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## Impact of Accounting Information Systems on Operational Performance of Nigeria Small Scale Business Enterprises.

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### Abstract

*The study investigated the Impact of accounting systems on Operational Performance of Nigerian Small Scale Business Enterprises. A representative sample of 44 businesses were selected from various categories of small businesses, of which 16 are registered, 12 unregistered, 8 freelanced and 8 mobile businesses at Faringada commercial business area in Jos metropolis of Plateau State, and Bogoro community in Bogoro local Government Area of Bauchi State. Some selected organization has been chosen so as to enable a good work and to allow free-flow of callbacks and for a thorough check of the returned questionnaires, to measure and statistically handle error for quick result. The researcher chose the questionnaire and the interview methods for data collection. The chi-squared and the product moment coefficient of correlation were used for data analysis. The results of the investigation on the hypotheses using the chi-squared were tested at the 5% level of significance using SPSS25. A total number of 15 (fifteen) questions were designed and each questionnaire contain these 15 questions. 44 questionnaires were administered and they were all returned. The likert-scale method of options was used. It was discovered that no matter the size of the business, proper accounting system of record keeping is indispensable, and that accounting system does have a whole lot of influence on the operational performance of small businesses, irrespective of the size of such organization.*

**Keywords:** Accounting information systems, operational performance, small business enterprises, chi-square test, product moment coefficient of correlation, likert-scale.

### 1.0 Introduction

It is difficult to track down the progress of any serious business without an organize conscious effort to record and account for the various activities of the business organization irrespective of the size and type of business, most especially the profit-oriented concerns. Small scale businesses tend to neglect the issues of proper record keeping and as such most remained disadvantaged in terms of financing growth, expansion, diversification into other areas of businesses. It is because of this mentality of small business owners that necessitated the choice of this topic to make it known that no matter the size of the business, if the culture of proper bookkeeping is imbibed the small business have the capacity to enjoy all the benefit larger organization are enjoying. As can be discovered the influence of accounting system in any business organization cannot be overemphasized. All organization must realize that not keeping accounting records will impact negatively on their business performances, growth and success.

Researchers and analysts of small or owner-managed businesses generally behave as if nominal organizational forms (e.g., partnership, sole-trader or corporation) and the consequent legal and accounting boundaries of owner-managed firms are consistently meaningful. However, owner-managers often do not delineate their behavior to accord with the implied separation between their personal and business interests. Lenders also often contract around organizational (corporate) boundaries by seeking personal guarantees or accepting privately held assets as collateral. Because of this behavior, researchers and analysts should reject the relevance of the organizational types and implied boundaries in many contexts relating to owner-managed firms. These include analyses that use traditional accounting disclosures, and studies that view the firm as defined by some formal organizational structure. Think of the accounting system as a wheel whose hub is the general ledger (G/L). Feeding the hub information are the spokes of the wheel. These include: Accounts receivable, Accounts payable, Order entry, Inventory control, Cost accounting, Payroll, Fixed assets accounting.

These modules are ledgers themselves. They are called sub-ledgers, each contains the detailed entries of its specific field, such as accounts receivable. The sub-ledgers summarize the entries, and then send the summary up to the general ledger. For example, each day the receivables sub-ledger records all credit sales and payments received. The transactions net together then go up to the G/L to increase or decrease the account receivable A/R, increase cash and decrease inventory.

We have to always check to be sure that the balance of the sub-ledger exactly equals the account balance for that sub-ledger account in the G/L. If it doesn't, then there's a problem. This constant check and assurance services can only be effective if an accounting system is in place. Since most small businesses do not have an accounting system, this essential service becomes very difficult to come by.

Differences always exist between manual and automated Ledgers. Think of the G/L as a sheet of paper on which transactions from all four categories of accounts-assets, liabilities, income, and expenses-are recorded. Some of them flow up from various sub-ledgers, and some are entered directly into the G/L through a general journal entry. An example of such a direct entry would be the payment on a loan.

The same concept of a sheet of paper holds for each sub-ledger that feeds the general ledger. A computerized accounting system works the same way, except that the general ledger and sub-ledgers are computer files instead of sheets of paper. Entries are posted to each and summarized, and then the summary is sent up to the G/L for posting. This accounting system could have a substantial influence on the operational performance of the business of the organization, provided they are established and applied judiciously in the organizational business operations.

Small businesses often face a variety of problems related to their size. A frequent cause of bankruptcy is undercapitalization. This is often a result of poor planning rather than economic conditions - it is a common rule of thumb that the entrepreneur should have access to a sum of money at least equal to the projected revenue for the first year of business in addition to his anticipated expenses. Another problem for many small businesses is termed the 'Entrepreneurial Myth' or E-Myth. The mythic assumption is that an expert in a given technical field will also be expert at running that kind of business. Additional business management skills are needed to keep a business running smoothly. Some of this misunderstanding arises from the failure to distinguish between small business managers as entrepreneurs or capitalists; nearly all owner-managers of small firms are obliged to assume the role of capitalist, only a minority will act as entrepreneur. The line between an owner-manager and an entrepreneur can be defined by whether or not their business is growth oriented. In general, small business owners are primarily focused on surviving rather than growing, therefore not particularly concerned with the five-stage system of the corporate life cycle (birth, growth, maturity, revival, and decline) like an entrepreneur would. It is difficult to distinguish this role in a small business than in larger firms. This paper intends to connect these roles to ensure that in small businesses owner-manager and entrepreneurial role are adequately synchronized so that the operational performance of small scale businesses can be clearly systematic and streamlined. The major objective of the study is to determine the influence of accounting system on the operational performance of Nigeria small scale business, while other specific objectives are: to examine the significance of accounting system to small businesses progress, and to determine whether accounting systems have influence on the operational performance of small businesses.

## 2.0 Literature Review

### 2.1 Performance Evaluation

According to Ehiagwina (2014), "Performance evaluation is the periodic review of operations to ensure that the objectives of the enterprise are being accomplished".

In other words, it is a report on the success or failure of an operation. A corporation's performance evaluation is part of its financial control system. One reason for performance evaluation is to reward managers for achieving the organization's goals. Corrective actions can also be taken when achievement falls short of the goals. Performance evaluation guides resource allocation decisions within the organization.

#### 2.1.1 Financial Measures used In Evaluating Businesses

Most businesses use various measures to evaluate the results of their operations both at home and abroad. Ehiagwina (2014) posited some of the measures as hereunder;

##### *Profitability Measures*

A fundamental measure of operating success is profitability. This can be expressed as gross profit, net income, or return on investment (ROI). Gross profit (or operating margin) is the difference between revenues and the cost of products sold or services provided. Net income is the "bottom line" profit figure of an operation expressed as a rate of return; ROI relates profitability to invested capital. It is said that since shareholders are profit oriented, manager should be as well. Profitability measures imply a level of decentralization that does not always exist in multinational operations.

##### *Sales Growth and Cost Reduction*

The ability to reach customers is vital to company's long-run success. Customer acceptance of a company's products or services translates directly into the sales (or revenue) figure. Sales growth may also indicate increased market share.

Cost reduction intensified in the 1990s in response to increased competition brought on by the globalization of products and services markets. Most companies including Multinational-corporations re-engineered their businesses to improve efficiencies and many spun off

peripheral activities in order to focus on their so-called “core competencies”. Outsourcing such functions as accounting and information technology were other cost reduction moves. Sales growth and cost reductions should also improve profitability.

#### *Budgets as a Success Indicator*

Sometime, budgeting has been accepted as a management tool for controlling operations and forecasting future operations of companies. One purpose of the budget is to clearly set out the objectives of the entity. A budget generally provides a forecast and a means of comparing the actual results, of operations to the budget. This comparison produces variances that can be analyzed to evaluate performance and improve the efficiency of future operations. When a budget is used for a subsidiary, the budget should be developed by that subsidiary. The experience of the manager is extremely important, in that, it produces a deep knowledge of the specific business situation in that locality. Thus, the subsidiary manager should fully participate in establishing the subsidiary's goals and in developing its budget. A budget developed on this level will help control the operations and make achievement of goals possible. This budget can be used by the local manager on a daily basis. Budgeting gives local managers the opportunity to set their own performance standards. In international operations, top management is not as familiar with what the standards should be. Headquarters must rely to a greater extent on good local or regional budgets, which help facilitate the strategic planning process. The subsidiaries' budgets are approved at the parent-company level and often require the endorsement of the president and/or the board of directors. Presumably, headquarters uses the budget to consider the circumstances peculiar to each subsidiary. All of this should ensure a two-way flow of communication between the subsidiary and headquarters, which in turn, will improve the overall budgeting process. Most organizations need flexible performance evaluation models capable of incorporating factors peculiar to it for the separate evaluation of its activities and managers. Because performance evaluation systems used by a firm has significant economic impact, these systems should be under constant examination, and improvements should be made continuously. This vital function can be enhance through the use of emerging technologies, the rate at which small scale businesses are receptive to these innovations are yet to be made clear; this is why the researcher want to assess this by formulating the following hypothesis to test usefulness of these emerging technologies:

***H<sub>0</sub>: Accounting information system is not significant to small scale business growth.***

#### **2.1.2 Accounting Information System**

The limitation of accounting information systems (AISs) over the years to mere preparation of financial statements for legal purposes and the production of historical accounting and financial information for the privileged stakeholders have been redefined by the introduction of some sophisticated systems of information technology for use. The mission of the AIS has risen from the simple provision of formal and financial information to encompass a broader range of information (Chenhall, 2003). AIS is responsible for the collection, storage and processing of financial and accounting data that is used for internal management decision making, including nonfinancial transactions that directly affect the processing of financial transactions (Belfo & Trigo, 2013). Accounting information system is a method and procedure to collect, classifies, summarize and report financial business and operational information (Warren, Reeve & Fess, 1999). AIS can be interpreted besides financial reporting of business transactions also reported the company's operational information. (Ramdany, 2015).

Accounting information technology is a man made information technology which utilizes computer and related resources in collecting data, process the data into information and make the information available for decision-making. It is a computer-based method for tracking accounting activity in conjunction with information technology resources (Adejola, 2017). AIS is viewed as a system that helps management in planning and controlling processes by providing relevant and reliable information for decision making. It suggests that AIS's functions are not solely for the purpose of producing financial reports. Its role goes beyond this traditional perspective. AIS should be utilized to include planning and managing business activities. It could also be used as a controlling mechanism such as budgeting. Therefore, full adoption of the system is essential to fully attain the system's benefits (Harash, Al-Timimi, & Radhi, 2014)

The implementation and adaption computerized accounting systems (CAIS) for any organization such as SMEs will enable the management and owners to improve decision making, internal controls and financial information, as well as enable financial reporting to be designed and processed on a standardized format and timely. It was reported that the use of inefficient information to support financial decision making and poor quality and reliability of financial information were part of the major SMEs challenges (Abdulle, Zainol & Ahmad, (2019).

The use of enterprise resource planning (ERP) technology has facilitated the embodiment of this new vision. An ERP is a complex set of computer applications designed to integrate the processes and functions within the same company. This system is able to present a holistic vision of the company's business by sharing a common and integrated database. The amount of information has become more important, and the data are updated and relevant. the AIS provides both historical and forecasting accounting information that covers financial accounting, management control and financial analysis (Daoud & Triki, 2013). The quest is to assess how accounting information system can influence small scale business enterprises in terms of performance, growth, profitability, stability and reliability. It is because of these that the researcher intends to seek to proffer answers to the following Null hypothesis;

*H<sub>0</sub>: Accounting information system does not have any significant influence on the operational performance of small scale business enterprises.*

### 2.1.3 Organization of the Accounting Department

Organize your small-business accounting system by function. Often there's just one person there to do all the transaction entries. From an internal control standpoint, this isn't desirable. Having too few people doing all the accounting opens the door for fraud and embezzlement. Companies with more people assign functions in such a way that those done by the same person don't pose a control threat. (Meyer, 2009).

Having the same person draft the checks and reconcile the checking account is a good example of how not to assign accounting duties. We'll talk extensively about internal control later. However, for now, small businesses often can't afford the number of people needed for an adequate separation of duties. The internal control structure that we'll install in your new accounting system helps mitigate that risk through mechanics and procedures rather than expensive people.

### 2.1.4 Assignment of Duties

Here's your first assignment: Figure out who is going to do what in your new accounting system. The duties and areas of responsibility we need to assign includes according to (Meyer 2009):

- Overall responsibility for the accounting system
- Management of the computer system (if you're using one)
- Accounts receivable
- Accounts payable
- Order entry
- Cost accounting
- Monthly reporting
- Inventory control
- Payroll (even if you use an outside payroll service, someone must be in control and responsible)
- Internal accounting control
- Fixed assets

In many cases the same person will do many of these things. However, these are the areas we'll be dealing with in setting up the accounting system. The person you assign to be in overall charge of the system should be the one who is most familiar with accounting. If you are just starting your company, you might want to think about the background of some of your new employees. At least one should have the capacity to run the accounting system.

Meyer and Allen (1991), developed a three component "model of commitment" which explains that commitment to an organization is a psychological state that has three distinct components that affects how employees feel about the organization that they work for. According to them the three components are: Affection for your job (affective commitment); fear of loss of job (continuance commitment); and sense of obligation to stay (normative commitment), they argue further that these model can be used to increase commitment and engagement in a team while also helping people to experience a greater feeling of well-being and job satisfaction.

This model can very significant in accounting information system seeing that the accountant and the accounting personnel is affected by it; it will take a great deal of commitment to convince these staff category in a small scale business setting to be obligatorily committed, in the face of the fear of loss of job, and in the presence of new innovative technologies.

### 2.1.5 Management Accounting Reports and Feedback

Most contemporary organizations and societies are faced with a common paradox: information systems are constantly improving and users are receiving more and more systems based information but still they suffer from inability to get sufficient personal feedback. In management accounting, feedback has traditionally been viewed rather mechanistically- as a formal control loop between goals and measured performance using formal accounting and information systems, such as the balanced scorecard (Hanna & Kari, 2010).

By providing information that is relevant to planning and control decisions, for example, budgetary control information, budgeting information, relevant costs for one-off decisions, profitability reports for profit monitoring such as, management accounting, like any other



MIS, should help managers to plan and control the resources of their organization. Much of management accounting is concerned with the recording of actual costs for comparison with expectation or budget. This control information is known as “feedback” (Leon, 2010).

### 2.1.6 Qualities of accounting Information

According to Onyebuanyi, Idrisu, and Abianga (2013), Management information is expected to possess the following attributes:

- (a) **Accuracy** - The information must be communicated with sufficient confidence in its accuracy to enable the manager to make valid decisions.
- (b) **Completeness** - The information to be given to the manager should be complete so that a decision is not made in ignorance of some of the key facts.
- (c) **Timeliness** - Information should be produced at the right time so as to enable useful decisions to be taken.
- (d) **Concise** - The manager should be provided only with the information which is useful for the purpose of his need and of a quantity for which he is capable of absorbing.
- (e) **Clarity** - The information to be provided to manager should be readily intelligible. It must reduce ambiguity to the barest minimum.
- (f) **Cost/benefit analysis** - The cost of the information to be obtained should be less than the benefit to be derived from the information.

### 2.1.7 Risk and Information Presentation

Onyebuanyi, et al, (2013), says risk to a greater or lesser degree is present in all planning and decision making situations. It may be as follows:

- (a) The possibility of machine failure,
- (b) The difficulties of forecasting inflation or exchange rates, and
- (c) The effects of competition, changing tastes, government actions, etc.

Therefore, it is important that the preparer of information for planning and decision making purpose presents the information in a manner which helps the manager to understand the effects of risk on the problem being considered, how risks are likely to affect the range of possible outcomes.

The effects of uncertainties can be presented in reports, statements and analyses in the following ways:

- (i) Results and outcomes are presented as ranges of values rather than single point estimates.
- (ii) Three points estimates (high, low and most likely) for analysis and presentation purposes are used.
- (iii) Probabilities are associated with the values and outcomes. This is so because of its subjective nature. However, probability has been tested to provide possible valuable insights to the underlying risks.
- (iv) Sensitivity analysis may be used. This is a process by which the factors involved in the situation, for example, sales volume, cost per unit, selling price per unit and so on are varied one at a time and the effect on the outcome noted.
- (v) Confidence limits may be applied more so when forecasts are involved.

From the foregoing, it is obvious and can be discovered considering the risk factors identified above that accounting system will be incomplete without a good and reliable system of data preservation and retrieval.

### 2.1.8 Levels of Information

According to Lucey (1988), Accounting data and information are used to represent the underlying economic activities of the organization which include: buying materials, selling products, manufacturing and financing the organization. Accordingly, it is essential that the record of the past performance and the information derived from the records which is used to guide future planning and decision making, represent the underlying economic realities in a clear and unambiguous manner unfettered by accounting conventions.

Thus levels of information within an organization (as distinct from information provided by an organization to external users, such as shareholders, the general public, pressure groups, competitors, suppliers, customers, etc.) can be analyzed into three:

- (a) *Strategic information*: This is used by top management to plan organizations' objective. Such information includes future market prospects, the availability and cost of raising new funds, total cash needs, etc. Readers will note that strategic information is orderly used as the management for decision-making, called strategic planning.
- (b) *Tactical information*: Management control information used by middle management to ensure that the resources of the business are efficiently and effectively utilized, to achieve organization strategic objectives. Examples are productivity measurements (output per man hour or per machine hour); budgetary control or variance analysis; profit result within a particular department of the organization; labor turnover statistics within a department; short-term purchasing requirements, etc. it is worthy of note that a large proportion of this information will normally be generated within the organization that is, as feedback and is likely to have an accounting emphasis. Tactical information is usually prepared regularly - perhaps weekly, or monthly (whereas strategic information is communicated irregularly). Tactical information is used for the decision-making called management control.
- (c) *Operational information* is used by 'front-line' managers such as foreman or head clerks to ensure that specific tasks are planned and carried out properly within a factory or office. In the payroll office, for example, operational information relating to day-rate labor will include the hours worked each week by each employee, his rate of pay per hour, details of his deductions and for the purpose of wages analysis, details of the time each man spent on individual jobs during the week. Operational information relates to a level of decision-making called operational control.

## 2.2 Theoretical Framework

### 2.2.1 Theory of Internal Control

Internal control system is a control function put in place by the management of firms to ensure that the whole organization is brought to an appreciable light so as to coordinate its activities adequately well in an effective and efficient manner, it enables the firm to be on top of happenings internally in-order to promptly harness its strength and be aware of its weaknesses and devise a way to manage these weaknesses. According to Konrath (2002) internal control system is an oversight function of the company's operations that promote the effectiveness and efficiency of the financial reporting that helps in the supervision of financial statements presented are trustworthy and prepared in accordance with applicable rules. Internal control as part of the management function is to provide reasonable certainty that the existing policies to be implemented in the company are adhere to properly. The policy is one of which is the supervision of the accounting system that provides adequate assurance that the financial transactions have been recorded according to the procedure in force and avoid misstatement of the financial statements (Boynton, Johnson, & Kell, 2001). The strength of an organization's operational performance is dependent on its internal control system in place and goes a long way to determining its profitability, market share, going concern, stability and its ability to be competitive in the chosen line of business operation whether in as a small, medium or large scale firm.

### 2.2.2 Resource-Based View

The approach is grounded on the rational of RBV that firms create value and impact by combining various resources that are economically difficult to imitate or valuable across firms (Peteraf, 1993). In addition, resources impact resides more in an organization's ability to leverage an innovation than the innovation itself (Clemens & Row 1991; Ross, Beath & Goodhue, 1996). Put it differently, innovation impact depends on the extent to which innovation is used to support key activities of the firm's value chain. The greater the use, the more likely the firm is to develop unique impact from its innovation (Zhu 2004). This approach has produced stream of research that focus on the antecedents and consequences of innovation usage (Salwani, Marthandan, Norzaidi, & Chong 2009; Picoto, Belanger & Palma-dos-Reis 2014; Zhu & Kraemer 2005).

### 2.2.3 Technology Organization Environment

The TOE framework provide a useful starting point to look on AIS usage Tornatzky & Fleischer 1990; Lufti, Idris, & Mohamad 2016). The TOE framework identifies three categories of factors that influence the process by which firms use technologies. First, technological context describes the perceived innovation attributes which include: observability, relative advantage, complexity, compatibility, and trial-ability. A meta-analysis study conducted by Tornatzky & Fleischer (1990), shows that the most common relevant and positive significant characteristics are the relative advantage and compatibility, which are going to be considered in this study. Secondly, organizational context refers to the amount of slack resources available internally, owner/manager commitment and organizational readiness are the most frequently found to be significant in the usage/adoption of innovations, which also are going to be considered in this research. Thirdly, "environmental context which refers to the arena, in which a firm conducts its business, competes and deals with government" (Tornatzky & Fleischer 1990). This framework is consistent with the Diffusion of Innovation Theory (DOI) of Rogers, (2003), that emphasizes on technological characteristics and organizational characteristics of an organization as drivers for technology diffusion.

## 2.3 Empirical Review

Adenike and Adewoye, (2018), carried out a study to examine investment in accounting information system and its effect on sales growth of Nigeria Small and Medium Enterprises (SMEs). The specific objectives of the study are to; identify the factors that influence sales growth, and examine the relationship between investment in Accounting Information System (AIS) and sales growth. A total of 120 questionnaires were administered to management staff of each selected Small and Medium Enterprise (SME) in Lagos State, Nigeria. Both descriptive and inferential statistics were employed for the study. The descriptive statistics employed include percentage frequency and charts to achieve the study objectives. The inferential statistics employed is multiple regression analysis while ANOVA was used to examine the relationship between investment in accounting information system and sales growth. Findings revealed that AIS investment, non AIS labor and AIS labor accounted for 82% of the variation in sale growth in the study area and that there is a relationship between investment in accounting information system and sale growth. Furthermore, it was revealed that AIS investment have the highest impact on sales growth (beta value = 0.944) followed by AIS labor (beta value = -0.018) while the variables that had the least impact on sales growth was Non AIS labor (beta value = -0.052). they found out that a relationship existed between investment in AIS and sales growth, and recommended that government should implement a policy that will stimulate the investment in AIS by SME in order to improve their sales and in return have positive impact on economic development of the nation.

Spremic and Jakovic (2012) In their paper an analysis of the impact of the Accounting Information System usage on the company's e-business efficiency is made. The analysis was based upon the secondary data on the application of the e-business in the companies in 29 European countries, as well as on the primary data obtained by a survey on 252 Croatian companies. They conducted a relevant empiric research (using Chi-square and Levene's Test analyses) which gives the up-to-date information on the impact of Accounting Information System usage on e-business efficiency and made it possible not to reject the hypothesis that indeed Accounting Information System usage affects the e-business efficiency.

Saira, Zariyawah and Annur (2010) examined "information system and firm performance of Malaysian SMEs using panel data". Using 205 firms as a sample, they gathered monetary statement information for five years times frame starting from the year 2004-2008. Results from regression analysis revealed that SMEs adopting AIS improve significantly in performance compared to non-adopters.

Abdulle, Zainol and Ahmad, (2019), carried out a study on the impact Of Computerized Accounting Information System on Small and Medium Enterprises in Mogadishu, Somalia. The study attempts to understand the usage of CAIS and its impact on the performance of SMEs in Somalia. The survey questionnaire was designed and distributed to select SMEs in the capital city of Mogadishu, Somalia. The results of CAIS's impact are discussed from four components of balanced scorecard namely financial, customer, internal processes and

learning & growth perspectives. The results of this study may provide knowledge about the impact of usage CAIS for SMEs performance in Somalia.

Siyanbola, Maduemem, Ogbebor, and Sanyaolu, (2019), In their study sought to determine the effect of accounting system on the performances of SMEs in Nigeria. The population of this study consists of the Small and Medium scale Enterprises (SMEs) in Festac - Town, Lagos. Data were extracted from 154 questionnaires administered with 80% retrieval success. The hypotheses were formulated and tested using regression analysis at 5 per cent level of significance (0.05). The data were analyzed and interpreted using both descriptive and inferential statistics. The study found accounting information system having a significant positive effect on SMEs performance. In conclusion, accounting information systems employed by the managers/owners of SMEs were found to have contributed positively to their decisions and performances. We therefore recommended that users of accounting information should take cognizance of the quality of accounting information systems provided so as to aid their performance.

Harash, Al-Timimi, and Radhi, (2014), in their paper investigate the influence of the use of Accounting Information System (AIS) on the performance of Small and Medium Enterprises (SMEs) in Iraq. The study discusses and explores the effects of the use of AIS on the performance of SMEs. The result of the study is expected to help the owners and manager of SMEs to understand the importance of the use of AIS to achieve performance. The use of AIS is influenced by several characteristics enjoyed by the accounting information such as: reliability, relevance, and timeliness that effect on SMEs' performance. The result of this study and modern literature shows that AIS characteristics enjoyed by the accounting information such as: reliability, relevance, and timeliness have significant effects on the use of AIS and SMEs' performance. Prior researches have shown that is crucial for SMEs to use AIS to ensure business continuity and survival in the increasingly competitive environment and to enhance their business operations capability and efficiency.

Ramdany, (2015), carried out a study to determine the influence of accounting information systems and the effectiveness of internal control on financial reporting quality. Secondary source of data collection were employed by making use of available literature in related field of study; after testing the hypotheses, the results showed that the influence of accounting information systems and the effectiveness of internal control have a significant effect on the financial reporting quality. Furthermore it was found that the accounting information systems and the effectiveness of internal control have relation on financial reporting quality.

Soudani, (2012), in a study entitled: The Usefulness of an Accounting Information System for Effective Organizational Performance, stated that AIS is very useful for the performance of the organization. This study proves that AIS gives a positive contribution to the performance of the organization including the performance of financial reporting.

Haija, Alrabei and Aryan, (2016), undertook a study aimed to explore the respondents' perceptions on the role of accounting information quality in enhancing cost accounting objectives, namely, planning, controlling, performance evaluation and decision making functions. The researchers had designed a 31-item questionnaire distributed to 227 respondents who are working in industrial companies, out of 227 questionnaires distributed only 181 were returned. Ten of these questionnaires were excluded because they were invalid, the remaining 171 questionnaires yielded 75.3% responses rate. The demographic profile of the respondents was highlighted in a table. The results found accounting information quality plays significant role in enhancing the cost accounting objectives of firms in the Jordanian industrial companies.

Lutfi, Idris & Mohamad, (2016), Drawing upon Technology-Organization-Environment (TOE) framework as well as the Resource Based View (RBV) theory, they proposed an integrated model to examine the antecedents and impact of AIS usage in Jordanian SMEs. The proposed model enables incorporation of usage and the performance aspects of AIS in a single model. The study employed self-administered questionnaire survey for data collection purposes. The research model was validated based on the responses from 186 Jordanian SMEs. Three major findings emanated from the study. First, competitive pressure, compatibility, organizational readiness, owner/manager commitment and government support were found to significantly influence the usage of AIS. Secondly, the study demonstrated significant and positive relationship between AIS Usage and effectiveness. Finally, contrary to the expectation, environmental uncertainty does not moderate the relationship between AIS usage and AIS effectiveness. The findings provide insights as to how firms could improve their AIS usage for better firm performance. The current paper also contributes to the small but emergent stream of literature that examines antecedents and impact of IS/IT usage.

### 3.0 Methodology

A representative sample of 44 businesses were selected from various categories of small businesses, such as 16 registered, 12 unregistered, 8 freelanced and 8 mobile businesses at Faringada commercial business area in Jos metropolis of Plateau State, and Bogoro community in Bogoro local Government Area of Bauchi State, Some selected organization has been chosen so as to enable a good work and to allow free-flow of callbacks and for a thorough check of the returned questionnaires, to measure and statistically handle error for quick result. The researcher has chosen the questionnaire and the interview methods for this research work, which are primary data source. The data were analyzed using both chi-squared statistics  $\{\chi^2 = (O-E/E)\}$  and the product moment correlation

Coefficients; where results were proxy by outcome  $X = \text{true}$ , outcome  $Y = \text{false}$ , outcome  $X_1 = \text{no-idea}$ , and outcome  $Y_1 = \text{undecided}$ . Chi-square tests on SPSS25 was also used to determine the level of significance of the relationship between the study variables.

#### 3.1 Model for Product Moment Coefficient of Correlation and Chi-Square

The Product Moment Correlation of Coefficient model is used to determine the level of correlation of the variables of the study, this model is depicted as follows; the components of the model have been defined above already.

$$b = \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{n\sum x^2 - (\sum x)^2} \times \sqrt{n\sum y^2 - (\sum y)^2}} ; \text{ whereas the Chi-square model model is represented thus;}$$

$\{\chi^2 = (O-E/E)\}$ , where: O represents Observed outcome.

E represents Expected outcome.

$\chi^2$  represent the Chi-Square.

#### 4.0 Data Presentation and Analysis

Table I: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis		Z-score	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error	Skew	Kurtosis
OutcomeX	15	4	44	24.73	15.055	0.129	0.580	-1.656	1.121	0.222	-1.477
OutcomeY	15	1	40	14.47	13.277	0.785	0.580	-0.674	1.121	1.353	-0.601
Prof	15	0	7	3.20	2.426	0.285	0.580	-1.030	1.121	0.491	-0.919
Nprof	15	0	6	2.40	2.293	0.210	0.580	-1.512	1.121	0.362	-1.349
Outcome X <sub>1</sub>	15	1	14	4.00	4.259	1.145	0.580	0.278	1.121	1.974	0.248
Outcome Y <sub>2</sub>	15	1	6	2.27	1.944	1.114	0.580	-0.377	1.121	1.921	-0.336
Valid N (listwise)	15										

Source: Authors' computation using SPSS. 25

Table I, is the descriptive statistics table that shows the summary of the distributions of all the variables used in the study such as the outcomes and the groups in the characteristics as it relates to the minimum, maximum, mean standard deviation, data skewness and kurtosis as well as z-statistics. The z-statistics explain the normality of the variable used, which shows that all the variable fall within the range under the standard normal curve of  $\pm 1.96$ ; except for the outcome 3, that expressed no idea in the subject matter.

Table II: Summary of Response Frequency

Questions	True	False	No idea	Undecided
1	13	16	9	6
2	12	24	8	-
3	4	40	-	-
4	44	-	-	-
5	40	4	-	-
6	44	-	-	-
7	16	16	8	4
8	20	20	-	4
9	36	8	-	-
10	44	-	-	-
11	24	8	8	4
12	18	6	14	6
13	12	32	-	-
14	4	36	4	-
15	40	4	-	-
Total	371	214	51	24

#### 4.1 Analysis:

Table I is a summary of the 44 questionnaires administered to the public and were returned, the table shows how the respondents acted in their independent opinions. From the outlook of the table it can be observed that majority of sample population chosen have a reasonable level of knowledge of the subject matter of the “influence of accounting system in the operational performance of Nigerian small business enterprises”, and as such were able to choose their options to the best of their knowledge. Other respondent from the general public who are not conversant with accounting as a profession responded to the best of their knowledge as laymen as to true or false about certain questions.



Table III: Data Presentation and Analysis

N	x	y	x <sup>2</sup>	y <sup>2</sup>	xy
1	13	16	169	256	208
2	12	24	144	576	288
3	4	40	16	1600	160
4	44	-	1936	-	-
5	40	4	1600	16	160
6	44	-	1936	-	-
7	16	16	256	256	256
8	20	20	400	400	400
9	36	8	1296	64	288
10	44	-	1936	-	-
11	24	8	576	64	192
12	18	6	324	36	108
13	12	32	144	1024	384
14	4	36	14	1296	144
15	40	4	1600	16	160
n=15	371	214	12,347	5,604	2,748

Applying the Product Moment Correlation Coefficient formula;

$$\begin{aligned}
 b &= \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{n\sum x^2 - (\sum x)^2} \times \sqrt{n(\sum y^2) - (\sum y)^2}} \\
 &= \frac{15 \times 2,748 - 371 \times 214}{\sqrt{15 \times 12,347 - (371)^2} \times \sqrt{15(5,604) - (214)^2}} \\
 &= \frac{41,220 - 79,394}{\sqrt{(185,205 - 137,641)} \times \sqrt{(84,060 - 45,796)}} \\
 &= \frac{-38,174}{(218.09 \times 195.61)} \\
 &= \frac{-38,174}{42,660} ; b = -0.8948
 \end{aligned}$$

#### Interpretation/Analysis

Table II, shows the first group of individual respondents who are either professionals or knowledgeable and experienced in the subject matter, who responded to each questions in the questionnaires according to their opinions. The analytical instrument used that is the product moment coefficient of correlation shows that there is a strong perfect negative relationship between accounting information system and operational performance of small business enterprise at -0.8948 or -89.48%.

Table IV: Data Presentation and Analysis

N	X <sub>i</sub>	Y <sub>i</sub>	X <sub>i</sub> <sup>2</sup>	Y <sub>i</sub> <sup>2</sup>	X <sub>i</sub> Y <sub>i</sub>
1	9	6	81	36	54
2	8	-	64	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	8	4	64	16	32
8	-	4	-	16	-
9	-	-	-	-	-
10	-	-	-	-	-
11	8	4	64	16	32
12	14	6	196	36	84
13	-	-	-	-	-
14	4	-	16	-	-
15	-	-	-	-	-
n=15	51	24	485	120	202

Applying the Product Moment Correlation Coefficient formula;

$$\begin{aligned}
 b &= \frac{n\sum xy - (\sum x)(\sum y)}{\sqrt{n\sum x^2 - (\sum x)^2} \times \sqrt{n(\sum y^2) - (\sum y)^2}} \\
 &= \frac{15 \times 202 - 51 \times 24}{\sqrt{15 \times 485 - (51)^2} \times \sqrt{15 \times 120 - (24)^2}} \\
 &= \frac{3,030 - 1,224}{\sqrt{15 \times 485 - 2,601} \times \sqrt{15 \times 120 - 576}}
 \end{aligned}$$

$$= \frac{68.37 \times 34.99}{2,392} \quad b = 0.7550$$

### Interpretation/Analysis

Table III, shows the second group of individual respondents who responded to the questionnaires as they deem fit sincerely according to the level of their understanding of the subject matter. These sets of individuals do not have adequate knowledge and those with just elementary knowledge about accounting system. But were able to respond based on that level of knowledge which they possess.

The product moment coefficient of correlation at 0.7550 shows the level of sincerity, frankness and unbiased nature of the data collected, which is a strong fairly perfect positive correlation.

**H<sub>0</sub>: Accounting information system is not significant to small businesses progress.**

**Table V: Test of Null (H<sub>0</sub>) Hypothesis I**

Type of Business	True	False	No idea	Undecided	Total
Freelance	O= 0,(E)= 2.4	O= 6,(E)= 3.0	O= 0,(E)= 1.6	O= 2,(E)=1.0	8
Mobile	O= 2,(E)= 2.4	O= 4,(E)= 3.0	O= 2,(E)= 1.6	O= 0,(E)= 1.0	8
Registered	O= 7,(E)= 4.7	O= 6,(E)= 6.0	O= 3,(E)= 3.3	O= 0,(E)= 2.0	16
Unregistered	O= 4,(E)= 3.5	O= 0,(E)= 4.0	O= 4,(E)= 2.5	O= 4,(E)= 2.0	12
<b>Total</b>	<b>13</b>	<b>16</b>	<b>9</b>	<b>6</b>	<b>44</b>

From the table 'E' represents Expected frequency and

'O' represents Observed frequency

Given a 4 x 4 contingency table

**Table VI: Data Presentation and Analysis**

O	E	O - E	(O - E) <sup>2</sup>	(O - E) <sup>2</sup> /E
0	2.4	-2.4	5.76	2.40
2	2.4	-0.4	0.16	0.70
7	4.7	2.3	5.29	1.13
4	3.5	0.5	0.25	0.07
6	3.0	3.0	9.00	3.00
4	3.0	1.0	1.00	0.33
6	6.0	-	-	-
-	4.0	-4.0	16.0	4.00
-	1.6	-1.6	2.56	1.60
2	1.6	0.4	0.16	0.10
3	3.3	-0.3	0.09	0.03
4	2.5	1.5	2.25	0.90
2	1.0	1.0	1.00	1.00
-	1.0	-1.0	1.00	1.00
-	2.0	-2.0	4.00	2.00
4	2.0	2.0	4.00	2.00
			<b>X<sup>2</sup> =</b>	<b>19.63</b>

$$X^2 = 19.63,$$

The degrees of freedom (df) = (R-1)(C-1)

3x3 = 9df, @ 5% level of significance, the critical value is = 16.92

### Interpretation

Accept the Null Hypothesis (H<sub>0</sub>) and reject the alternative Hypothesis (H<sub>a</sub>), If Chi-squared (X<sup>2</sup>) calculated is less than (<) the table/critical value, and otherwise or vice versa.

It can be observed that the calculated value of chi-squared @ 19.63 is greater than (>) the table/critical value of 16.92 at 5% level of significance. Therefore, the Null Hypothesis (H<sub>0</sub>) is rejected, which says:

**H<sub>0</sub>:** Accounting information system is not significant to small business progress.

### Findings

Meaning that no matter the size of the business, proper accounting system of keeping records is indispensable, and as such for any business to thrive and survive in the ever dynamic business environment, its activities must be adequately streamlined using a well planned accounting system so that relevant and useful accounting information necessary for decision making both for internal and external benefits can be communicated to the various interested parties. Therefore, a very strong evidence of relationship between accounting information system and business progress exist. The finding is consistent with the submission made by Tornatzky & Fleischer (1990); Lufti, Idris, & Mohamad (2016) on the usage of accounting information system in a technology organization environment

**H<sub>0</sub>:** Accounting information system does not have influence on the operational performance of small businesses.

**Table VII: Test of Null (H<sub>0</sub>) Hypothesis II**

Types of Business	True	False	No idea	Undecided	Total
Freelance	O= 0,(E)= 3.3	O= 0,(E)= 1.0	O= 4,(E)= 2.6	O= 4,(E)=1.0	8
Mobile	O= 2,(E)= 3.2	O= 2,(E)= 1.0	O= 2,(E)= 2.6	O= 2,(E)= 1.0	8
Registered	O= 8,(E)= 6.6	O= 4,(E)= 2.0	O= 4,(E)= 5.0	O= 0,(E)= 2.0	16
Unregistered	O= 8,(E)= 5.0	O= 0,(E)= 2.0	O= 4,(E)= 4.0	O= 0,(E)= 2.0	12
<b>Total</b>	<b>18</b>	<b>6</b>	<b>14</b>	<b>6</b>	<b>44</b>

A 4 x 4 contingency table

**Table VII: Data Presentation and Analysis**

O	E	O - E	(O - E) <sup>2</sup>	(O - E) <sup>2</sup> /E
-	3.3	-3.3	10.89	3.30
2	3.2	-1.2	1.44	0.45
8	6.6	1.4	1.96	0.30
8	5.0	3.0	9.00	1.80
-	1.0	-1.0	1.00	1.00
2	1.0	1.0	1.00	1.00
4	2.0	2.0	4.00	2.00
-	-	-	-	-
4	2.6	1.4	1.96	0.75
2	2.6	-0.6	0.36	0.14
4	5.0	-1.0	1.00	0.20
4	4.0	-	-	-
4	1.0	3.0	9.00	9.00
2	1.0	1.0	1.00	1.00
-	2.0	-2.0	4.00	2.00
-	2.0	-2.0	4.00	2.00
			<b>X<sup>2</sup> =</b>	<b>24.94</b>

The degrees of freedom ( $df$ ) =  $(R-1)(C-1)$  i.e.  $(4 - 1) (4 - 1) = 3 \times 3 = 9df$  @ 5% level of significance, the critical value is = 16.92. The calculated value = 24.94.

### Interpretation

Accept the Null Hypothesis (H<sub>0</sub>) and reject the alternative Hypothesis (H<sub>a</sub>), If Chi-squared (X<sup>2</sup>) calculated is less than (<) the table/critical value, and otherwise or vice versa.

It can be observed that the calculated value of chi-squared @ 24.94 is greater than (>) the table/critical value of 16.92 at 5% level of significance.

Therefore, the Null Hypothesis (H<sub>0</sub>) is rejected, which says:

**H<sub>0</sub>:** Accounting information system does not have influence on the operational performance of small businesses.

### Findings

This means therefore, that accounting system does possess a very strong evidence of a lot of influence on the operational performance of small businesses, irrespective of the size of such organization. Without a well documented, understandable, user-friendly and comprehensively systematic records keeping, the operational performances of businesses cannot yield the desired results of customers'

satisfaction, going concern or survival, growth, and ultimately profitability. The findings also agrees with the theory of technology organization environment by Tornatzky & Fleischer (1990); Lufti, Idris, & Mohamad (2016) and the resource based view theory (Zhu 2004).

**Table IX: Case Processing Summary**

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Prof *	15	100.0%	0	0.0%	15	100.0%
NProf						

Table IX, shows the summary of case validity that was processed and the result explain that no case was missing all the data processed returned 100% without any of them missing.

**Table X: Chi-Square Tests**

	Value	df	Asymptotic Significance (2- sided)
Pearson Chi-Square	38.000 <sup>a</sup>	15	0.001
Likelihood Ratio	34.282	15	0.003
Linear-by-Linear Association	0.378	1	0.539
N of Valid Cases	15		
a. 24 cells (100.0%) have expected count less than 5. The minimum expected count is .27.			

*Source: Authors' Computation using SPSS.25*

Table X is the case of Chi-Square test, looking at the Pearson Chi-Square value which shows an asymptotic Significant 2-sided value of less than (<) 5%, summarizes the significance of the relationships between the variables in this study.

## 5.0 Discussion of findings and Conclusion

It was discovered that the two (2) null-Hypotheses formulated were rejected and the reason for their rejection were made known through the use of suitable instruments in the data analysis. It was observed that most small scale business do not have a workable accounting system, and where some make use of the system its' principles are not judiciously applied, thereby giving room for frauds and other unaccountable anomaly bedeviling the progress, success, growth and survival of the business. Accounting system was discovered to be the road-map to business survival and as such a business that ignores its usefulness in its operating activities will only be busy for nothing meaning that it is bound to go down the drain. No matter the size of that business and its operations the issues concerning accounting system must be treated with utmost seriousness, just like the popular saying that 'finance is the lifeblood of any business', likewise also, accounting system is the carrier of that lifeblood, which is very essential without which the finance will be spilled. All businesses have the potentiality to succeed, if the basic principles of planning, proper accounting records and bookkeeping, adequate operations and management of accounting system are adhere to by a trained and qualified personnel. Judging from what had been discovered in this work, it can be concluded that the influence of accounting system in the operational performance of small business enterprises cannot be overemphasized. This is because accounting system is basically proper record keeping, and whatever you do not have in your record you do not practically have it. This means that it is easier to remember what you document by way of record keeping than what is ordinarily committed to memory. What is committed to the memory will efflux in the process of time whereas what is documented can stand the test of time and a useful instrument for evidence and future reference purposes.

The researcher recommends as follows among others;

The usefulness of accounting system to an organization should be noted and not taken lightly, but should rather be adequately harnessed for the growth and success of the small business,

Small businesses should be supported and necessary assistants given by the government to encourage its operations and their owners,



It is also recommended that intensive and regular capacity building for preparers of financial statements and accounting information be organized by the various organizations responsible for this programme as the need arises.

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