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DETERMINANTS OF ACCOUNTING INFORMATION TECHNOLOGY USAGE IN NIGERIAN BANKING SECTOR

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DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
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USAGE IN NIGERIAN BANKING SECTOR

By

SHAMSUDEEN LADAN SHAGARI

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TUNKU PUTERI INTAN SAFINAZ
SCHOOL OF ACCOUNTANCY
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ABSTRACT

Banks in Nigeria have increased their investment in the Information System (IS) as a fundamental e-banking tool, capable of yielding significant contributions to their financial income especially in cost efficiency. However, investment in Accounting Information Technology (AIT) is less effective due to many users complain of persistent systems failures, technical issues, lack of system stability, fraud and security challenges. Therefore, the main purpose of this study is to investigate the determinants of AIT usage in the Nigerian banking sector. Specifically, the study examines the influence of system quality, information quality, service quality, internal control quality, training and top management support on AIT usage. It also investigates the moderating effect of an external consultant involvement on the relationship between the system quality and usage of AIT. A cross-sectional survey was employed for data collection. A questionnaire was distributed to 571 samples, and 257 valid responses were obtained from regional or branch managers, and account managers of the banks. Partial Least Square path modeling was used in analyzing the relationship between the determinants and AIT usage as well as the moderating effect of an external consultant involvement between system quality and AIT usage. The findings from the direct relationship reveals that system quality, information quality, and internal control quality has a significant positive relationship with AIT usage, but service quality, training, and top management support has insignificant negative relationship. Furthermore, the result of the moderating effect reveals that the external consultant involvement significantly moderates the relationship of the system quality, information quality, and service quality with AIT usage. The outcomes of this study provides another insight to the banks’ management with specific factors that they can leverage to improve the usage of the AIT thereby realizing the expected benefit of their investment.

Keywords: AIT usage, external consultant involvement, internal control quality, Nigerian Banks
ABSTRAK

Bank di Nigeria telah meningkatkan pelaburan dalam Sistem Maklumat (IS) sebagai alat e-perbankan asas yang mampu memberikan sumbangan penting kepada hasil kewangan terutamanya berkaitan kecekapan kos. Walau bagaimanapun, pelaburan dalam Teknologi Maklumat Perakaunan (AIT) kurang berkesan kerana banyak aduan daripada pelanggan mengenai kegagalan sistem yang berterusan, isu teknikal, ketidakstabilan sistem dan penipuan serta ancaman keselamatan. Oleh itu, tujuan utama kajian ini ialah untuk meneliti penentu penggunaan AIT dalam sektor perbankan Nigeria. Secara khususnya, kajian ini meneliti pengaruh kualiti sistem, kualiti maklumat, kualiti perkhidmatan, kualiti kawalan dalaman, latihan, dan sokongan pengurusan atasan terhadap penggunaan AIT. Kajian turut mengkaji kesan penyederhana penglibatan perunding luar terhadap hubungan antara kualiti sistem dan penggunaan AIT. Kaedah kajian rentas digunakan untuk pengumpulan data. Soal selidik telah diagiikan kepada 571 sampel dan hanya 257 maklum balas diperoleh daripada pengurus cawangan dan pengurus akaun bank. Model persamaan kuasa dua terkecil separa digunakan untuk menganalisis hubungan antara penentu dan penggunaan AIT serta kesan penyederhana penglibatan perunding luaran di antara kualiti sistem dan penggunaan AIT. Penemuan hubungan langsung menunjukkan bahawa kualiti sistem, kualiti maklumat dan kualiti kawalan dalaman mempunyai hubungan positif yang signifikan dengan penggunaan AIT, tetapi kualiti perkhidmatan, latihan, dan sokongan pengurus atasan menunjukkan hubungan yang negatif dan tidak signifikan. Tambah pula, dapan kesan penyederhana menunjukkan penglibatan perunding luar menyederhana secara signifikan antara kualiti sistem, kualiti maklumat dan kualiti perkhidmatan dengan penggunaan AIT. Hasil kajian ini memberikan gambaran yang lebih lanjut kepada pihak pengurusan bank tentang faktor khusus yang boleh dimanfaatkan untuk meningkatkan penggunaan AIT demi mencapai manfaat yang diharapkan.

Kata kunci: Penggunaan AIT, penglibatan perunding luar, kualiti kawalan dalaman, bank Nigeria
ACKNOWLEDGEMENT

In the name of Allah (S.W.T) the most gracious and the most merciful. All praise is indeed due to Allah (S.W.T), complete blessings and salutation upon all the messengers. May peace and tranquillity be upon the seal of the prophet, Muhammad (SAW), His families, and all His companions.

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LIST OF ABBREVIATIONS

The followings abbreviations are used in this study:

AIT  Accounting Information Technology
AITU Accounting Information Technology Usage
ACC  Accuracy
ATM  Automated Teller Machine
AVE  Average Variance Explain
BIS  Business Intelligent System
CBN  Central Bank of Nigeria
CL   Completeness
EOU  Ease of Use
EFF  Efficiency
E-Banking Electronic Banking
EFT  Electronic Fund Transfer
E-PURSE Electronic Purse
ERP  Enterprise Resource Planning
EXCO External Consultant Involvement
GoF  Goodness of Fit
GDP  Gross Domestic Product
HRIS Human Resource Information System
ICT  Information and Communication Technology
InfQty Information Quality
IS   Information System
IT   Information Technology
INCO Internal Control Quality
LAN  Local Area Network
NSE  Nigerian Stock Exchange
PLS  Partial Least Square
RBV  Resources Based View
SEC  Security
ServQty Service Quality
SPSS Statistics Package for Social Sciences
SEM  Structural Equation Modeling
SysQty System Quality
TMS  Top Management Support
TL   Timeliness
TR   Training
UK   United Kingdom
US   United States
VIF  Variance Inflation Factor
WAN  Wide Area Network
CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

The use of information technology (IT) has been widely recognized to enhance management decision making and capability. Greenstein-Prosch, McKee, and Quick (2008) consider IT to include all the software and hardware products, information system operations and management processes, the human resources and skills needed to develop and utilize these products and processes to produce information. Accounting information technology (AIT) is considered a key part of the information needed for decision making in organizations. Negash and Gray (2003) conceptualized AIT as the addition of IT in the accounting operations of organizations. It is designed to generate and deliver information to managers at the right time, in the right place and the right format for effective decision making.

Accounting information technology is a set of interdependent activities, documents, and technology designed to collect, process and reports information to a wide group of internal and external decision makers in organizations (Hurt, 2013). Accounting information technology has the ability to integrate different organizational components and accounting procedures such as IT tools, accounting models, human resources, and data (Tokic, Spanja, & Blzevic, 2011). Consequently, this translates them into meaningful information for effective decision making by the management.

The use of AIT in banks has facilitated the basic accounting functions of collecting, organizing, recording, and storing of accounting data used for decision making. The successful implementation AIT enables banks to transform data into information for
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### Appendix A

**Determining sample size for a given population**

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APPENDIX B

RESEARCH QUESTIONNAIRE

The Determinants of Accounting Information Technology Usage in Nigerian Banking Sector

The questionnaire will take fifteen minutes to complete. Your objective response would be highly appreciated as it will contribute immensely in generating reliable evidence that can assist managers and other decision makers in the Nigerian banking sector, in order to understand the factors that result to accounting information technology failures. Please, be rest assured that your response will be treated with utmost confidentiality as it will exclusively use for academic purpose.
PART A

Please indicate the extent of your agreement with each of the following statement by circling the appropriate option using the scale below. Please note that AIT stands for Accounting Information Technology.

1- Strongly Disagree (SD), 2- Disagree (D), 3- Not Sure (NS), 4- Agree (A), 5- Strongly Agree (SA).

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1- The AIT assists our bank in achieving a competitive advantage.
2- The use of AIT helps in satisfying our customers.
3- The use of AIT does not facilitate effective integration between departments in our bank.
4- The use of AIT does not assist in reducing cost.
5- The use of AIT issues periodic report on all the organization activities for decision making.
6- The use of AIT allows our bank to save a lot of time.
7- The use of AIT enables us to manage our task effectively.
8- User login is required to access the online banking facilities.
9- Auto logout is enabled after a period of inactivity online.
10- The antivirus software does not prevent the systems from being attacked by virus.
11- Our AIT is not regularly examined and maintained by IT unit staff.
12- The user interface of our bank information systems is easy to use.
13- The tutorials or instructions provided by our AIT help me to use the system easily.
14- The user interface design by our AIT is user friendly.
15- I understand every function of the AIT.
16- I am not familiar with the interface of our AIT.
The user interface items of our AIT are easy to understand.

Our AIS greatly facilitates my work efficiency.

The processing speed of the AIT assists me in accomplishing my work very fast.

Our AIT does not provide me with accurate information.

Our AIT does not provide me with relevant information.

Our AIT does not provide me with the necessary information in a timely manner.

The information contained in our website is timely and regularly updated.

The information from our AIT improves the quality of my work.

Our AIT does not provide sufficient information related to my task.

Our AIT provides me with comprehensive information to complete my task.

When I have problems, the officials of the bank IT units show a sincere interest in solving it.

The employees of the bank IT units do not have the knowledge to maintain the system and solve the problems well.

The employees of the bank IT units have never given me personal attentions.

Our AIT does not improve the controls of breaking through or trespassing of the system.

Our AIT regulates the access of employees to the system according to their level of authorization.

Our AIT contributes in segregating the discrepant tasks among employees in the bank.
Our AIT does not enable the linkage across all branches of the banks properly and appropriately.  
Our AIT is in-effective in safeguarding against internal and external threats.  
Our AIT does not provide the document needed to follow up work and evaluate performance.  
Our AIT provides appropriate method that ensures proper data entry and processing in order to obtain the required output.  
Our AIT provides a library and archive to all files, programs and data which can be stored in separate tools.

The AIT training programs provided by my bank are not useful.  
The AIT training programmes provided covers specific needs.  
The AIT training programmes provided does not cover our needs.  
The AIT training programmes are organised regularly  
The AIT training programmes are not educative.  
The AIT training programs are cost effective.  
The AIT training programmes help me learn the various system uses.

Top management does not provide the resources needed for the implementation of our AIT systems.  
Every departments are of equal importance.  
I am not satisfied with the changes that the top management decides on AIT issues such as financial support.  
Top management encourage the sharing of information in our bank.
Our consultant is effective in performing information requirement analysis.

Our consultant is effective in recommending suitable AIT solution.

Our consultant does not response rapidly in case of emergency.

Our consultant facilitates internal relationship.

Our consultant does not provide adequate technical support if needed.

PART B

Accounting Information Technology

Among the following Accounting Information Technology subsystems, Please tick the applications presently implemented in your Bank (You may tick one or more boxes if appropriate).

- Transaction Processing System
- General Ledger System
- Financial Reporting System
- Management Reporting System

Please indicate your demographic background by ticking the appropriate option:

1- Age:
   - Below 30 years
   - 30-39 years
   - 40-49 years
   - 50-59 years
   - 60 years and above

2- Gender:
   - Male
   - Female

3- Highest Qualification:
   - Diploma
   - Degree

310
Masters

PhD

4- Working Experience:

Below 5 years

5-9 years

10-14 years

15 years and above

5- Job Position (Please specify)…………………………………………………

Thank you for taking your precious time to complete this questionnaire. Your support in providing this information is highly appreciated

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HP: +60143251744/+234703850361
### APPENDIX C

**Summary of Determinants of Accounting Information Systems**

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Malik (2001) Indian automobile industry Products, process, and environment perspectives

Chalu (2012) Tanzanian local authority Management support, external auditors, specialization and councilor’s involvement

Ortiz et al. (2007) Canadian SME’s Managerial support and vendor support

Kankanhalli et al. (2003) In Singapore organizational size, top management support

Cho (2007) Hong Kong Organizations Management support and training Top management support,

Hamdan (2004) Organizational context training and users’ involvement, with AIS effectiveness

Saliem et al. (2003) Egyptian Organizations Management supports and user involvement

Rahayu (2012) Indonesian public organizations Management commitment and data quality
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Extraction Method: Principal Component Analysis.