of understanding of factors that responsible for performance made it difficult for the stakeholders to known the actions to take when looking for project success improvement. In Nigeria, the high number of partnering projects failed to meet scheduled is an indication that there existence an underlying CSFs which are yet to be identified. Therefore, the target of this paper is to identify the critical factors that lead to scheduled performance. In developing countries such as Nigeria, it becomes difficult to deliver construction projects due to complexity; this cannot be continued due to the competitive nature of the industry, therefore, achieving success in project execution is becoming more paramount.

The understanding of CSFs influencing scheduling performance will help improve partnering project management, and that would lead to better delivery. This knowledge will allow construction practitioners to adopt best practices to support continuous improvement and help their organization to remain competitive. This study will facilitate a better comprehension of factors contributing to the scheduling accomplishment in the Nigerian context. Understanding of the impacts of the CSFs on the scheduling performance is crucial to decision-making and problem-solving. This paper is structured thus: First, review the concept of success and criteria in relation to the construction industry. Next is an explanation of the concept of CSFs in construction projects generally and in partnering projects in particular. Partnering projects in Nigeria discussion will then follow. After that, approach and methodology adopted for this paper, data analysis and discussion of the findings were presented. The conclusion was then drawn for the paper.

## RESULTS AND DISCUSSION

Thirty- two factors were identified as contributors to the success of construction partnering projects through a pilot study and excessive literature. Identified factors run through logistic regression analysis to ascertain those having a great impact on the scheduling performance of partnering projects. The result of the analysis revealed that only four factors were significant predictors of the partnering project scheduling performance outcome when the probability of delivering the project on schedule was considered as project success criterion. The factors are acting consistently with objectives, effective coordination, commitment & support of management and involvement of all key stakeholders. The four variables are statistically significant ( $p < 0.05$ ) predictor of project success in scheduling performance. This study finding tallied with Chen & Chen (2007) in the study CSFs for construction projects in Taiwan. Summary of the results present in the tabular format below.

**Table 1.** Scheduling analysis using Logistic Regression Statistics

Predictor	B	SE	Wald	Df	Sig	95% confidence interval	
						lower	Upper
Acting consistently with objectives	-.738	.285	6.689	1	.010	-1.297	-.179
Effective coordination	.486	.226	4.621	1	.032	.043	.930
Commitment & support of Management	.536	.252	4.516	1	.034	.042	1.030
Involvement of all key stakeholders	.503	.220	5.227	1	.022	.072	.934

\* Significant at  $p < 0.05$

## CONCLUSION

In conclusion, even though all the 32 identified factors are equally important to partnering projects success. The level of contribution of each of these CSFs to project goals varies. This study identified four CSFs that responsible for achieving schedule performance in partnering construction projects in Nigeria. It also tested the practitioners (clients, contractors, and consultants) agreement on the ranking of the partnering CSFs, and several recommendations were proposed to respond to the critical factors. The analysis reveals that acting consistently with objectives, effective coordination among parties, commitment and support of management, and involvement of all key stakeholders are the four vital factors influencing the schedule performance of partnering projects in Nigeria. Furthermore, the results of the Kruskal-Wallis test implied that there was no statistically significant difference among respondents in 28 out of 32 factors (P-value > 0.05).

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