

## **Effect of Accounting Information System on Organisational Effectiveness: A Survey of Some Selected Construction Companies in Bayelsa State, Nigeria**

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### **Abstract**

*The efficiency, precision, and consistency of information processing have all been significantly boosted by the advent of technology. In this age of widespread technological development, an automated accounting information system (AAIS) may be helpful in every company's financial department. The primary goal of this research is to analyse how an effective accounting information system influences business outcomes. At the same time, the precise goals are to discover how an accounting information system impacts the efficiency of administrative processes and how such a system helps managers make informed choices. Five construction firms in Yenagoa, Bayelsa State, were randomly chosen for this study. Ten employees were randomly chosen from each of the participating firms. Both descriptive and inferential statistics were used to examine the data and support or refute the hypothesis. The outcomes indicate that an accounting information system can benefit an organisation's efficiency and productivity.*

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**Key Words-** *Organizational Effectiveness, Accounting Information system, Construction Companies.*

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### **1. Introduction**

Every sector of the evolving global economy is currently dominated by information technology. Recent developments in accounting information technology, along with rapid improvements in production processes, rising consumer demand, intense market competition, and vicious skimming activities by producers to survive the volatile and complex dynamics of business, have highlighted the importance of accounting information in financial and business disclosure, particularly as it relates to the efficacy and efficiency of administration (Fraihat, Joy, Masa'deh, and Farzaneh). Accounting is the language of business because it keeps track of money, records and interprets all company activities, and presents this information in meaningful financial statements that management can use to make decisions. Based on the going concern principle,

accounting is the "science and art" of compiling, organising, summarising, and disseminating financial information for profitably running a business.

Most, if not all, important financial managing decisions necessitate using an accounting information system. These judgments are worth billions of dollars annually in developed countries like the United States of America (USA) because they recognise the importance of accounting information systems. It sometimes seems like the decisions are not good. However, companies' decision-making bodies will significantly profit if researchers can enhance their study of accounting information systems.

### **Problem Statement**

Specifically, we have moved from the information age into the knowledge age, with knowledge now being valued above all other assets. While it is true that books, databases, and computer programs can store much information, none of it can replace actual human interaction and the acquisition of new knowledge. According to El Louadi (2017), knowledge is always imbued in a person, whether taught, learnt, used, or abused. Data from the accounting department is a reliable resource that may be used to improve administration. Managers, notably in Nigeria's construction industry, suffer from a lack of administrative nourishment due to poor accounting information, which threatens the efficiency of government operations. It has led to the current crisis condition being experienced by the Nigerian building sector. Kwarteng (2018) argued that to thrive in today's "knowledge-based society," businesses must master the skill of managing their intellectual property. Information management focuses on the use and growth of resources (both human and material) (Al-Okaily & Rahman, 2017). Based on these premises, the research aims to analyse how the quality of accounting information influences the efficiency of businesses, focusing on a few construction firms in Yenagoa, Bayelsa State.

This study contends, therefore, that efficient management is dependent on accurate Accounting data. This research investigates how an efficient accounting information system might improve an organisation's productivity.

## **2. Literature Review**

### **2.1 Conceptual Framework**

#### **2.1.1 Organisational effectiveness.**

There is a certain number of people who make up an organisation. Organisations are complicated goal-seeking entities which, in order to thrive, they must both maintain their internal structure, which coordinates the human part of the organisation and must adapt to and change in the external environment. There are several ways to define a company. Management accountants may talk about it in terms of how people are connected. According to Peter Drucker (2014), a successful manager produces results commensurate with their efforts. To paraphrase Nikpour (2017), "the degree to which an organisation fulfilled its aims" is the definition of organisational effectiveness. However, it is best characterised by Trabulsi (2018) as "the extent to which an organisation produces the expected result." To reiterate what Nikpour has pointed out so well. As a result of competition and open market operations, limited resources, and disagreement among interest groups, organisations must balance competing objectives.

As Reneau (2019) stated, organisational effectiveness is achieving set goals. According to Chang (2001), accounting data is crucial for improving efficiency in a globally competitive market. According to Huy and Phuc (2020), financial statements are the most reliable way to learn about a company from the outside. However, accounting is widely used and vital, and some worry that it has not evolved to keep up with the latest innovations in the high-tech and economic sectors. It might reduce the usefulness of the data it produces. Large-scale accounting fraud in industrialized nations, notably the United States (USA), a fast-evolving economic environment, and assertions by some scholars that value the relevance of accounting information have deteriorated all lend credence to Chang's thesis. Many scholars, however, insist that accounting data still holds significant insights. According to Ibrahim, Ali, and Besar (2020), one of the main reasons for the existence of accounting is to meet the need for information. Accounting information, among other things, must be responsive to the demands of users (especially investors) to be helpful. Most potential investors cannot easily access information on the financial health of the businesses in which they are interested in making investments. They often rely on reports and records of financial transactions compiled by the administration of these entities. There are few better places to find out about a company's financial standing than its financial report. A vital aspect of transparency, financial reporting facilitates the identification of investment possibilities. The primary function of financial statements is to report on the health of a business, including its cash flow, ownership structure, and operational performance.

### ***2.1.2 Relationship between Accounting Information Systems and Organizational Effectiveness***

According to Susanto and Meiryani (2019), the primary goal of producing accounting data is to help people make informed decisions. However, financial reporting needs to meet several criteria to be helpful, including being timely, complete, accurate, easy to comprehend, precise, and trustworthy. The material must be fair and transparent and not favour one side over another to be used to assess these qualities or attributes; therefore, impartiality and integrity are crucial. A decision-maker should be able to make informed judgments about future actions based on the information provided by the books of account. Ideally, it will also improve users' ability to weigh the pros and cons of various options and spot parallels and contrasts across various datasets (Lutfi, 2016). Accurate accounting data is a prerequisite for every business hoping to raise productivity. A solid accounting information system is also vital to the development of the stock market. Given the stock market's "engine of economic development" potential, advanced economies do not mess about their stock markets or the importance of financial reporting.

The research conducted by Hair, Hollingsworth, Randolph, and Chong (2017) found a positive correlation between the use of an automated accounting information system and increased efficiency and productivity within an organisation. The existing financial reporting paradigm in the developed world has been called into question by several recent studies on the utility of accounting information for equity valuation, share price, and profits forecast. Accounting figures' value relevance to investors is also a concern in Nigeria. It helps the researcher see if their findings are consistent with or contradict those of other studies.

The accounting information system (AIS) plays a significant role in a company's management and establishment of an internal control system. The term "internal control" refers to the system

of financial and other controls put in place by an organisation's leadership to guarantee the smooth operation of day-to-day operations, the upholding of management policies, the protection of assets, and the maintenance of accurate, complete records. The extent to which AIS satisfies organisational needs for information exchange and control is crucial in accounting and management decision-making. An accounting information system's output can help make decisions, but only if the system's advantages are more significant than its expenses. Automated accounting information systems help with managerial decision-making, as acknowledged by Dagiliene & Utiene (2019). Improvements in decision-making, accounting information quality, performance evaluation, internal controls, and transaction ease are all indicators of a successful accounting information system.

### **2.1.3 Accounting Information System**

Moscow (1990) provided the following definition of an accounting information system: "an organisational component which acquires, processes, analyses, and communicates relevant financial oriented decision-making information to a company's external stakeholders (such as existing and future investors, Federal, and State tax agencies, and creditors), and internal parties" (principally management). Accounting information that is timely, relevant, and objective is essential for the planning, decision-making, and regulating business activities in any company, public or private. Every business has the ultimate goal of increasing the value of its ordinary shares for its shareholders. They need valuable and applicable data that will let them make intelligent choices and take practical actions to accomplish their goals. Accounting information is considered valuable when managers use it to make well-informed decisions.

Hicks (1979) states that a company's management information system (MIS) is responsible for processing all data within the company to supply management with the information it needs to make decisions. The accounting information system is a part of this more extensive system. Financial and transactional data processing is the focus of this subsystem. Business-to-customer, business-to-supplier, and other such exchanges are the source of transactional data.

### **2.1.4 Functions of Accounting Information System**

The primary goal of an AIS is to evaluate past, current, and future economic occurrences quantitatively. The accounting software automatically generates all of AIS's financial statements, including income statements, statement of financial position, and cash flow statements. During the input, processing, and output stages, the system will process the data and change it into accounting information that shareholders and stakeholders can use. According to Taiwo (2016), an efficient AIS collects, processes, analyses, and applies knowledge to the business, controls that data (including its security) and generates information.

### **2.1.5 Usage of Information Within Accounting Information System**

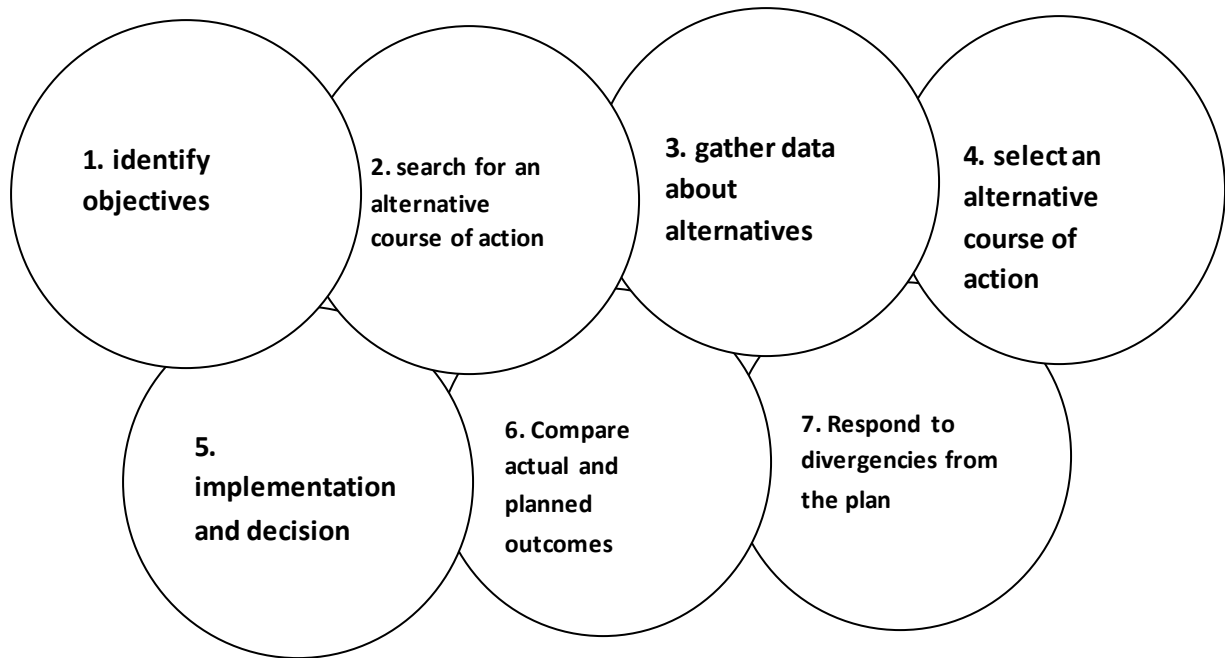
Each company's construction projects are categorised into one of five broad categories based on the construction operations they involve: infrastructure, buildings, electricity, wastewater, and oil and gas. The amount of work done by each department is proportional to the sum of the contracts won by the business. The information was gathered through other parties, such as clients, vendors, and subcontractors. It is expected that the Project Accountants and the Quantity Surveyors will collaborate closely to produce the following data:

The work in Progress (WIP) Percentage will be determined by the client's Quantity Surveyors (QSs) and mutually agreed upon by the parties. Once everything is finalised, the Client's QSs will issue Progress Billing Certificates (PBC) and send a copy to the primary office for filing. As a subcontractor, the Quantity Surveyors will assess the firm's on-site work in progress (WIP) and provide you with an agreed WIP percentage to which you and the main contractor may agree. Quantity Surveyors will issue a Subcontractor Progress Certificate (SPC), which the Project Manager will check before a copy is delivered to the corporate office for processing. Before placing delivery orders, the Quantity Surveyors and Project Accountants will check in with the suppliers to ensure the supplies and machinery arrive at the building site in working order (Al-Okaily & Rahman, 2017).

The accepted delivery orders will be included with the supplier's invoice and delivered to the corporate headquarters for processing and planning. Planning is a forward-looking exercise focusing on recognising issues and making informed decisions about potential solutions. To guarantee that the selected alternatives and implementation strategies are carried out, the following two steps constitute the control process, which includes monitoring and adjusting actual performance. Now, let us break down the steps involved in governance and decision-making (Kwarteng, 2018).

The first step is to define the Organization's Purpose or Objectives: To make sound choices, leaders need a clear picture of the big picture to weigh the benefits and drawbacks of potential actions. Therefore, defining the organisation's aims should come first in any decision-making procedure. Find out why this choice matters so much to management and customers. As a second step in the decision-making process, brainstorming potential solutions for achieving the goals is essential. It involves amassing information to make well-informed decisions. The third step is to collect information on potential alternatives when possible business opportunities are identified. Management should gather information on the growth rate of the activities, the company's ability to secure sufficient market share, and the cash flows for each potential alternative activity under different environmental conditions. The fourth step is picking the Best Option From a Menu of Possible Outcomes. Real-world decision-making requires weighing several potential outcomes and settling on the one that will most impact meeting an organisation's goals. Finally, Putting a Plan into Action Once a course of action has been decided upon, it should be implemented as part of the budgeting procedure. The budget is the financial strategy for carrying out the management's choices (Al-Okaily & Rahman, 2017; Kwarteng, 2018).

The management function of control is measuring, reporting, and correcting performance to guarantee that the firm's objectives and plans are attained, and this is accomplished by comparing actual and planned outcomes and reacting to divergences from the plan.



*Figure 1. The decision-making, planning and control process.*

### **2.1.7 The construction Industry in Nigeria**

As soon as man is involved, building and associated activities may commence. It should go without saying that the industry is just as crucial to the nation's economic prosperity as any other sector. The breadth of Nigeria's exposure and activity in the building sector may be gauged by looking closely at the country's most modern cities. Adaptation in society has led to new ways of building and designing. It is a process that involves putting things together. Thus, the building process begins with the design, architectural work, quantity surveying, landscaping, actual mixing of concrete and cement, finishing of such completed structures by a real estate practitioner, or final commissioning in the case of roads, fly-overs, and overhead bridges. This technique is as old as humanity itself, which is rather intriguing. Mattocks, cutlasses, shovels, wheelbarrows, mud bricks, and other primitive tools were used in pre-colonial buildings. Palaces, civic centres, recreational facilities, and public utilities like community wells and halls were all erected in traditional Nigerian cultures using this antiquated equipment and methods. Proof of traditional technology's success may be seen in the still-standing walls of ancient towns like Kano and the former Oyo Empire (Al-Okaily & Rahman, 2017; Kwarteng, 2018).

The Cocoa House in Ibadan, the Niger Bridge, Offa Bridge, the second Niger Bridge, and many more were all built with the help of Western experience in the construction business. Construction of the first church cathedrals in Abeokuta and Calabar; dredging of the River Niger and the Lagoon on Victoria Island; construction of the old secretariat in Ikoyi; construction of the Dodan Barracks in Obalende; and so on. Most of these were conceived by and created by

Western missionaries and engineers. Without a doubt, these have energized the nation's appearance and sped up the expansion of the building sector. The Julius Berger Company is a household brand in Nigeria's construction sector, among other notable companies such as the P. W (Nig.) Limited has also made a significant influence, securing the industry's largest contracts through its easy access to financial resources and political connections. The indigenisation directive has resulted in several multinational corporations appointing influential Nigerian business people to strategic board seats. It is a significant disadvantage for smaller companies run only by Nigerian professionals (EL Louadi, 2017).

The transition of the Nigerian federal capital from Lagos to Abuja was a watershed moment in the country's building sector. With the relocation to Abuja, a whole new city had to be constructed, including government and private sector office buildings, residential neighbourhoods for the people who had been relocated there, entertainment venues for the masses and the aristocracy, and a network of roadways. The city planners got to work drawing out plans for Abuja (Al-Okaily & Rahman, 2017; Kwarteng, 2018). It meant that there would be more work for builders, architects, and local engineers and that heavy construction equipment would have to be sent to Abuja. Samples of construction firms in Yenagoa are listed in Table 1 below.

### ***Challenges in the construction sector***

To a greater or lesser extent, the construction industry faces the same difficulties as the rest of the rising economy. Among the many limitations, we find: Low levels of capital due to high bank rates; Low levels of technology; Inadequate training of human resources, notably among those responsible for designing accounting information systems; Poor upkeep habits; The climate and environment of Nigeria need alterations to designs.

### **3. Methodology**

To what extent does accounting information system quality influence organisational performance is the primary focus of this research. While our ultimate goals are: One goal is to examine how an efficient accounting information system influences organisational performance. The second objective is to examine how using an accounting information system has improved managerial judgment. A total of five (5) construction firms in Yenagoa, Bayelsa State, were included in the research. Questionnaires were utilised to solicit useful information from the company's financial accountant and the site project manager. Companies that cut are: Julius Berger Nigeria Plc, *Reynolds Construction Company*; Bricks Alliance company limited Yenagoa; Condonet Nigeria Construction Company Yenagoa, Azikel Construction Company Ltd Yenagoa, Abis Parkins Venture Nigeria Ltd, First Based Construction Company, Yenagoa.

The information was analysed using the statistical package for social science (SPSS), including descriptive and inferential statistics capabilities. To put it more precisely, analysis of variance (ANOVA) was used to examine the hypothesis. The following hypotheses were developed in light of the problem described above:  $H_1$ : The effectiveness of an organisation is significantly impacted by the accounting information system.  $H_0$ : The effectiveness of an organisation is not significantly impacted by the accounting information system.

**Table 3.1: List of some of the major construction companies that have branches in Bayelsa State.**

Serial number	Names of the construction company
1	Julius Berger Nigeria Plc, Yenagoa
2	Engineer Super Nigeria Ltd Yenagoa
3	Setraco Construction Company, Yenagoa
4	Condonet Nigeria Construction Company, Yenagoa
5	Reynolds Construction Company, Yenagoa
6	Bricks Alliance company limited Yenagoa
7	Abis Parkins Venture Nigeria Ltd
8	Daewoo Construction company Yenagoa
9	Azikel Contractors, Yenagoa
10	First Based Construction Coy, Yenagoa

#### 4. Results and Discussion

##### Descriptive Statistics

One-third of the respondents were aged 20–44, 40% were aged 45–54, and the remaining 33% were aged 55 and over. Most accountants and site project managers must be somewhat mature individuals. Four males and six women answered the survey. It indicates that women comprise the majority (60%) of construction site accounting and project management teams. From the data in table 2, it can be inferred that chartered accountants lead all of the construction firms included in the sample and that all the site project managers hold advanced degrees in their respective fields.

**Table 4.1 Frequency Distribution of Respondents' Qualification**

Frequency	Percent	Valid Percent	Cumulative percent
ND/CNA	1	10.0	10.0
HND/ACA	3	30.0	40.0
BSC/FCNA	2	20.0	60.0
MBA/ACA	4	40.0	100
Total	10	100.0	



#### 4.2 Test of Hypothesis

H<sub>0</sub>: The effectiveness of an organisation is not significantly impacted by the accounting information system.

H<sub>1</sub>: The effectiveness of an organisation is significantly impacted by the accounting information system.

Sum of Squares	Df	Mean Square	F	Sig.	
Regression	103.515	1	12.939	7.354	0.018(a)
Residual	4.585		8		1.759
Total		108.100		9	
Coefficients of a regression line					
Variable	Unstandardised Coefficients	Standardised Coefficients (β)	t	Sig.	
Constant	10.455	.206	2.128	0.066	
Accounting information	.138	.595		0.568	

Source: Survey Output, 2023

#### Discussion of Analytical Results

For this reason, we will assume that the accounting information system does not have any noticeable impact on the efficiency of the business. Findings indicate a favourable impact, although a modest association. Thus, a better accounting information system will boost efficiency inside a firm. Having a high 'F' ratio (7.354) suggests that the accounting information system is crucial in deciding the company's efficiency. As R<sup>2</sup> indicates, the model adequately accounts for the dependent variable of organisational effectiveness on the accounting information system (103.515). With an R=0.22 determinant coefficient, an efficient accounting information system may explain 22% of an organisation's performance variation.

Because of this, we reject the null hypothesis and support the alternative hypothesis that the Accounting Information System significantly impacts the company's efficiency. Lai (2018) found similar findings in his study, demonstrating the critical role of accounting data in allowing businesses to achieve their productivity goals.

#### 5. Conclusion and Recommendations

This study's findings suggest that accounting information systems considerably impact productivity within the sample of construction firms studied. Researchers concluded that accurate financial records improve organisational efficiency. Better financial reporting and decisions were also shown to result from using an accounting information system. Another policy recommendation stemming from this research is that the International Accounting Standards Board (IASB) should mandate the use of a sound accounting information system throughout the construction sector.

Nigerian construction firms' management is urged to use an automated Accounting Information System in this article (AAIS). Software for financial and project accounting used by the Finance Department. Top-level management can better anticipate possibilities and challenges in the

market and inside the firm thanks to the financial data generated by this program and examined by the accountants. The competitive effects of a company may be ensured if its management hires and trains people who are both fluent in computers and highly skilled in their use. Last but not least, the government should facilitate workers' access to computer training.

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