TSU-International Journal of Accounting and Finance (TSUIJAF)
e-ISSN: 28811-2709, p-ISSN: 28811-2695.Volume 1, Issue 1 (Dec. 2021).
Official Publication of Taraba State University |
Managed by K-Injo (A product of Kobia Data Limited)

Accounting Information System and Financial Performance of Small and Medium Scale Enterprises in Taraba State, Nigeria

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Abstract

This study examined the effect of accounting information systems on the financial performance of small and medium scale enterprises (SMEs) in Taraba state. Adopting a survey research design to define the structure and strategy of the study, the target population were registered SMEs in Taraba state, as of 31st December 2020, which were 466 SMEs. Out of the 466 SMEs, 60 were systematically selected as a sample. The required data were collected using a structured questionnaire and were analyzed using ordinary least square and regression analysis statistical tools. The result of the analyses revealed that; accounting information systems such as manpower, internal control system and information and communication technology have a positive and significant effect on the sales growth of the selected SMEs in Taraba state throughout the study. Therefore, the study recommended that SMEs owners in Taraba state should learn to maintain basic accounting records, and adopt the use of information and communication technology while ensuring effective internal control systems since were found to have a positive and significant effect on the sales growth of the businesses.

Keywords: Accounting Information System, Financial Performance, Nigeria, Small and Medium Scale Enterprises, Taraba State

1. Introduction

The private sector is identified by many scholars as a catalyst for every national economic development. This sector, particularly, small and medium scale enterprises contribute immensely to the development of the nation in terms of taxes to the state, provision of quality goods and services to the larger public at a comparatively reduced price as well as its contributions to poverty alleviation. Thus, the need for apt development of the sector cannot be overemphasized.

However, several empirical studies revealed that a sound Accounting Information System (AIS) is needed to improve the financial performance of the business. An increase in business competition and technological advancement have necessitated managers to consider more advanced management strategies targeted at improving decision making in an organization and most of these strategies are tailored towards sustaining businesses by the adoption of information systems within business organizations (Davoren, 2019).

AIS is critical to all organizations. It is designed to provide financial information to stakeholders. Harash (2015) asserted that AIS is a system used for the collection and recording of data and information regarding events that have an economic impact on organizations and the maintenance, processing and communication of such information to stakeholders. Furthermore, it is a computer-based system that increases control and enhances cooperation in business decision making. For its

effectiveness, Ironkwe and Nwaiwu (2018) were of the view that AIS is made up of six (6) components such as accounting data, manpower, internal control system, information and communication technology, software and procedures.

However, the significance of accounting information systems has been raised from the problems that initially accompanied small and medium scale enterprises. According to Harash (2014), managers over years failed to perform their duties effectively and efficiently due to poor or lack of proper accounting information systems, especially in developing nations. The researcher further stated that several SMEs demised without fulfilling their expectations due to poor internal administrative policies arising from the weak accounting information systems. Therefore, there is a need to examine the effect of accounting on financial performance in developing countries such as Nigeria, since the government is recently emphasizing economic diversification. Hence, the motivation of this study is to examine the effect of the accounting information systems on the financial performance of SMEs in Taraba state, Nigeria.

To achieve this objective, the following hypotheses were formulated and tested using appropriate statistical tools.

Ho_1: Accounting knowledge of entrepreneurs has no significant effect on the financial performance of SMEs in Taraba state.

Ho_2: Internal control system has no significant effect on the financial performance of SMEs in Taraba state.

Ho_3: The application of ICT does not significantly affect the financial performance of SMEs in Taraba state

The novelty of this study lies in its contributions to knowledge as the views of the respondents were collected at its grassroots. In respect to the beneficiaries, the study would benefit policymakers especially the directorate of employment, Central Bank of Nigeria, and the entrepreneurs on the impact of accounting information on SMEs performance.

The remaining part of this study is structured into four sections. The review of relevant literature was presented in Section 2, while Section 3 described the methodology adopted for the study. Then, Section 4 discusses the results of the empirical study, while Section 5 presents the conclusion and recommendations.

2. Literature Review

2.1 Small Scale Enterprises (SMEs)

Various definitions of Small and Medium Size enterprises are being offered by different scholars and intuitions. According to Wairimu and Mwilaria (2017), SMEs are defined in terms of their characteristics such as the size of capital invested, the number of employees, business turnover, the management style, location, and the market share.

Eton et al. (2017) and Barine (2021) contends that the definition of SMEs varies according to context, author and countries. In-country such as USA, Britain and Canada small scale business is defined in terms of annual turnover and the number of paid employees (Thapa & Nepal, 2015). In Britain, for example, small scale business is conceived as an industry with an annual turnover of 2 million pounds or less with fewer than 200 paid employees. In the case of Japan it is conceptualized as a type of industry, paid-up capital and number of employees, consequently, SMEs are defined as those manufacturing with 100 million yen paid-up capital and 300 employees. Those in wholesale trade with 300 million paid-up capital with 100 employees while

those in retail trade with 100 million paid-up capital with 50 employees (Fatai, 2012). In the case of Nigeria hardly do see a clear-cut definition that distinguishes between small and medium scale enterprises. However, the Central Bank of Nigeria in its monetary policies circular No. 22 of 1988 view small scale industry as those enterprises which has an annual turnover not exceeding 500,000 Naira (CBN, 2011).

In a more general and comprehensive term, Adama et al. (2017) proffer general criteria for defining SMEs in different countries. These include a number of employees, annual turnover, local operations, sales volumes, financial strength, managers and owners' autonomy, relatively small markets compared to their industries and capital usually supplied by individual or shareholders etc. As a result of this definitional differences and lack of universal definition, the European Union in 2003 adopted a universally accepted definition of small and medium scale enterprises and micro business as companies with less than 250 employees, concerning financial criteria, revenues must not exceed 50 million Euro (measure as turn over) or 43million euro (measure as the balance sheet). In addition, the European Commission specifies the term of ownership stating SMEs must be independent with less than 25% being owned by outside interest (European Commission, 2007). In a report of enterprises association, Alhassan et al. (2016) viewed SMEs as enterprises employing 10-99 full-time employees or with a fixed capital investment of US$1000-500,000.

SMEs are certainly not a transnational companies, multinational cooperation, publicly owned enterprises or large facility of any kind. However, they can depend on business and ownership structure to become a large business unit (Ekpete & Iwedi, 2017) while it can be argued that 80% of the financing of SMEs come from owners, friends and families.

2.2 Accounting Information System

According to Gel (2010), an accounting information system is a collection of parts and sub-systems connected and the surrounding environment operating as a single overlap relationship. Each part depends on the other to achieve the goals sought by the comprehensive system of accounting, to provide data and information to decision-makers. While Olamide and Adeyemi (2016), viewed an accounting information system (AIS) is a system used to record the financial transactions of a business or organization. Nicolau (2000), was of the view that accounting information system is a computer-based system that increases control and enhances cooperation in the organization.These systems combine the methodologies, controls and accounting techniques with the use of technology to track transactions, provide internal and external reporting data, financial statements and trend analysis capabilities to affect organizational performance (Urquia et al., 2011). Although information technology was within reach of only large companies a few years ago, SMEs are gradually taking the advantage that this portends given the need to improve on their competitive advantage. The main reason for the accounting information system as stated by Stefanou (2006) is the collection and recording of data and information regarding events that have an economic impact upon organizations and the maintenance, processing and communication of such information to both internal and external stakeholders. Hence, Ironkwe and Nwaiwu (2018) were of the view that AIS is made up of six (6) components such as accounting data, manpower, internal control system, information and communication technology, software and procedures.

2.3 Empirical Review

The concept of small and medium scale enterprises has attracted the attention of many researchers. Therefore, below is the review of the previous empirical studies that examined the impact of accounting information systems and firm performance. Olatunji (2013) examined the impact of sound accounting systems on the corporate performance of small and medium scale enterprises using survey research with analysis of variance (ANOVA) as the statistical tool. The results of the study showed that the adoption of a sound accounting system enhances the performance of SMEs. Furthermore, Harash et al. (2014) evaluated the influence of accounting information systems on the performance of SMEs in Iraq. The study revealed a positive and significant effect of accounting information systems on the financial performance of the businesses throughout the study.

In a study conducted by Azize (2016) on the impact of accounting information systems on the performance of 60 SMEs in Keyseri, Turkey. The study found a positive and statistically significant relationship between the use of AIS and the educational status of managers. Moreover, the study concluded that, as the number of employees rises, the use of AIS also increases. Furthermore, a positive relation was also found between the use of AIS and growth, measured by Sales, Customer and Revenue. These findings were further corroborated by a study by Olamide and Adeyemi (2016) on the effect of accounting information system on the financial performance of 154 SMEs in Kwara state Nigeria. Using logistic regression analyses, the result of the study revealed a positive and significant influence of accounting information systems on the financial performance of SMEs in the state. In the same vein, Ida and Lalu (2019) examined the effect of the accounting information system on the performance of 152 MSMEs in the West Lombok Regency, with the quality of financial statements as a mediating variable. The study revealed that accounting information systems have a positive effect on the quality of financial statements, while the quality of financial statements has a positive effect on the performance of MSMEs in the trading business sector. Furthermore, the accounting information system was also found to have a positive effect on the performance of the MSME trade business sector.

Looking at the above empirical studies, it can be observed that, only a few studies were conducted in Nigeria. Furthermore, the few studies that were conducted in Nigeria were not from North-eastern Nigeria, as the region was considered to be the poorest zone among the six political zones in Nigeria. Thus, the motivation of this study is to examine the application of accounting information systems by SMEs in Taraba state to enhance their performance.

2.4 Theoretical Review

Several theories were applied by the different scholars to explain the concept of accounting information systems. However, this study is based on contingency theory. Contingency theory suggests that accounting information systems should be designed flexibly to consider the environment and organizational structure of a business entity.

Extant literature such as Mia and Chenhall (1994), has examined different forms of AIS combination with other variables such as technology, structure, and environment. These various combinations of AIS have provided useful directions for AIS research, although such research directions have majorly not been directed towards SMEs. AIS also need to be adapting to the specific decisions being considered. In other words, AIS needs to be designed within an adaptive framework (Lawrence & Danny, 1978). Other early contingency research summarized by Otley (1980) found no universally

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appropriate management accounting system applicable to all organizations in all circumstances. The techniques or system is inherently dependent on specific circumstances. Studies such as Gul and Chia (1994) examined the contingent relationship between internal and external environmental factors such as organizational interdependence, decentralization and perceived environmental uncertainty and choice of an AIS (information scope, timeliness, aggregation and integration). The general conclusion from this was that greater organizational interdependence, decentralization and perceived environmental uncertainty are factors associated with either a greater perceived need for more sophisticated AIS or higher firm's performance with more sophisticated AIS. The present study adds to this body of literature by examining AIS within the context of SMEs.

3. Methodology

This study was quantitative; thus, a survey research design was used to define the structure and strategies of the study. The target population of the study was the registered SMEs in Taraba state as of 31st December 2020, and were 466 SMEs. Out of the 466 registered SMEs, 60 were systematically selected, that is those operating within the Jalingo metropolis. A structured questionnaire was used to collect data from respondents and was analyzed using Ordinary Least Squares (OLS) and linear regression analysis.

3.1 Model Specification and description of Variables

The linear model for the study was presented thus:

$$GSR = \beta o + \beta_1 MPW + \beta_2 ICS + \beta_3 ICT + e$$

Where: GSR= Growth of Sales /Revenue of SMEs
MPW= Manpower employed
ICS = Internal Control System of the SMEs
ICT = Information and Communication Technology adopted
$\beta_1, \beta_2, \beta_3$ = Coefficient of margin
β_o = Constant
e = Error term

4. Results and Discussion of Findings

Various statistical tools were used to analyze the data collected and the results are presented in tables.

Table 1

Descriptive Statistics

Variable	Mean	SD	Min.	Max.	Skew	Kurt
GSR	2.2750	2.4930	0.000	4.6200	0.0030	-3.3250
MPW	2.8361	0.4797	2.2167	3.6000	0.4250	0.5030
ICS	2.6277	0.8513	2.1000	4.3000	2.0820	4.4300
ICT	2.2500	1.4088	0.0000	4.4333	-0.1050	2.3430

Source: STATA 13 Output

The descriptive statistical result presented in Table 1 shows that the mean for GSR is 2.275 indicating the average level of GSR across the sampled SMEs. It also suggests that for every unit, GSR generates 2.275 GSR in the sampled SMEs in Jalingo and the standard deviation of 2.493. The difference between the mean and the standard deviation is -0.218. This is an indication of wide variations in the GSR around the mean. It means that there is a significant variation in the GSR status of the sampled SMEs in Jalingo, Nigeria. The minimum and maximum are 0.000 and 4.620

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respectively. This is an indication of a very wide range of 4.620. The range corroborates the revelation of the standard deviation that there is a very wide gap between the SMEs about GSR, some SMEs have low GSR and others with high GSR. The minimum value implies that other firms make a loss in some accounting years.

The mean proportions of the Manpower (MPW), Internal Control System (ICS) and Information and Communication Technology (ICT) are 2.8361, 2.6277 and 2.2500 respectively. Manpower (MPW), an average of 2.8361 indicates that the SMEs' MP is not equal, one category likely SMEs constitute an average more than half of 50% of the total operational performance (GSR) during the study period. However, the standard deviation of 0.4797 shows the difference or variation in MPW of the SMEs. This can further be verified from the minimum (MPW) of 2.2167 and maximum value of 3.6000.

Internal control system (ICS) having a mean value of 2.6277 is an indication of the fact that the ICS of the sampled SMEs is strong and reliable. This shows that the ICS is active in the period under review. The internal control system (ICS) had a minimum value of 2.1000 and a maximum value of 4.3000. The standard deviation of 0.8513 further shows the serious dispersion in the ICS of the sampled SMEs over the period covered by the study. The construct of Information and Communication Technology (ICT) indicates that out of the average of 2.2500, the minimum is 0.000 whereas the maximum is 4.4333, confirming the high discrepancy in the standard deviation of 1.4088.

Table 2 *Correlation matrix*

	GSR	MPW	ICS	ICT
GSR	1.000			
MPW	0.803	1.000		
ICS	0.998**	0.845**	1.000	
ICT	0.688*	-0.770**	-0.799**	1.000

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The result of the correlation in Table 2 shows that there is a significant positive statistical correlation (r = 0.803 stronger relationship) between GSR and MPW. There is also a positive statistical correlation (r = 0.998, strongest relationship) between GSR and ICS, and a significant positive statistical correlation (r = 0.688, strong relationship) between GSR and ICT. This signifies that the positive correlation between GSR and MPW, ICS, ICT does conform to expectation. The correlation coefficients on the main diagonals are 1.000 because each variable has a perfect positive linear relationship with itself.

Table 3 *Regression Result*

Variable	Coefficient	Std Error	t-Statistic	P-Value	Coefficient	Std Error	Z-Statistic	PValue
Constant	156.657	1380.165	-0.766	0.040				
LMPW	129.096	4701.830	-2.635	0.000*	2091.070	3222.100	1.61	0.009**
LICS	038.212	2081.00	2.421	0.004				
LICT	-0.368	0.13	-2.825	0.006				
R^2	0.896							
F-Value	2.316							
Prob F(Sig)	0.038							

Source: STATA 13 Output, (2021). (** @ 1% significant level, * @ 5% significant level)

Table 3 presents the regression results of the study. The coefficient of determination (R^2) is 0.896. This indicates that about 89.6% of the variation in the GSR of the sampled SMEs in Jalingo can be explained by MPW, ICS and ICT, while the remaining 10.4% is accounted for by other factors. While the p-value of 0.040 at 5% significant level is significant, thus the model has good explanatory power.

Furthermore, the result in Table 3 also shows that in both the OLS and RE estimates, MPW has a positive and significant influence on the GSR of the listed SMEs in Jalingo. The coefficients are (129.096, p = 0.000) for OLS at 1% level and (2091.070, p = 0.009) for RE which is less than 0.050 significant level. This shows that as MP increases, other independent variables held constant, the GSR will increase significantly.

Table 4 *Summary of Hypotheses Tested*

Hypotheses	Variables	p-value	Decision
H_{01}	Accounting knowledge of the entrepreneurs has no significant effect on the financial performance of SMEs in Taraba state	0.000<0.05	Rejected
H_{01}	The internal control system has no significant effect on the financial performance of SMEs in Taraba state	0.004<0.05	Rejected
H_{01}	Information and communication system has no significant effect on the financial performance of SMEs in Taraba State	0.006<0.05	Rejected

5. Conclusions and Recommendations

This study empirically examined the effect of accounting information systems on the financial performance of small and medium scale enterprises (SMEs) in Taraba State, Nigeria. The result of the analyses revealed that accounting knowledge of entrepreneurs, internal control systems and information and communication technology systems has a positive and significant effects on the sales growth of the SMEs throughout the study. Therefore, the study concluded that accounting information system has a positive and significant effect on the financial performance of the businesses throughout the study. This implies that SMEs in Jalingo that applies accounting information system performed financially better than their counterpart.

Therefore, the study recommended that small and medium scale enterprises (SMEs) owners in Taraba state should learn how to maintain a basic financial accounting, in addition to applying information and communication technology with an effective internal control system would perform financially better, since accounting information system was found to have a positive and significant effect on the financial performance of the businesses

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