# ACCOUNTING INFORMATION SYSTEM (AIS) AS A PANACEA TO CRISIS IN BUSINESS OPERATIONS: A CASE STUDY OF SELECTED SMEs IN OWERRI MUNICIPALITY

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**Abstract**

This paper x-rays the relevance of Accounting Information System (AIS) to effective decision making in businesses in the Small and Medium Scale (SME) sub-sector of the economy. To achieve this purpose, research questions were raised, hypothesis was formulated, and a review of related literature carried out. The population of the study comprised managers and accountants of the 72 SMEs within Owerri municipality that are registered with the state's Ministry of Commerce and Industry. Out of these, 30 each were randomly selected through a purposive sampling technique. Two research questions were drawn to guide the study. A questionnaire titled "Questionnaire for Respondents" (QFR) of reliability coefficient of 0.76 was administered on the respondents and all of them were returned. Mean was used to analyze the data, while stated hypothesis was tested with Z-test at 0.05 level of significance. The result revealed that AIS has significant effect on performances of SMEs in Owerri municipality. Based on this, it was recommended among other things that managers of Small and Medium Scale Businesses (SMBs) sector should introduce AIS in their business operations in order to make progress in the right direction.

The economic crisis that resulted from the fall of crude oil prices together with the success story of some countries in Europe, Asia and America necessitated Nigerian Government to encourage development of Small and Medium Scale Enterprises (SMEs) within the country (Situmbeko, 1997). This is because small and medium scale enterprises (SMEs) are viewed as growth catalysts; engine that powers the economic development of any economy. Rajesh, Suresh, and Deshmukh, (2008); Agwu & Emeti, (2014). The SMEs are labour intensive, capital saving and capable of helping create the over one billion new jobs needed by the world by the end of the century (Lalkaka, 1997, in Agwu & Emeti, 2014). Considering this fact, successive administrations in Nigeria encouraged the creation, survival, growth, maturity and sustenance of businesses in the sub-sector through various policies and programmes. One of such measures was the recent inclusion of entrepreneurship education as a compulsory course of study among all levels of students of our institutions of higher learning. The idea behind this policy has been among other things, to train individuals that would eventually be self-employed / employable on graduation, thus reducing the saturated unemployment rate and incidences of business failures that have characterized SME operations in Nigeria in recent time. Though, the latter measure is still fresh, however, SMEs in Nigeria are yet to play the expected vibrant role in the economic growth and development of the country. The situation has its wider implication on purchasing power, state of internal security, crime rate, social and political stability of the country. Cases in point include the current exchange rate of ₦350 to one American dollar, Boko-Haram Insurgency at the North East, Massob Imbroglio bedeviling the South East-South-South, as well as the Hausa-Fulani Herdsmen's alleged attacks on defenseless citizens at various parts of the country.

The problem has generated a lot of research interest among scholars and government at all levels, seems to be at the cross roads, considering non-complimentary effect of her efforts. Several reasons adduced for the failure of these SMEs range from harsh government policies, poor capital, poor infrastructure, lack of managerial skills, poor educational background of operators, to lack of proper accounting information system. Oko & Uzoka, (2012); Ngobiri & Uchegbu, (2013). Most SMEs in Imo state operate as sole propriateships and are generally classified into commerce, agriculture and industrial categories depending on their activities, though commercial SMEs make up 90% of the total number. Anyakoha (2006) in Ekomaru & Okwulehie (2013) opined that the rate of unemployment in Imo state is 30% of the total population of 4,800.000 persons. This high rate suggests that these SMEs are experiencing some major challenges that affect their operations and performances negatively. Owerri municipality is not immuned to the aforementioned challenges, hence the need for a study of this nature.

Relatedly, most SMEs in Nigeria die within their first five years of existence, a smaller percentage goes into extinction between the sixth and tent year, while only five percent survive, thrive and grow to maturity (Aremu & Adeyemi, 2011). Apart from this, Ekwem (2011) pointed out that SMEs operations played greater role in placing the developed countries to the height they occupy this day in the community of nations. However, the sub-sector's paltry contribution of 1% to the total GDP of the nation as well as the alarming rate of poverty, youth restiveness, crime and unemployment shows that SMEs in Nigeria are not doing well (Oyeyinka, 2008). Unfortunately, previous studies on the causes of this anomaly had focused mainly on factors such as poor, start-up-capital, lack of proper planning, illiteracy and ignorance, managerial incompetence, poor available facilities and inimical government regulations as seen in Onugu (2005); Lewu (2008), Agwu & Emeti (2014), among others. These researchers failed to consider problems associated with book-keeping and accounting. They forgot that without proper Accounting Information System, it will be difficult to provide adequate administrative management that guarantees business survival and growth. In as much as this, the few available studies that focused on accounting and book-keeping, for instance, the one of Yahaya, Osemene & Salmon (2011); Okoh & Uzoka (2012); and Ademola, Samuel & Ifedolapo (2012) treated accounting information system with lavitude and did not properly dichotomize between book-keeping and accounting information system in the face of the importance of the latter to successful business operations. Moreover, their research concentrated on locations outside Owerri cum Imo state and has findings that may not be suitable for Imo state, especially when culture and environmental differences are put into consideration. Based on the above, our point of departure is to fill these existing gaps and therefore research on the topic of this nature.

Sequel to this, the central objective of the study is to examine whether or not accounting information enhances performances of SMEs in Owerri municipality. Specifically, the study tends to:

1. Examine the effects of Accounting Information System (AIS) on the effectiveness of SME operations in Owerri municipality.
2. Ascertain the extent to which Accounting Information System (AIS) leads to better decision making by operators of SMEs in Owerri Municipality.

Based on the stated objectives, the following hypothesis stated in null form were formulated at 0.05 level of significance to further advance the course of the study:

**Ho:** Accounting Information System (AIS) has no significant effect on performances of SMEs in Owerri Municipality

**Literature Review**

The concept of small and medium scale enterprises (SMEs) has no universally accepted definition, (Ngobiri and Uchegbu, 2013). This is because no single definition can capture all the definitions of ‘Micro’, ‘Small’, ‘Medium’, or ‘Large’, and no single definition is expected to reflect the differences between firms, sectors, or countries at different levels of development, (Ilo, 1997). Therefore, the definition of SMEs varies from one organization or the other and from country to country. However, a number of criteria that have been used to define the concept include number of people employed by the enterprise, capital size, ownership and management structure of the enterprise, annual sales volume, corporate assets, number of sites or share of market, nature of business, even volume of bank deposit, (Odeyemi, 2012); (Ngobiri and Uchegbu 2013); (Onaolapo and Adagbite, 2014); and (Agwu and Emeti, 2014).

The European Union (EU) defined an SME as an enterprise which has less than 250 employees; has either an annual turnover not exceeding ECU 40 Million, or annual balance sheet total not exceeding ECU 27 Million; is less than 25% owned by non SME, (Starkey, 1998). This definition, Gerstenfeld & Roberts (2000) noted, was broken down in terms of number of employees by the EU thus:

| Type of Enterprise | Size of Employee |
|---|---|
| Micro | 1 to 9 |
| Small | 10 to 49 |
| Medium | 50 to 249 |

In Nigeria, the National Conference on Industries (NCI, 2001); and Ngobiri & Uchegbu, (2013) bought this view. The latter added that:

- Micro Cottage Industries are those industries whose total cost including working capital but excluding cost of land is not more than ₦1 Million, and a labour size of not more than 10 workers;
- Small scale Industries are those industries whose total cost, including working capital but excluding cost of land is ₦1 Million but not more than ₦40 million and a workforce of between 11 and 35 workers;
- Medium scale industries are industries whose total cost, including working capital but excluding cost of land is over ₦41 million but not more than ₦150 million and a labour size of between 36 to 100 workers;
- Large scale industries are industries whose total cost including working capital and excluding land is higher than ₦150 million with a labour size of over 100 workers.

This, slightly differs from the official definition of SMEs by the Small and Medium Enterprises Development Agency of Nigeria, (SMEDAN, 2003) which defined an SME as follows;

a. Micro enterprises as enterprises with assets not more than ₦1.5 million (excluding land) and employing not more than 100 people.
b. Medium enterprises as enterprises with assets of not more than ₦200 million and employing not more than 300 people.

Ngobiri and Uchegbu (2013) reported also that the Central Bank of Nigeria (CBN), defined SMEs according to assets base and number of people employed. The criteria are an asset base of between ₦5 million and ₦500 million, and staff strength of between 11 and 300 people.

The National Economic Reconstruction Fund (NERFUND) set a maximum limit for small scale industries at ₦10 million, (Odeyemi, 2012); while section 37b (2) of the companies and Allied Matters Decree (CAMD)

1990, defined a small scale company as one with:

a. an annual turnover of not more than ₦2 million
b. net asset value of not more than ₦1 million.

In Imo State, SMEs are heterogeneous in nature and they include variety of firms such as restaurants, pure water, soap and detergents, wood works, leather products, textiles, computer software, tailoring & fashion designing, printing press, fabrication, cassava processing, block making, and consultancy. These firms, Yahaya, Osemene and Salman (2011), pointed out, possess different sophistications and skills, and that they operate in different markets and social environments.

As has been observed from the foregoing, there is no consensus on the real definition of the concept as it can be seen that both terms, small and medium, are relative and differ from industry to industry, country to country and over time within counties. The difference amongst industries could be seen to be the difference in capital requirements of each business, which those among countries could arise as a result of difference in industrial organization by countries at different stages of economic development. What might therefore be defined as SME in a developed country can be regarded as a large scale enterprise in a developing country using partners as fixed investment and employment of the labour force. It is important to also recognize that definitions change over time and hence, even in developing countries, what was previously classified as large scale industry could be regarded as small or medium scale enterprise in the future.

For purposes of this research however, the definition of the National conference on Industries (NCI) is adopted, i.e. small and medium scale enterprises are enterprises with capital outlay of ₦1 million to ₦150 million, and workforce of 11 to 100. The definition covers the situation in Imo State; although the CBN definition is most appropriate to the current economic situation in Nigeria which is characterized by high operational costs as a result of the continuous depreciation of the naira, and the resultant inflationary impacts.

Going a step further, Ngobiri and Uchegbu (2013) addressed the features of the SMEs in Nigeria as follow:

- They exist mainly in the form of sole proprietorship and partnership, although some are registered as limited liability companies;
- Management structure is simple and allows for easy decision making as there is generally no separation of ownership from control
- Inefficient management and poor record/book keeping and accounting records
- Majority of them are labour intensive, requiring more human capital per unit of production. Agwu and Emeti, (2014) corroborated this view. They added that the SMEs in Nigeria are generally classified into commerce, agricultural, and industrial categories.

Olokoyo (1999) in Ekwem (2011) made the following additions:

- **Local Operation:** The employers and employees often live in the community in which the business is located. This does not mean however, that all small firms serve only local markets, some go beyond their areas of operation by seeking outlets for their products or services in other parts of the country, or even export.

- **Capital Requirement:** The amount of capital required is relatively small compared to that required by bigger firms. The capital required is supplied by one or at most by a few individuals, e.g. friends, relations and so on.

Ekwem (2011) maintained that other characteristics of SMEs include simple organizational structure; lack of specialized managers; owner knows his/her employees (better industrial relationship); high percentage of business failures; few employees; long and short term capital being difficult to obtain; freedom of action, easy adaptation to local needs etc.

Odeyemi (2012) however observed that SMEs start typically with an ownership structure of sole proprietorship, but that in the recent past, this orientation has noticed significant changes, partly as a result of the indigenization decree of '70s and partly as a consequence to better exposure and enlightenment. He opined among other things, that the SMEs are characterized by highly centralized management and administration, often built around the owner of the business, which is also perhaps, why they are found to have a high mortality rate.

On the role of SMEs in Nigeria, Situmbeko (1997); Gude (2010); Ngobiri and Uchegbu (2013); and Agwu & Emeti, (2014) pointed out that poverty reduction or alleviation and employment creation are the main focus of economies like Nigeria; and that these issues are usually addressed through the planned development of small and medium scale enterprises.

Based on this, Lalkaka (1997) in Agwu & Emeti (2014) noted that SMEs are the engine of economic growth of any country. To him, SMEs are labour intensive and capital saving. Situmbeko (1997) addressed the importance of SMEs thus; SMEs are tools for employment generation, and for: addition of value in terms of Gross Domestic Product (GDP) and national income (NI), foreign exchange, capital investment, tax contribution, inculcation of export culture and adoption of technology, improvement of infrastructure/standard of living. Udechukwu, (2003); Anyanwu, (2003); Ekwem, (2011); and Agwu & Emeti (2014) agree to the fore-going. The latter however opined that SMEs are key to poverty alleviation and sustainable development.

Expatiating this view, Ekwem (2011) observed that SMEs played greater role in placing the developed countries to the enviable heights they occupy this day in the world economies. He noted that for example, 98% of the industrial fabric in Portugal is composed of SMEs; while 81% of all employment in Japan is in SMEs, 59% in Canada, 46% in the U. S, 90% in Pakistan (and that the activities of the SMEs account for 46% of that country's Gross Domestic Product, GDP). He also observed that SMEs activities share 40% of China's GDP, and has helped place China into the fore-front of leading economies of the world.

According to him, African countries have started to feel the impact of SMEs; for instance, SMEs account for 18% in Kenya's GDP and 20% in Senegal; and that 46% and 55% of all jobs in Morocco and South Africa respectively are in the SMEs.

Going by this view, Kombo (2011), submitted that SMEs have contributed greatly in the growth of Kenyan economy, accounting for 12-18% of GDP through creating employment opportunities, training entrepreneurs, generating income, and providing a source of livelihood for the majority of low income households in the country.

Aruwa (2005) believed that Nigeria's industrial sector is dominated by SME's which accounts for 90% in terms of number of enterprises, as compared with other developed countries.

On other developing economies, Fissaeha (1991) stated that SMEs employ 22% of the adult population in developing countries, while Fabayo (1989) observed that small firms are major source of employment opportunities for a wide cross-section of the workforce. Given the place occupied by the SMEs in Nigeria's industrial sector, it is expected that the success of Nigerian economy would be partly dependent on the success of the SMEs.

However, Aremu (2004); Onugu (2005), Ekwem (2011); Oko and Uzoka (2012); and Agwu and Emeti (2014) noted that inspite of the above efforts, not much benefits have been realized. They however regretted that the SMEs have had an unimpressive performance in employment generation in recent years, and that the situation has generated a lot of research interests on their challenges and prospects in Nigeria.

Corroborating this, Oyeyinka (2008) stressed that though the Nigerian industrial sector is dominated by SMEs, they contribute only 1% of total GDP of the nation, compared to countries in Asia, Europe, and America that have their SMEs accounting 40%, 50%, and 50% respectively. He maintained further that encouragement of the growth of the sub-sector was a thought in the right direction but that much still needed to be done to promote the activities of SMEs

In as much as this, Ngobiri & Uchegbu (2013) classified the problems and challenges of the SMEs in Nigeria into 3 categories, namely finance; working capital; and others.

i. **Finance**: To them, this problem has been to what extent or degree have SMEs been able to access funds from all those agencies and institutional funding. According to Babajide (2002) in Ngobiri & Uchegbu (2013), one major factor identified for inhibiting the accessibility of funds by the SMEs is stringent conditions attached in loan accessibility; especially the issue of collateral security and long delays in processing and approving the request. Apart from that, Ngobiri & Uchegbu (2013) pointed out that the SMEs on their own possess poor financial management practices and lack financial transparency due largely to ownership structure; and poor educational background. Other related problems in this category, according to them, include poor feasibility studies that could lead to the denial of the loan, cost of accessing these funds which, are usually very high thus limiting the ability of the SMEs to access the funds; high interest charges that take a lot of toll in their working capital and creates additional problems to the SMEs; and activities of promoters of SMEs who, they maintained, are at times unable or unwilling to provide sufficient information to accelerate the processing of their financing requests.

ii. **Working Capital Problem:** The incidence of inadequate working capital, which constrains productive capabilities of SMEs as well as absence of succession plan in the event of death of the proprietor, leads, in many cases, to frequent early demise of SMEs (Ekwem, 2011). The most challenging problem of all is sourcing and management of working capital, (Ngobiri & Uchegbu, 2013). According to them, no matter the amount spent on other assets, particularly fixed assets, if the ingredients required for production are not effectively managed, the entire commitment to the profit will become a waste. They further noted that without working capital, establishments cease to become a going concern and therefore suggested that the most effective ways of managing working capital is to unlock internal cash by maintaining enough liquidity in the system; maintaining an effective operating business cycle to free up cash; and maintaining restricted and short and medium term outlays.

iii. **Other Problems:** On this, Ekpeyong & Nyang (1992); Onugu (2005); Ogechukwu (2006); Fatai (2011), and others listed problems such as lack of planning, inimical government regulations, poor marketing strategies, lack of technical know-how, lack of skills and experience, poor state of infrastructure, low performance of public utilities etc.

Onugu (2005) classified the problems into external and internal and posited that some of the challenges of SMEs are induced by the operating environment such as government policies, globalization effects, activities of the financial institutions etc, others are a function of the nature and character of SMEs themselves.

Many banks have blamed their inability to fund SMEs on the poor state of infrastructure, economic climate and low performance of public utilities such as electricity and water (Olarenwaju, 2001), in Ngobiri & Uchegbu (2013).

About this problem, Omolola (2008), in Ekwem (2011) stated that the cost of providing infrastructural facility by SMEs themselves constitutes about 30-35% of establishing a manufacturing enterprise in Nigeria. However, Ngobiri and Uchegbu (2013) opined that the most critical of all the problems is power problem.

Apart from the above mentioned problems and their negative implications on SMEs operations, Laughlin & Gray (1999); Reed (2010); Okoh & Uzoka (2012); Onaolapo & Adegbite (2014); Mbroh & Attom (2014); and others made mentioned that the greatest challenges that SMES face in their survival, growth, development and sustenance particularly in Nigeria is inefficient management which stems from absence of or lack of well instituted Accounting Information System (AIS). This, they maintain are the bane of the SMEs.

Hence, Romney and Marshall (2010), see an information system is an organized means of collecting, entering and processing data and storing, managing, controlling, and reporting information so that an organization can achieve its objectives and goals. To them, an information system has the following components: goals and objective, inputs, outputs, data storage, processor, instruction and procedures, users and control measures. Thus, any system that includes the above components is known as an information system; and various forms of information system exists, namely, Accounting Information System (AIS), Management Information System (MIS), etc. however, for purposes of this study, our interest is on AIS.

On that note, Modum (2005) defined an accounting system as comprises of accounting forms, (i.e. documents, records, reports, employee worksheets, internal control procedures) designed to help the process of accounts. Modum agued further that accounting, on its own, is a service function that seeks to provide the user with quantitative information, while an accounting information system is a system designed to make the accomplishment of accounting function possible. On their own part, Romney and Steinbert (2012) defined an accounting system as a system that collects, records, stores and handles data to provide information to decision-makers through using advanced technology or simple system or in between of the two. Chang (2001) in Onaolapo & Adetayo (2012) asserted that in any case, accounting information plays a significant role in enhancing organizational effectiveness in a global competitive environment.

Ahmad (2014) listed the following as characteristics of AIS: appropriateness, credibility, accuracy, timeliness, clarity, importance, fulfillment, and qualitative. He maintained further that these characteristics aim to help business operators in assessing the accounting information that results from the application of alternative accounting methods and distinguished between what is a necessary classification and what is not, according to the users of the information. Onaolapo & Odetayo (2012) corroborated this and pointed out that the essence of accounting is to satisfy information need of users and that for any accounting information to be relevant, the data must, among other things, be quick to respond to user's needs. They maintained further that financial report is one of the best sources of accounting information about a business entity. On his own part, Wilkinson (2000) noted that the main function of accounting information system (AIS) is to assign quantitative value of the past, present and future economic events. This view was expatiated by Onaolapo and Adetayo (2012) when they opined that through either manual or computerized form (Contract Plus), the AIS produces the financials statements, namely, Income Statements, Balance Sheets, and Cash flow Statements to be used by wide variety of interest groups – Internal and External. Modum (2005) noted that internal users of accounting information are the management and employees of the business, management requires accounting information to take decisions concerning how bests to run the business, and for strategic planning; employees need the information to be able to take decisions on personal matters, such as promotion, appointments, security and training. Modum addressed the external users to include:

- Investors and potential investors – Information on the risk and returns on investments
- Unions and employee groups – information on the stability, profitability and distribution of wealth within the business
- Lenders and Financial Institutions – information on the credit worthiness of the company and its ability to repay loans and pay interests.
- Supplier and Creditors - information on whether accounts owed will be repaid when due, and on the continued existence of the business.
- Customers – information on the continued existence of the business and thus the probability of a continued supply of products, parts, and after sales service
- Government and other Regulators – information on the allocation of resources and the compliance to regulations.
- Social Responsibility Groups, such as Environmental Groups – information on the use of the environment
- The Public – information on the role and contribution of businesses to society.
- Competitors – information on the relative strength and weaknesses of their competitors and for comparative and benchmarking purposes. Whereas the above categories of users share in the wealth of the company, competitors require the information making for strategic purposes.

In any case, Ahmed (2014) stated that the AIS processes data and transforms them into a accounting information during input, processing, and output stages that will be employed by the wide variety of users for decision making purposes. Wilkinson (2000) opined that an effective AIS performs several key functions throughout these three stages such as data collection, data processing, data maintenance or management, and data control (including security). Modum (2005) observed that due to the relevance of AIS to businesses, the system has over time changed and grown both in response to limitations and the availability of new technologies, thus, AIS has passed through different models from the manual, flat-file, data base and finally to the Enterprise Resource Planning (ERP) models. Further, Romney & Marshall (2009) opined that regardless of the type, manual or computerized, AIS is designed to collect or capture, enter, process, store and report data and information. They however pointed out that in manual accounting information system, processing of data is slow and prone to error; the computerized method is a better option because it makes the process fast, easy, cheap, and error reduced. Elucidating further, Modum (2005) observed that in manual AIS, the data are captured with the source documents (e.g. receipts, invoice, credit memos, employee time sheet, time and bin card, purchase requisitions, etc ) and directly processed in journal and transferred to ledger accounts, then a final accounts or financial statement is drawn. On the other hand, in computerized AIS, after data are captured, they are converted into machine readable forms, in most computerized AIS, source data automation device that captures data at the time and place of their origins are used for example, bar code scanners used in retail stores can record the sale transaction just as scanning devices read the codes located on the product. Romney & Marshall (2009) also mentioned that in addition to the data scanned into the computer, there are existing data bases that contain stored data for future processing. A data base (i.e. data bank or ware-house) includes information about entities. An entity is something about which information is stored. After the data are entered into computers, they are processed, after which information output is produced to meet the needs of the users. Modum (2005) concluded that information is presented in three forms, a document, a report, or a response to query; documents are records of transactions or company data such as invoices.

However, Hunton (2002) study, which investigated the relationship between automated accounting information system and business or organization effectiveness showed that there was strong relationship between AIS and business effectiveness, which means access to accounting information will lead to business effectiveness. The outcome was corroborated by Onaolapo & Adetayo. Goitom (2003) added that the better the quality of accounting information, the greater the possibility for a business success, and this is possible because accounting can be viewed as an information measurement and communication system to serve macro and microeconomic activities. The latter further argued that in managing an organization and implementing an internal control system, the role of accounting information system is crucial. Goitom hinted also that though information generated from an AIS can be effective in decision-making process, usage of such a system is beneficial when the benefits exceed its cost. Huber (1990) agreed to the foregoing and however added that benefits of AIS can be evaluated by its impacts on improvement of decision-making process, quality of accounting information, performance evaluation, internal controls, and facilitating company's transactions. To him, regarding the above five characteristics, the effectiveness of AIS is highly important for all the firms. In the face of this, Muhindo & Mzuza (2014) regretted that inspite of the prevailing benefits of AIS, a good number of SMEs has not integrated its use in their daily business operations. In that regard, Modum (2005) opined that involvement of the accountant at the design stage of AIS is paramount due largely to the following points:

- Accountants as users of accounting information must decide what information must be collected, how it must be processed and how it must be reported.
- Accountants, as system designers must work with computer professionals in designing the conceptual system, while the computer professionals handle the physical system. The accounting system is the custodian of the accountant's data and the processor of his information, therefore, cannot be ignored.

Furthermore, Modum identified the following as steps to the implementation of AIS:

- **Detailed Requirement Analysis:** This is where all the individuals involved are interview and questions that need to be answered are gathered. And users need are identified, outlined and documented. This will integrate users into the new system and allow them to accept changes reflected, Modum noted.

- **System Design (Synthesis):** The analysis is thoroughly reviewed and a new system created. The system is built with control files, sample master records, and the ability to perform processes on a test basis. The design has to include appropriate internal controls and to provide management with information needed to make decisions. Ideally, once the system is designed, an RFP is created, detailing the requirements and fundamental design. The vendor will input control files, sample master records, and be able to show how various transactions are processed that result in the information that management needs to make decision.

- **Documentation:** As the system is being designed, it is documented. The documentation includes vendor documentation of the system and the procedures that help users handle each process specific to the organization.

- **Testing:** Prior to launch, all processes are tested from input through output, using documentation as a tool to ensure that all processes are thoroughly documented and that users can easily follow the procedures to ensure that it works. The reports are reviewed and verified to ensure stability and performance.

- **Training:** Prior to the launch, all users need to be trained with procedures, the procedures often need to be updated during training sessions as users describe their unique circumstances, the design is then modified with the additional information.

- **Data Conversion:** Tools are developed to convert the data from the current system (which was documented in the requirement analysis) to the new system. The data is mapped from one system to the other, and data files are created that will work with the tools that are developed. The conversion is thoroughly tested and verified prior to final conversion.

- **Launch:** The system is implemented only after all of the above is completed. Ideally, the old system is retained and of oftentimes run in parallel until the new system is in full operation and deem to be working properly.

- **Support and Security:** The support phase has two objectives. The first is to update and maintain the AIS. The second is to continue improving on the system to enable it adjust to situational changes. These changes might result in future problems, new ideas / opportunities, etc. also physical system must be addressed, and movement of the people not meant to handle it must be checked.

**Research Methodology**

However, the descriptive survey design was adopted in this study. The research is limited to the personnel of some selected SMEs within Owerri municipality whose businesses are officially registered with the state's Ministry of Commerce and Industry. Particularly, the figure comprises of 72 accountants and managers of the SMEs in the metropolis. Out of these, 30 each were randomly selected for data gathering purposes through a purposive sampling technique. The questionnaire was used to collect primary data, and was designed in five response options of Likert scale types of Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD) and Undecided (U); and administered on the respondents. Secondary data were sourced through journals, textbooks, business reports, magazines, newspapers, conference materials and, the internet services. The content validity of the questionnaire was determined by three chattered accountants operating firms in Owerri municipality, and the reliability of the instrument was established at 0.76 using the Pearson r. The data gathered were presented in a table and analyzed using mean scores and references to existing literature. The stated hypothesis was tested with z-test at 0.05 level of significance.

### Test of Hypothesis

**Ho:** Accounting Information System (AIS) has no significant effect on performances of SMEs in Owerri municipality.

To test this hypothesis, the data obtained is presented in the table below:

**Table 1:** Z-Test Computations for Test of Hypothesis I

| Accountants | | | | | | Managers | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Score (X)** | **Frequencies (F)** | **Fx** | **$X - \dot{X}$** | **$(X - \dot{X})^2$** | **$F(X - \dot{X})^2$** | **Score (X)** | **Frequencies (F)** | **Fx** | **$X - \dot{X}$** | **$(X - \dot{X})^2$** | **$F(X - \dot{X})^2$** |
| 1 | 1 | 1 | -2.77 | 7.67 | 7.67 | 1 | 0 | 0 | -2.4 | 5.76 | 0 |
| 2 | 1 | 2 | -1.77 | 3.13 | 3.13 | 2 | 0 | 0 | -1.4 | 1.96 | 0 |
| 3 | 5 | 15 | -0.77 | 0.59 | 2.95 | 3 | 19 | 57 | -0.4 | 1.16 | 22.04 |
| 4 | 20 | 80 | 0.23 | 0.053 | 1.06 | 4 | 10 | 40 | 0.6 | 3.6 | 3.6 |
| 5 | 3 | 15 | 1.23 | 1.512 | 4.54 | 5 | 1 | 5 | 1.6 | 2.56 | 2.56 |
| | **30** | **113** | | | **19.35** | | **30** | **102** | | | **28.2** |

***Source:*** Field Survey, 2016

$$\dot{X}_1 = 3.77 \qquad \dot{X}_2 = 3.4$$
$$S_1 = 4.4 \qquad S_2 = 5.3$$
$$n_1 = 30 \qquad n_2 = 30$$

$$Z = \frac{3.77 - 3.4}{\sqrt{\frac{(30-1)(4.4) + (30-1)(5.3)}{30 + 30 - 2}\left(\frac{1}{30} + \frac{1}{30}\right)}}$$

$$Z = 2.65$$

**Decision:** Ho is therefore rejected since Z – computed (2.65), is greater than Z – critical (1.96). This implies that AIS has significant effect on performances of SMEs in Owerri Municipality.

### Discussion of Findings and Recommendations

The result of our analysis clearly showed that AIs has significant effect on performances of SMEs. Our analysis on this issue revealed a mean score of 3.6 which is equally greater than 3.00, the expected mean score. This result does not differ from the works of Hunton (2002), and Onaolapo & Adetayo (2012), who asserted that access to accounting information leads to business effectiveness. The study also found that accounting information system leads to good financial report and results in better decision making. It was further noted that small scale businesses do not apply accounting information system in their operations which results to poor performance levels due largely to lack of business information records keeping. Not only that, most small scale businesses realize after a long period of time that their businesses are not doing well and they end up closing or bringing them to an abrupt end, and this is all because of lack of proper business records. Business information records are reliable and safe only when proper documentation is backed up in case of any data loss. This is not the case with small businesses, they don't have records and even if they have sketchy ones, they are not able to document properly for future use.

Based on these, the following recommendations are made:

i. SMEs should adopt AIS in their business management in order to make progress in the positive direction. In addition to that, businesses that have already implemented the system should also train their staff in efficient use of it, especially the aspect that has to do with computer.
ii. Government should come up with policies and guidelines that would facilitate the implementation of the system in the SME environment. Such policies should include

tax waivers or deductions on equipment to be used in the system.

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