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ASSESSMENT OF THE RELATIONSHIP BETWEEN COST REDUCTION AND QUALITY OF PROJECT DELIVERY: A STUDY OF CONSTRUCTION INDUSTRY

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----------ABSTRACT----------

One thing common to organization in both public and private is procurement. The competitiveness of business environment today has impact both small and large organization. An impulsive reaction under the current circumstances is just to cut all costs to the minimum level. There is need for careful examination of every aspect of an organization's cost structure to eliminate unnecessary discretionary and non-value adding costs, while the competitive position is still retained. This makes Cost reduction to become the number one focus for businesses. It was discovered that 50% to 75% of annual organizational revenue spent by business leaders is on procurement costs. Thus, reducing procurement cost is now a central business strategy to increase profitability. This effect of this cost reduction leads to undermining of quality as explained by some researchers. This study assess the relationship between cost reduction and quality of project delivery. Survey research design was adopted for this study while convenience sampling technique was employed in selecting administrative staffs of the selected companies. Data was gotten from primary source by use of structured questionnaire. The reliability test was 0.939. To test for relevant hypotheses, regression analysis was used. The study found out that cost reduction influences quality of project delivery with a given value of 52.6%, cost reduction accounts for shortage of procured item with a given value of 8.6%. Cost reduction affects late delivery of project with a given value of 12.6%. It was therefore recommended that quality should be of priority to organization when carrying out cost reduction analysis, other aspect like shortage and late delivery should also be considered and prevented.

KEYWORDS: *Cost Reduction, Quality, Shortage, Late Delivery. Project Quality* ----------

BACKGROUND TO THE STUDY

One basic function common to both private and public organizations is procurement (Salim & Kitheka, 2019). Project that are delivered safely to the required quality standards, on time, and within budget are considered successful. To achieve these objectives there is need for a vital element which is the effective management of costs (Cunningham, 2017).

The construction industry has been identified as one of the industries that contributes significantly to the Gross Domestic Product (GDP) of a country and it's a good indicator of economic performance and growth of a country (Dlamini and Cumberlege, 2021).

Cost reduction has become the number one focus for businesses. Cost reduction should be done in a way that has instant and lasting effects. This can be achieved through management of your procurement costs.

Simfoni (2022) suggested that the costs associated with acquiring goods and services from external sources are a key performance indicator that is vital to organization's success, this is due to the fact that procurement costs provide a straightforward and traceable way to measure the performance of the entire procurement process and the business in general.

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There is critical examination and review of each aspect of businesses such as products, process, procedures, methods, organization, personnel etc., with a view of improving efficiency and effectiveness and reducing the costs (Neetika, 2022).

At all stages of the contract and project life cycles quality is an important factor, from conceptualization and business case development; through planning and design; to procurement, implementation, and completion. One important phase in the contract and project life cycle is procurement process which presents an opportunity to assure that the requirements for quality are met are fit for purpose (Asian Development Bank, 2018).
Gabriel et al (2022) identifies that whether public or private the nerve center of quality in every organization is procurement.
Where quantity of any given project demanded is higher than the quantity of the same project supplied, it refers to as shortage in economic terms. Shortage is usually temporary and can be corrected (Chen, 2022).

Chen (2022) highlighted possible causes of shortage which ranges from miscalculation of demand by a company producing a good or service, resulting in the inability to keep up with demand, or government policies such as price-fixing or rationing. Global consumer and business trends can also create commodities and labor shortages.

Project management team main objectives is to complete project on time, within budget and in accordance to the required specifications, project objectives can be influenced by many factors and those factors vary according to their importance as perceived by the owner, contractor, sub-contractor and consultant. When there is late delivery of some materials/products it may cause an overall delay in the project (Abdellatif and Alshibani, 2019).

Rahman et al (2017), gave some factors that can cause late delivery such as slow decision-making, shortage of raw materials, Labour productivity, Poor planning and scheduling etc
Therefore, this study tends to assess the relationship between cost reduction and quality of project delivery in construction industry.

Statement of the problem
In a competitive and globalized business environment, corporate sectors and business houses needs to manage reduction of operational cost while meeting the organizational goals and objectives by been updated or informed with new technological developments (Musau, 2018).
According to Areguamen, (2017), he explained that 50% to 75% of annual organizational revenue spent by business leaders is on procurement costs. Thus, reducing procurement cost is now a central business strategy and an excellent process attaining organizational sustainability and growth.
A preliminary survey on one of the study areas shows that in the quest to save cost most of the top management have realized occasional shortage, quality, fluctuation and once in a while late delivery of project as some of the challenges facing the organisation.
However, researchers like Musau (2018) and Ganni (2019) focused on cost reduction. But how the quest for cost reduction addresses quality, shortage and late delivery were rarely examined. Therefore, this study intends to fill the gap in literature by examining critically the relationship between cost reduction and quality of project delivery in construction industry.

Objectives of the study
The main objective of this study is to assess the relationship between cost reduction and quality of project delivery in construction industry.
While the specific objectives are to:
1. To examine the effect between cost reduction and quality of project delivery in construction industry
2. To investigate the effect of cost reduction on shortage of procured item
3. To determine the relationship between cost reduction and late delivery of project

Research Questions
To guide the study and achieve the objectives of the study, the following research questions were formulated:
1. What is the relationship between cost reduction and quality of project?
2. How does cost reduction affect shortage of procured item?

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3. What is the relationship between cost reduction and late delivery of procured item?

Research Hypothesis

H_{01}: There is no relationship between cost reduction and quality

H_{02}: Cost reduction does not affect the shortage of procured item

H_{03}: There is no relationship between cost reduction and late delivery of procured item

Significance of the Study

According to United Nation Report (2018), Procurement is an important and expensive business activity for organizations. This is because organizations usually spend a large portion (even up to 70%) of their revenue and operational budget on purchasing goods and services.

The study will be of importance to personnel in construction industry as it will help them look at how the quest to save cost can affect quality of procured items.

Scope and Delimitation of the Study

In pursuing this research, the focus of attention shall be limited to construction industry who are involve with procurement process in Lagos State. This is because Lagos is the economic nerve center of Nigeria, Also the study is limited to Lagos State because of cost and time constraints.

Literature Review

This section involve the review of existing studies pertaining to the research study. It consist of the conceptual review (definition of variables and indicators according to school of thoughts) and theoretical review (models and theories underlying the research study), empirical review (methodological review of studies pertaining to the topic under study), and conceptual framework illustrating connection between variables and indicators. The following variables are relevant to this study. The Independent variable is Cost reduction and dependent variables are Quality, Shortage and late delivery

Conceptual Review

Cost reduction

The competitiveness of business environment today has impact both small and large organization. An impulsive reaction under the current circumstances is just to cut all costs to the minimum level. There is need for careful examination of every aspect of an organization's cost structure to eliminate unnecessary discretionary and non-value adding costs, while the competitive position is still retained (Babatunde, 2017).

Cost reduction is the process of cutting down costs incurred by an organization for the purpose of making profit. It starts when cost control ends and considers that no cost is at its optimum level.

At all levels of enterprises, the concept of continuous searching for new ways and avenue of reducing costs needs to be constantly promoted, which signifies that the enterprise has a strategic approach to this issue. Value engineering and value analysis, tight budgetary control (budget discipline), target costing and life cycle costing which are cost reduction strategies can be adopted by manufacturing companies to reduce the material cost, labor cost and productivity cost attributed to manufacturing (Ben-Caleb et al, 2019)

Raj (2021), has therefore identifies some features of cost reduction which are as follows: cost reduction is not concerned with setting targets and standards. Cost reduction is the final result in the cost control process, Cost reduction aims at improving the standards, it is continuous, dynamic, and innovative in nature, looking always for measures and alternatives to reduce costs, it adds thinking and analysis to action at all levels of management.

Suhbo (2022), identify the possibility that reduction in cost may not be real and permanent. It may not be based on sound reasons and may be short lived and cost may come back to the original cost level when temporary conditions (i.e. fall in prices of materials) due to which cost has reduced disappear.

Bhasin (2019), opined that at times while focusing on cost reduction, the quality of the product may be sacrificed and in turn affect the long-term vision of the company by reducing the brand value. Cost reduction should be handled

carefully because it's a double-edged sword, it could boost profits if done well, without affecting major things, it could backfire if worked incorrectly,

A lot of businesses focus on the wrong strategies to save cost instead of making the right investments that can save them way more. Nearly 43% of cost-cutting initiatives fail. (Shuler, 2021).

Cost reduction is not a one-time thing, its continuous and involve a lot of activities and follow processes, but most organization cannot go through these processes appropriately which in turn leads to the company compromising on quality in a bid to reduce cost.
This study examined standard costing and quality measurement as an indicator of cost reduction to show the relationship between cost reduction and quality.

Quality
The concept of quality has existed for many years, with its meaning evolving and changing over time. In the early twentieth century, quality management meant inspecting products to ensure that they met specifications. Quality is evaluated through statistical sampling techniques, while quality control charts were used to monitor the production process. In the 1960s, with the help of quality gurus, the concept took on a broader meaning. Quality began to be viewed as something that encompassed the entire organization, not only the production process. Quality was seen as a concept that affected the entire organization since all functions were responsible for product quality and all shared the costs of poor quality. (Reilly, 2022).
Quality, according to ISO (International Standardization Organization), is the adaptation and conformity to the requirements that the standard itself, and customers, establish. In another words, quality is view as the level of perfection of a process, service, or product delivered by company in such a way that meets the requirements defined by ISO and of course, by your customers.
According to Barbosa (2021) there are three fundamental concepts of quality. These are stated below:
i. Quality Assurance
Quality assurance is a way of ensuring that the operational quality standards and requirements, already established, are used in all future development processes, whether of a product or service.

ii. Quality Control
This concept is aimed at fulfilling the quality requirement, and is mainly carried out through inspections. Quality inspection is a procedure that analyzes and assesses whether the attributes of a product or service conform to specified requirements to determine whether a nonconformity has occurred.

iii. Quality Management
Quality management is the coordination of activities in production processes and services so that they are performed with quality.
This study examined specification and value engineering as an indicator of quality to show how cost reduction affects the quality of procured item performance

Shortage
A shortage is a situation in which demand for a product or service exceeds the available supply (Chen, 2022). Reducing cost at times might leads to shortage in different forms it can be in terms of materials/components, labour, tools and equipment, standardization, shape & appearance etc. (Neetika, 2022).

Rahman et al 2017 identifies some of the causes of shortage of materials as: origin or availability of material, Poor estimation of materials quantity, Poor workmanship, Quality of material (when materials do not meet standard or contained defects), Inconsistent demand, Special materials (imported materials takes long lead time if not ordered accordingly and right quantity).
This study examined Price-based indicators and Percentage of personnel with responsibilities for the position as an indicator of shortage to show how cost reduction affects shortage of procured item.

Late Delivery
Customers key concern is on time delivery and the importance that it plays in the operation of the supply chain has been documented by numerous empirical studies.

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Under the classification of the strategic level performant measures, delivery performance is acknowledged as a key metric for supporting operational excellence of supply chains and this can be found within the hierarchy of supply chain performance metrics (Bushuev et al, 2018).

Rahman et al (2017), identifies some of the causes of delay in supply of materials: Labour productivity (Change of labour from time to time), Slow decision-making (Indecision for a long time), Shortage of raw materials, Poor planning and scheduling, Variations and changes.

This study examined Supplier/Sourcing and delivery speed as an indicator of late delivery to show the relationship between cost reduction and late delivery.

Theoretical Review

Going Concern Theory

The going concern theory is based on the assumption that company/entity will keep up with its operating activities continuously for a period of time sufficient enough to meet its obligations and commitment as they fall due. This also means continuous operation of an entity to make enough money just to be in business without going bankrupt (The going concern principle, 2017).

Quality Theory

This states that to achieve the highest quality in the products or services of a company, it is necessary to work in five points:

1. Realize the dangers of having a low quality: This states that there is danger in offering service of poor quality.

2. Adapt the product to the use that is going to be given: The product created should be focused on being as useful as possible for customers. In this way, unnecessary expenses are not made on features that do not really interest.

3. Achieve conformity to previously defined quality standards: There should be communication between entrepreneurs and their customers to know if the products created were what they wanted. In this way, you can know if the product or service has met the expectations of the buyer.

4. Apply constant improvement: Once a product or service has been completed, it must examine how it has been done. In this way, the next version of the product may have the errors improved, so that we will always continue to advance more in the way of quality.

5. Consider quality as an investment: Muran believed that quality was the most important part of all business, since it brought many benefits with him. Although it may be difficult to achieve the highest quality in what is done, with it you get loyal customers, increase profits, and be more competitive than rival companies

Competence and capability theory

This has to with the skills, knowledge and behaviors necessary to perform to the standards of employment in a work context and this varies between sectors and organization (Winterton and Turnbow, 2020)

Empirical Review

Ben-Caleb et al (2019), conducted an examination on Cost Reduction Strategies and the Growth of Selected Manufacturing Companies in Nigeria, the main reason is to investigate whether there exists a relationship between cost reduction strategies and the growth of manufacturing companies in Nigeria using data of 40 manufacturing companies quoted in Nigerian stock exchange for the period of 2012-2016, correlation and regression were the statistical method used for data analysis. The analysis of variance used review that there was a positive significant relationship between changes in material costs, changes in total assets and growth of manufacturing companies. It was discovered that there is no significant relationship between changes in administrative overheads and growth of manufacturing companies. The researcher concluded that manufacturing companies adopt value analysis to reduce and eliminate unnecessary costs associated with products. The researcher recommended that businesses should conduct regular analysis of its business process to identify and eliminate costs.

Lawal (2017), He examined the effect of cost control and cost reduction technique on organizational performance with major emphasis on budgetary control as an effective tool of cost reduction and cost control. He viewed the importance of cost reduction scheme as something that cannot be overstated and suggests that companies undertake frequent examination of costs in order to curb excessiveness, thereby, eliminating costs. The population size is large

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and is practically impossible to conduct research on all the companies who engaged in the production of goods and services in Nigeria sample selection is therefore restricted to one company which is Chemster Paint Industry in Nigeria from which generalizations were made, judgement sampling was used for the actual selection of this company. 50 respondents from the company were used as sample size for the research. Regression was the statistical method used for data analysis. The analysis used shows that cost control has a positive impact on organizational performance and also the style of management has a positive impact on organizational performance. It was concluded in his study that for an organization to experience more profit growth by producing quality goods and services, there is a need to control and reduce cost to the acceptable limit. The researcher recommended that all manufacturing industry Cost control and cost reduction scheme must be properly administered in an organization by setting realistic standard Cost

Otieno (2017), concluded that quality of materials is what sugar manufacturing companies regularly base their supplier performance measurement on making supplier performance measurement in the company effective. Secondly it was concluded that, sugar manufacturing company regularly base their supplier performance measurement on quality of the materials making supplier evaluation in the company is efficient, although; financial capability and cost are also important in to base supplier evaluation, Third, it was concluded that, supplier development in sugar manufacturing company's help in matching supplier's quality with the company expectation. Lastly it was concluded that, supplier performance measurement, supplier evaluation and supplier development improve the efficiency and effectiveness of procurement performance of sugar manufacturing companies. He recommends that there is need to ensure that qualified suppliers are in place to supply quality product and meets the company expectations

Hijazi (2021), examined Factors Hindering Quality Performance in Construction Projects. 506 questionnaire was distributed to experts in the construction industry, 171 questionnaires were returned resulting in a response rate of approximately (34%). Factor analysis and tests of its appropriateness was the statistical method used for data analysis. The most critical factors that prevent quality performance in construction were identified and ranked. It was revealed that the most influencing failure factors are the managerial factor, the culture and environment factor, and the contractor factor. It was concluded in his study that to improve quality performance in construction projects all stakeholder should concentrate and avoid failure factors. The researcher recommended that for quality to be achieved top management employees should be trained to adhere to quality and bids should be awarded to competent contractor.

Research Methods

This section discussed the research process employ in collection and analyzing the data for this research work. It includes the identification of a population, from which an accessible population is also identified and the sample size and sampling procedures determined. The validity and the reliability of the information collected and the research design used.

Research Design

This study used a descriptive research design. The type of descriptive research design used is cross-sectional design this is because it involves the measurement of all elements of the population of interest and the sample of the survey at a point in time. Also, it is useful because it provides a quick snapshot of what is going on with the variables of interest in a research problem (Omotayo et al. 2016). This research design claimed to be more effective and accurate for seeking answers to the research questions (Abbott & McKinney, 2016; Nardi, 2018).

Population of the study

In pursuing this research, the focus of attention was limited to personnel in the construction industry who partakes in procurement process in Lagos State. The choice of Lagos state as the study area was because it serve as the state with the highest number of construction works and also the economic nerve center of Nigeria and a place where construction activities abounds (Salau, 2016). The administrative staff were targeted staff that their judgment was paramount for this study.

Sampling Technique and Sample Size

Sampling Technique

This study identified with non-probability sample techniques. It employed double sampling technique, which are purposive and convenience sampling technique. Purposive sampling techniques allows the researcher to select samples based on judgment or specific purposes, it is most suitable for small samples not all members of the population are qualified to be member of the sample. Convenience sampling was used to obtain those cases that are mostly

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conveniently available, it involves the use of respondent that are easy to get to constitute the sample (Omotayo et al. 2016). These respondents were willing and ready to complete the research instrument as carried out by the researcher.

Sample Size

Convenience sampling was used to select five (5) construction firms in Lagos state. Purposive sampling techniques was used to select the administrative staff that are involve in procurement process for the project execution, ten (10) people each was selected from each of the five (5) construction firm, this which amount to a sample size of 50 respondents.

Data Collection Instrument

Data required for this study was generated from a primary source of information. The primary data source research instrument was a well-structured questionnaire distributed to respondents of the selected organizations. The questionnaires comprise of two sections (section A & B). Section A entails respondent general data while section B entails data relating to the objectives of this study.

Test of Validity and Reliability of the Research Instrument

To ascertain the correctness of the survey instrument content types of validity were adopted. Content validity was employed through the administration and distribution of the developed survey instrument which was reviewed by my supervisors to ensure it reflects what it was expected to measure before distribution to the targeted respondent.
To test for reliability of this study's research instrument, the Cronbach's alpha coefficient was used with value given as 0.939.

Cronbach's Alpha	N of Items
.939	34

Source: Field Study, 2023

The reliability test of the examined studies is given as 0.817, 0.907, and 0.911. This implies that this instrument is best for this research study.

Method of Data Analysis

The result given are presented in descriptive and inferential statistics. Furthermore, regression analysis was used to test the formulated hypotheses to verify assessment of the relationship between cost reduction and quality of project delivery: a study of construction industry. The data collected were analyzed using the Statistical Package for Social Sciences (SPSS) software version 24.0.

Data Interpretation and Discussion of Findings

This section deals with the interpretation of the data gathered for the study using a questionnaire

Response Rate of the Questionnaire

In all, 50 questionnaires were sent out to construction companies who partakes in procurement process in Lagos state, Nigeria. There were a total of 50 replies to the survey, for a response rate of 100%; the total 50 of these were useable. The valid response rate was also at 100%, as shown in table 1.

Table 1: Response Rate of Questionnaire

Response Details	Rate/Frequency
Questionnaire Distributed	50
Questionnaire Returned	50
Questionnaire Not Returned	0
Questionnaire Returned in Usable Condition	50
Questionnaire Returned in Non-Usable Condition	0
Response Rate	100%
Valid Response Rate	100%

Source: Researcher's Computation (2022)

Reliability of the instrument

The questionnaire's reliability was first examined to make sure that its various items were being measured in the same way before any additional research was performed. The scale's dependability was calculated using Cronbach's alpha.

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Cronbach's alpha, shown in Table 2, has a high value of 0.827, much over the required threshold of 0.70, indicating that the research instrument is reliable (Hair et al., 2006).

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.827	55

Source: Researcher's Computation (2022)

Descriptive Statistics of Study Variable

This section provides a descriptive analysis of the respondents' responses. The data was collected using a four-point Likert scale with corresponding numerical values for analysis. A score of 4 indicated total agreement, a score of 3 indicated moderate agreement, a score of 2 indicated some degree of disagreement, and a score of 1 indicated total disagreement (SD). Data was analyzed using descriptive statistics to determine trends and patterns. The mean of the replies is interpreted as follows: Levels of agreement ranged from 3.50–4.00 (implied highly agreed), 2.50–3.49 (implied agreed), 1.50–2.49 (implied disagreed), and 0.50–1.49 (implied severely disagreed). A standard deviation of more than 1 indicates that the responses are widely distributed or no consensus and less than 1 indicates consensus on responses obtained.

Table 3: Descriptive Statistics

	N	Mean	Std. Deviation
Cost Reduction	**50**	**2.40**	**.364**
Quality	**50**	**2.53**	**.368**
Shortage	**50**	**2.28**	**.354**
Late Delivery	**50**	**2.14**	**.228**

Source: Researcher's Computation (2022)

The findings showed that the mean for quality which is 2.53 indicates that respondents agreed with most of the statements on the high scale while the mean of cost reduction (2.40), shortage (2.28) and late delivery (2.14) all indicated that respondents disagree with most of their statements. The standard deviation of all four variables 0.364, 0.368, 0.354 and 0.228 are less than 1 which implies that the responses are clustered around the mean.

Analysis of Research Objectives

Analysis of Research Objective One: to assess the relationship between cost reduction and quality of project delivery in construction industry

To test the objective, linear regression analysis was used as specified in the regression model. Cost Reduction (CR) formed the independent variable while quality (QY) formed the dependent variable. The regression test results are presented in Table 4.

Table 4: Model Summary of the relationship between cost reduction and quality of project delivery in construction industry

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.725a	.526	.516	.25616
a. Predictors: (Constant), Cost Reduction				

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.779	.243		3.201	.002
	Cost Reduction	.733	.100	.725	7.292	.000
a. Dependent Variable: Quality of project delivery in construction industry						

Source: Researcher's Computation (2022)

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The model summary table above shows that there is a high positive relationship between cost reduction and quality of project delivery in construction industry in Lagos State, Nigeria (R = 0.725). The model further shows the extent to which cost reduction enhances the the quality of project delivery in construction industry in Lagos State, Nigeria. The coefficient of determination (R^2 = 0.526) indicates that cost reduction influences quality of project delivery with a given value of 52.6%. This result is statistically significant because the p-value of the result (0.000) is less than 0.01 level of significance used for the study. It is also observed from the table above that an evaluation of the unstandardized coefficient of the cost reduction in the coefficient table, and its associated p-value shows that cost reduction (β_{CR} = 0.733, $p < 0.01$) is statistically significant and it is used in enhancing quality of project delivery in construction industry in Lagos State, Nigeria.

QY = 0.779 + 0.733CR

Analysis of Research Objective Two: To investigate the effect of cost reduction on shortage of procured item

To test the objective, linear regression analysis was used as specified in the regression model. Cost reduction (CR) formed the independent variable while shortage (SG) formed the dependent variable. The regression test results are presented in Table 5.

Table 5: Model Summary of the effect of cost reduction on shortage of procured item

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.293a	.086	.067	.34184
a. Predictors: (Constant), Cost Reduction				

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.601	.325		4.929	.000
	Cost Reduction	.284	.134	.293	2.121	.039
a. Dependent Variable: Shortage of Procured Item						

Source: Researcher's Computation (2022)

The model summary table above shows that there is a moderate positive relationship between cost reduction and shortage of procured items (R = 0.293). The model further shows the extent to which cost reduction explains the shortage of procured item. The coefficient of determination (R^2 = 0.086) indicates that cost reduction accounts for shortage of procured item with a given value of 8.6%. This result is statistically significant because the p-value of the result (0.000) is less than 0.01 level of significance used for the study. It is also observed from the table above that an evaluation of the unstandardized coefficient of the cost reduction in the coefficient table, and its associated p-value shows that cost reduction (β_{CR} = 0.284, $p < 0.01$) is statistically significant and it is used for accounting the shortage of procured item.

SG = 1.601 + 0.284CR

Analysis of Research Objective Three: To determine the relationship between cost reduction and late delivery of project

To test the objective, linear regression analysis was used as specified in the regression model. Cost reduction (CR) formed the independent variable while late delivery (LD) formed the dependent variable. The regression test results are presented in Table 6.

Table 6: Model Summary of the relationship between cost reduction and late delivery of project

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.354a	.126	.107	.21498
a. Predictors: (Constant), Cost Reduction				

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Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.607	.204		7.865	.000
	Cost Reduction	.221	.084	.354	2.626	.012
a. Dependent Variable: Late Delivery						

Source: Researcher's Computation (2022)

The model summary table above shows that there is a moderate positive relationship between cost reduction and late delivery of project in construction industry in Lagos State, Nigeria (R = 0.354). The model further shows the extent to which cost reduction affects late delivery project in construction industry in Lagos State, Nigeria. The coefficient of determination (R^2 = 0.126) indicates that cost reduction affects late delivery of project with a given value of 12.6%. This result is statistically significant because the p-value of the result (0.000) is less than 0.01 level of significance used for the study. It is also observed from the table above that an evaluation of the unstandardized coefficient of the cost reduction in the coefficient table, and its associated p-value shows that cost reduction (β_{CR} = 0.195, $p < 0.01$) is statistically significant and late delivery of project in Lagos State, Nigeria.

LD = 1.607 + 0.221CR

Conclusion and Recommendations

Conclusion

The study's main objective was to determine the assessment of the relationship between cost reduction and quality of project delivery: a study of construction industry.

From the above analysis there is high positive relationship between cost reduction and quality of project delivery in construction industry in Lagos State, Nigeria (R = 0.725) . The coefficient of determination (R2 = 0.526) indicates that cost reduction influences quality of project delivery with a given value of 52.6%.

There is a moderate positive relationship between cost reduction and shortage of procured items (R = 0.293). The coefficient of determination (R2 = 0.086) indicates that cost reduction accounts for shortage of procured item with a given value of 8.6%.

There is a moderate positive relationship between cost reduction and late delivery of project in construction industry in Lagos S

tate, Nigeria (R = 0.354). The coefficient of determination (R2 = 0.126) indicates that cost reduction affects late delivery of project with a given value of 12.6%.

Recommendation

Since cost reduction has high positive relationship to quality of project delivery more attention should be on quality while dealing with cost reduction, quality should be every management priority, shortage and late delivery should also not be overlooked.

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