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Accounting Information System Competencies of Accountants as Predictors of Job Performance in Higher Educational Institutions in Rivers State, Nigeria

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Abstract:

This study examines accounting information system competencies of accountants as predictors of their job role performance in higher educational institutions in Rivers State, Nigeria. Three specific purposes, two research questions and one hypothesis guided the study. A descriptive survey research design was adopted for the study. The population of the study consists of 102 accountants and 62 assistant bursars from six public High Education Institutions (HEIs) in Rivers State. Only 96 accountants willing to respond to the questionnaire and the entire assistant bursars were used as the sample of the study. Judgmental sampling technique was used to select the participants. Two questionnaires designed based on four – points rating scales, one to assess the accountants' AIS competencies and the other to assess their job roles performance were used to collect data for the study. The two instruments were face validated by two lecturers: one expert in measurement and evaluation and the other of accounting education department. The reliability of stability of the instruments were tested using test retest method with data collected from 10 secretaries of Rivers State University within an interval of one week. The data collected were correlated using Pearson Product Moment Correlation to obtain 0.76 and 0.86 for the two instruments which was converted to reliability index using Spearman Brown probability formula to obtain 0.72 and 0.82 respectively for the two instruments. Data collected for the study were analysed using mean and multiple regression analysis computed with the aid of Statistical Package for Social Sciences (SPSS) version 20.0. The findings of the study revealed that accountants AIS competences significantly predict their job roles performance. However, it was also discovered that accountants almost never collaborate with external auditors in completing auditing. Based on the findings, the following recommendations were put forward among others: accountants within Rivers State HEIs should collaborate with external auditors by using their knowledge and skills of AIS to ensure the successful completion of auditing when the need arises.

Keywords: Accounting information, performance evaluation

1. Introduction

Timely, accurate and reliable accounting information is the bedrock upon which institution (public or private) relies for effective decision making. This is based on the fact that every activity of established institutions is tied to finance. However, it is a truism that financial resources are scarce due to competing needs; hence, every institution wants timely, accurate and reliable accounting information that would guide judicious use of available funds to achieve predetermined objectives. Chapman (2018) noted that the receipts and expenditures within organizations directly or indirectly linked to daily operations lead to generating of accounting information. According to Gheorghe, Feies, Mates and Cotlet (2013), accounting information consists of processed data relating to the financial aspects of institution and are required by users for the purpose of control, planning and other decisions making. Chapman (2018) also opined that accounting information has to do with processed data relating to organisation's financial transactions ranging from data on buying consumables, machinery (assets) to costs of awarded contracts. It is worth noting that what constitutes accounting information may vary based on the contextual objectives and goals of the organization within which the definition is applied.

Accounting information in Higher Educational Institutes (HEIs) centres on processed data relating to spending towards the attainment of tactic and strategic objectives educational programmes. According to Jorge de Jesus and Eirado (2012), accounting information of higher institution of learning relates particularly to budgetary and internally generated revenue, current expenses and operating assets used by the institutions to attain their goals. Vatasoiu (2014) also opined that accounting information of high educational institutions normally covers the institutions' financial position and performance as well as properties. Therefore, since accounting information of HEIs surrounds their various operations, it then means that as noted by Drăgușin and Criveanu (2014), institutions of higher learning can only function effectively if

there financial management team (accountants) provide effective methodical for accounting information recording, processing and reporting based on standards to relevant authorities who need to ascertain the financial position, financial performance and cash flow of the institutions for further decision making. This is because the authorizing officers of the HEIs need accounting information in order to have clearer picture of budgeted revenues and expenditures incurred, the budget performance, institutions property and the cost of programmes provided as well as other cash flows to support current and future financial obligations. Supporting this, Moses (2014), noted that management of institutions need quality accounting information in order to analyse their revenues and expenses and cost consequence of a particular course of action that can aid their decision making.

Underpinning, the relevance of accounting information to managers of HEIs, accounting information must be timely, accurate and reliable because managers of the educational institutes can only rely upon them for proper understanding of their respective institutions' financial dealings and to take informed decisions that would ensure the continuous survival of the institutions 'activities. Therefore, it is important that those charged with the responsibilities of generating, organizing and providing accounting information develop appropriate system for effective management of the accounting information. It is on this note that Chapman (2018) opined that accountants who are mostly responsible for providing accounting information need to have a system that timely and accurately captures the realities of operations, financial standings and reports the information in good faith. According to Athambawa and Kevin (2018), the system organization uses to ensure timely and effective collection, storage and reporting of accounting and/or financial information for internal and external users is known as accounting information system.

Accounting information system (AIS) has to do with creating the platform for collecting, recording, processing, maintaining and reporting accounting information to relevant users. Amidu, Effah and Abor (2011) opined that accounting information system is concerned with creating a platform for collecting, storing and providing financial information for organization's stakeholders' consumption. Platforms within organizations that allow for effective collection, processing, storage and providing financial data as accounting information traditionally are manual but with the advancement in technological devices, electronic digital accounting information systems now exist. According to Abdulkarim (2019), accounting information systems either manual or electronic are meant to support the entry of financial related data, the creation of financial records, the analysis of financial data and the reporting of processed financial data as information for management or external users. Amos and John (2019) noted that AIS enables accountant to track, record and produce organizational financial and managerial accounting reports with much ease. The authors further noted that the manual AIS which is characterised by much paper ledgers, manual spreadsheets and hand-written financial statements have now been replaced with computerized systems that can quickly generate financial reports from summary of daily financial transactions of units. Consequently, it is important to note that quick access to timely, reliable and accurate accounting information makes computerized accounting information system a desired component of every established institution's AIS.

Every effective accounting information system is dependent on several factors. Supporting this view, Amidu, Effah and Abor (2011) noted that the quality of accounting information system outputs depends on the quality of users (accountant's knowledge, skills and experience) and the technology put in place for collecting, storing, processing, analysing and reporting accounting information. Moses (2014) opined that the key factor in the use of accounting information system is the engagement of qualified and competent accountant. Diah and Hari (2015) reported that the key factors in guaranteeing quality accounting information system are the quality of human resources (competence), organization system, and external factors. Abdulkarim (2019) noted that of all resources needed to ensure effective and efficient accounting information system, the human resources (accountants) are the most important. This is due to the fact that it is the accountant that would in some cases established or provide the information needed for the establishment of the accounting information systems based on laid down standards and would eventually be the end users of the system to provide and manage the accounting information needed by management and other stakeholders. International Federation of Accountant (IFAC, 2014) also acknowledged roles of an accountant in relation with an IT system when it defined accountant using AIS as: a) User, b) Assurance provider and evaluator, c) Manager of an information system, and d) Designer of an information system.

In the engagement of accountant as user and manager of accounting information system, the competence of the accountant remains a primordial condition to be considered. This is based on the fact that competency has to do with knowledge, skills, attitude and experiences persona to the performance of jobs in the accounting profession. It is for this reason that Mejia, Balkin and Cardy (2010) described competency as human characteristics that drives the successful performance of tasks. Diah and Hari (2015) opined that competency is the abilities of individuals which is associated to superior performance in job roles. These abilities include knowledge, skill, and attitude or a combination of the three strategically applied to each unit of work. Kasim (2015) opined that competency causes or predicts behavior on the job, that is, it can actually predict who does something well or poorly every other thing being equal. The author also noted that competency can be viewed from two perspectives: (i) individual competencies (knowledge, skills and abilities of the individual); and (ii) the organization competence (the collective character at the organizational level).

An accountant's competency in the use and management of AIS is therefore associated with knowledge, skills and attitude of using and managing AIS during performance of job responsibilities. The accountant's knowledge, skills and experiences influence the quality of accounting information system management and the timely, accurate and reliable supply of accounting information to authorized persons within any organization (Laudon and Laudon, 2012). Hari, Diah and Yusuf (2018) also opined that accountant competence is a combination of knowledge, skills, attitudes and experience possessed by accountants who work in an organizational unit. Vyron, Panagiotis, Ilias, Sotiris and Evdokia (2014) reported that in today's technological era, accountants need good knowledge of spreadsheets, databases, accounting packages,

statistical packages and word-processing. IFAC (2019) outlined competences that accountant would need to possess in order to drive digital/electronic accounting information system to include: ability to use search techniques to locate and select relevant accounting information for tasks, ability to enter, develop, and refine accounting information using appropriate accounting software, and ability to analyse cash flow impact using accounting information generated from source documents. These knowledge, skills and experiences are required by accountants to enable them effectively and efficiently provide quick, accurate and reliable accounting information relating to work responsibilities and for decision making.

The work responsibilities of accountant using AIS vary based on the accounting framework of place of primary engagement. For instance, the responsibilities of accountant in the banking sector cannot be same with that of accountant in HEIs. This is based on the fact that the two establishments belong to two different sectors and accounting tasks performed also are not exactly same. Azih (2010) identified the jobs of modern accountant in educational institutions to include but not limited to preparation of tax codes, designing of nominal records, preparation of control accounts, creating, amending and deleting nominal records, creating of bank, cash and expenditure accounts, preparation of cheques, creating backups, compress data, creating month end financial reports and budget report, correction of errors made while posting transactions and preparation of a bank reconciliation statement. Belfo and Trigo (2013) outlined the following accounting job roles that accountant should perform using AIS as: accounting operations, external reporting, management accounting, management support, and staff management, training, scrutiny of capital projects, interactive reporting, auditing, internal control implementation, risk management, error or fraud detection and accountability. Drăgușin and Criveanu (2014) noted that accountant in public higher education institutions are required to perform the roles of: implementing revenues and expenditures budgets, estimate budgetary outturn, identify and cost property under management, estimate the institutions' patrimonial; and provide cost estimates for running programmes approved by governing bodies.

The evaluation of accountants' job roles performance is a key aspect of every serious organization that wants to attain predetermines goals through timely, accurate and reliable accounting information. Supporting the evaluation of employees as key focus of goal attainment, Micheli and Mari (2013) noted that performance should be evaluated in line with the competencies possessed by employees. This should be done with the mindset of improving identified areas of low competency level in line with specific tasks to be carried out in order to improve on the employee's competencies or update the job description. Chang and Chuang (2011) opined that performance evaluation based on organization goal attainment or job roles specifies in specific realistic term acceptable measurable tasks. Hence, the evaluation should be done using quantitative measures in order to avoid confusion. Kolibacova (2014) noted that employees' performance depends on many factors such as: motivation, knowledge, skills, abilities and the working condition among others. This makes it possible to relate employees' competencies to performance. However, it is paramount to note that when evaluating employees' competencies in relation to job roles performance, focus should be given to the required competencies that are needed to perform the job roles and the level reached by an employee.

Several studies have been conducted to examine the effect, impact or influence of AIS, users' competencies on one aspect of accountant and organization's performance or the other. Diah and Hari (2015) in their study reported that accountants' competence has significant effects on their job roles performance especially as it relates to quality financial reporting and financial accountability. Kasim (2015) conducted study are reported that there is significant effect of government accountant competency on job performance in government's establishments. Anie for (2015) conducted study and reported that computerized accounting information system as a component of information communication technology influenced the role of accountants in Nigeria and recommended that there is need for accountants with knowledge, skills and abilities to use computerized AIS to interpret financial data for informed decisions. Athambawa and Kevin (2018) discovered that user's knowledge and skills are significant factors in the use of AIS to improve on performance. It is worth noting that despite the abundance of studies considering one aspect of AIS or the other, none of the available researches to the best knowledge of the researchers considered examining AIS competencies of accountants as predictor of their job roles performance in high educational institutions in Rivers State, Nigeria. It is this gap in existing literature that led the researchers to conceive the present study.

1.1. Purpose of the Study

The main purpose of this study is to examine accounting information system competencies of accountants as predictors of their job role performance in higher educational institutions in Rivers State, Nigeria. Specifically, the study seeks to:

- Determine accounting information system competencies of accountants
- Determine job roles performance rating of accountants
- Determine whether accounting information system competencies of accountants predict their job roles performance rating.

1.2. Research Questions

The following research questions were posed to guide the study:

- What are the accounting information system competencies of accountants?
- What is the job roles performance rating of accountants?

1.3. Hypothesis

The following null hypothesis was tested at 0.05 level of significance:

- H_{01} : Accounting information system (AIS) competencies of accountants do not significantly predict their job roles performance.

2. Methods

A descriptive survey research design was adopted for the study. The survey was deemed most appropriate because of the use of self-evaluation to determine the AIS competencies of accountants and the use of roles performance evaluation questionnaire to assess the job roles performance of the accountants through their superior officers. The population of the study consists of 102 accountants and 62 assistant bursars in Rivers State University, Ignatius Ajuru University of Education, University of Port-Harcourt, Ken-Saro Wiwa Polytechnic, Port-Harcourt Polytechnic and Federal College of Education (Tech.), Omoku-Rivers State. The population is breakdown as follows: RSU – 17 accountants and 12 assistant bursars, IAUOE – 18 accountants and 10 assistant bursars, UniPort – 18 accountants and 8 assistant bursars, KSWPoly – 18 accountants and 10 assistant bursars, PHPoly – 9 accountants and 8 assistant bursars, and FCETOmoku – 22 accountants and 14 assistant bursars. However, only 96 accountants were selected across the HEIs in Rivers State as the sample of the study using judgmental sampling technique. This is based on the fact that only willing accountants were included into the sample size; therefore, none were coerced to participate in the study.

Two instruments were designed for the study. The first is a self-assessment questionnaire on accountant's accounting information system competencies tagged 'Accountant's Accounting Information System Competencies Questionnaire (AAISCOQ)' and the second was 'Accountants' Job Role Performance Evaluation Questionnaire (AJPEQ)'. The first questionnaire contains 10 items covering competencies related to: Knowledge competencies, and Skills competencies. The second questionnaire contains 10 items related to the performance of strategic accountants' job roles in HEIs based on their job description. Each of the questionnaires was structured based on four point rating scales of: Almost Always (AA – 4 points), Frequently (F – 3 points), Occasionally (O – 2 points) and Almost Never (AN – 1 point) for the first questionnaire and Exceed Expectation (EE – 4 points), Meet Expectation (ME – 3 points), Approach Expectation (AE – 2 points) and Does not Meet Expectation (DME – 1 point) for the second questionnaire. Each of the scales is interpreted for assessment at follows:

- Almost Never– I almost never act in this manner
- Occasionally– I sometimes act in this manner
- Frequently– I regularly act in this manner and I can provide recent examples
- Almost Always– I always behave in this way and I can illustrate with many recent examples
- Exceed Expectation - Frequently exceeds job requirements
- Meet Expectation - Performance is what is expected
- Approach Expectation - Full results are not totally achieved
- Does not Meet Expectation - Fails to meet performance expectations

Instrument 1 was filled by accountants and instrument 2 by their assistant bursars. The two instruments were face validated by two lecturers: one of measurement and evaluation major and the other of department of accounting education, FCETOmoku. The reliabilities of stability of the instruments were tested using test retest method with data collected from 10 accountants from Niger Delta University, Bayelsa State. The data collected were correlated using Pearson Product Moment Correlation to obtain 0.76 and 0.86 for the two instruments which was converted to reliability index using Spearman Brown probability formula to obtain 0.72 and 0.82 respectively for the two instruments.

Data collected for the study were tested using mean to answer the research questions and multiple regression analysis to test the null hypothesis. The multiple regression analysis is expressed as follows: accountant's job roles performance as dependent variable (ACCTJobRP), AIS Knowledge Competencies (AISKC), and AIS Skills Competencies (AISSC) are proxies for independent variables respectively. Hence, the model specification for the work is as diagrammatically represented below:

Figure 1: AIS Competencies of Accountant as Predictor of Accountant Job Roles Performance
Source: Researcher's Design, 2020

In addition, prior to performing multiple regression analysis, all the assumption of linear regression was tested and no problem had occurred.

$$ACCTJobRP = \beta_0 + \beta_1 AISKC + \beta_2 AISSC + e$$

- Decision rule: For the purpose of decision relating to mean computation, mean of 2.5 and above was regarded as AA or EE, 2.00 to 2.49 was regarded as O or ME, 1.50 – 1.99 was regarded as For AE and below 1.50 was regarded as: AN or DME as it applies to the questionnaires respectively. The regression computation was done using

Statistical Package for Social Science version 20.0. The implication is that for the interpretation of the result of multiple regressions, the SPSS rule was applied.

3. Results

- What are the accounting information system competencies of accountants?

N/S	Application Items	AA	F	O	AN	Mean	Decision
	AIS Knowledge competencies						
1	I apply the policies of utilizing AIS within institution	228	93	16	-	3.51	AA
2	I maintain operational standard procedures during entering, developing and refining accounting data into AIS	24	42	94	34	2.02	O
3	I ensure the application of internal control procedures in order to prevent fraud and dictate errors of entry in AIS	176	129	18	0	3.36	AA
4	Applies knowledge of accounting information sharing protocols when using AIS	00	09	76	55	1.46	AN
5	Applies knowledge of search techniques to easily locate needed accounting data	00	120	90	10	2.29	O
	Skills competencies						
6	Uses search techniques on AIS to locate and select relevant accounting information for task completion	00	84	92	22	2.06	O
7.	Enters and process accounting data using AIS	124	144	34	00	3.15	AA
8	Maintains privacy of accounting data/information when using AIS	108	159	32	00	3.12	AA
9	Performs error checks on entered accounting data using AIS	20	147	84	00	2.61	AA
10.	Manages and analyse cashflow using AIS	00	111	102	08	2.30	O
	Grand mean					1.96	ME

Table 1: Summary of Mean Responses on the AIS Competencies of Accountants

Source: Field Survey, 2020

Table 1 show that the respondents are of the opinion that they almost always apply policies of utilizing AIS within institution and ensure the application of internal control procedures in order to prevent fraud and dictate errors of entry in AIS with mean of above 2.5 respectively. The same respondents are of the opinion that they maintain operational standard procedures during entering, developing and refining accounting data in to AIS and apply knowledge of search techniques to easily locate needed accounting data with mean of 2.02 and 2.29 respectively but almost never apply knowledge of accounting information sharing protocols when using AIS with mean of 1.46.

The results in table 1 also show that the respondents are of the opinion that they almost always enter and process accounting data using AIS, maintain privacy of accounting data/information when using AIS and perform error checks on entered accounting data using AIS with mean scores of 3.15, 3.12 and 2.61 respectively. They also are of the opinion that they occasionally use search techniques on AIS to locate and select relevant accounting information for task completion and ensure control in handling, and manage and analyse cashflow using AIS with mean sores of 2.06 and 2. 30.

- What is the job roles performance rating of accountants?

N/S	Application Items	EE	ME	AE	DME	Mean	Decision
1	Applies accounting standards in preparing accounting information.	60	15	44	20	2.24	ME
2	Timely prepares and complete accounting tasks assigned	68	21	38	19	2.35	ME
3	Verifies accounting data generated for dictating overstatement and understatements.	44	42	50	12	2.39	ME
4	Prepares bank reconciliation statements monthly	44	63	40	10	2.53	EE
5	Conduct cash flow analysis for reporting the cash position of the institution	56	30	50	13	2.40	ME
6	Reports fraudulent act when dictated	68	21	38	19	2.35	ME
7.	Ensures internal audit of accounting records	96	24	26	17	2.63	EE
8	Prepares financial summary for report purpose	56	51	38	12	2.53	EE
9	Issues receipts for all monies paid into institution's account and maintain records	88	42	14	19	2.63	EE
10.	Collaborate with external auditors in ensuring the completion of audit	04	63	82	33	1.90	AE
	Grand mean					1.96	ME

Table 2: Summary of Mean Responses on Accountants' Job Roles Performance

Source: Field Survey, 2020

Table 2 show that assistant bursars are of the opinion that accountants exceed expectation in preparing bank reconciliation statements monthly, ensuring internal audit of accounting records, preparing financial summary for report

purpose, and in issuing receipts for all monies paid into institution's account and maintain records with mean scores of above 2.5 respectively. The assistant bursars are also of the opinion that their accountants met expectation in applying accounting standards in preparing accounting information, in timely preparing and completing accounting tasks assigned, in verifying accounting data generated for dictating overstatement and understatement, conducting cash flow analysis for reporting the cash position of the institution and reporting fraudulent act when dictated. However, the assistant bursars opined that the accountant approached expectation in collaborate with external auditors in ensuring the completion of audit.

3.1. Hypothesis 1

- H_{01} : Accounting information system (AIS) competencies of accountants do not significantly predict their job roles performance.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.72 ^a	.52	.495	3.28	.52	21.60	2	155	.000

Table 3: Summary of Multiple Regression Model on the AIS Competencies of Accountants as Predictors of Job Roles Performance

a. Predictors: (Constant), Ais Knowledge Competencies and Ais Skills Competencies

Source: Field Work, 2020

Table 3 above shows linear regression (R) of 0.72, regression square of (R^2) of 0.52, adjusted R^2 of 0.495, the standard error estimate is 3.28. The change statistics show R^2 0.52 which means that all predictors that actually contributed significantly to the prediction accounts for 52% of the variance in the accountants' job roles performance. Therefore, since the p value of 0.0001 is less than the assumed p value of 0.05, using SPSS, the null hypothesis was rejected and alternative hypothesis accepted. This means that AIS competencies of accountants significantly predict their job roles performance.

4. Discussion of Findings

The major finding of this study shows AIS competencies of accountants significantly predict their job roles performance. This is because from the AIS knowledge competencies assessed, the accountants were of the opinion that they apply policies of utilizing AIS within institution, ensure the application of internal control procedures in order to prevent fraud and dictate errors of entry in AIS, maintain operational standard procedures during entering, developing and refining accounting data to AIS and apply knowledge of search techniques to easily locate needed accounting data. They also show their ability to enter and process accounting data using AIS, maintain privacy of accounting data/information when using AIS and perform error checks on entered accounting data using AIS, use search techniques on AIS to locate and select relevant accounting information for task completion, and ensure control in handling, and manage and analyse cashflow using AIS. All these AIS knowledge and skills possessed by the accountants contributed to their job roles performance assessed by assistant bursars. These findings are in line with the findings of Diah and Hari (2015) when they reported that accountants' competence has significant effects on their job roles performance. The findings are also in line with the discovery of Kasim (2015) who reported that there is significant effect of government accountant competency on job performance in government's establishments. It is also in line with findings of Athambawa and Kevin (2018) when they discovered that user's knowledge and skills are significant factors in the use of AIS to improve on performance.

5. Conclusions

Based on the findings of this study, it can be concluded that accountants AIS competencies are significant predictors of their job roles performance. This is due to the fact that the accountants possessed virtually all the AIS knowledge and skills competencies that are related to their job roles and their performance of jobs roles with their competencies were attested by assistant bursars to have exceeded expectation and met expectation in almost all areas evaluated relating to their job roles. This means that timely, accurate and reliable accounting information are made available to managers of HEIs in Rivers State for informed decision making through institutional established AIS. However, since the accountants were almost never collaborating with external auditors in ensuring the completion of audit, it can be concluded that the report of the fairness of the accounting reports the prepared would be difficult, hence, dent on the accountability of the HEIs accountants to the financiers of HEIs in Rivers State and Nigeria at large. This also calls for questioning the reliability of the accounting information made available through the job roles performance of the accountant and may create room for fraudulent practices within the institutions.

6. Recommendations

Based on the findings and conclusions drawn, the following recommendations are put forward for implementation:

- Accountants within Rivers State HEIs should collaborate with external auditors by using their knowledge and skills of AIS to ensure the successful completion of auditing when the need arises.
- Accountants within Rivers State HEIs should be exposed to the knowledge and skills of applying established accounting information sharing protocols when using AIS through workshops.
- Accountants within Rivers State HEIs should improve on their AIS competences especially as it relates to using AIS to maintain, manage and analyze cash flow of the institutions so as to update management on the financial position of the institution at the appropriate time.

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