



Approval Page

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..... *Customers acceptance of Internet Banking*
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..... *Acceptance and Use of Technology*
..... *(UTAUT) model.*

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

In the name of Allah, the Beneficent, the Merciful.

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ

الْحَكِيمُ ٣٢

They said, "Exalted are You; we have no knowledge except what You have taught us.

Indeed, it is You who is the Knowing, the Wise."

Quran (Surat Al Baqarah) – verse 32

Dedication

- I dedicate this work to my parents who taught me discipline and patience, my God bless them.
- To my wife Hallima Osman Mohammed Hamed who share with me the hard time and gave me moral support while I was preparing this thesis.
- To my daughter Ghofran.

Declaration

I declare that the PhD thesis entitled “*Customers’ Acceptance of Internet Banking in Sudan by Using Unified Theory of Acceptance and Use of Technology (UTAUT)*” is entirely my own effort. Except where otherwise indicated. I also declare that this thesis is original and has not been previously submitted for any degree award.

The work was done under the guidance and supervision of **Dr.** Babekir Elfaki Elmansour, and **Dr.** Mohammed Hamad Mahmoud, at the college of business studies, Sudan University of Science and Technology, Khartoum, Sudan.

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Abstract

This study taken up customers' acceptance of internet banking service in Sudan by using unified theory of acceptance and use of technology. The objective of this research is to identify the factors influencing customers' acceptance of internet banking service in the banks operating in Sudan: Using Unified Theory of Acceptance and Use of Technology (UTAUT) model.

This study employed a quantitative data collection method using the survey approach to collect data concerning the usage of internet banking services by intended customers. Data analysis for the final conceptual model was performed by Structured Equation Modelling (SEM) using the Analysis of Moment Structures (AMOS) software.

The results revealed that the ability is the most influential determinant of behavioral intention in the proposed model and performance expectancy construct was second in influence, then effort expectancy. While Social influence had no impact on the behavioral intention in the proposed model. Furthermore, the moderating role of age, experience, education, and income was supported in the proposed model. While the model reported a non-moderating effect of gender.

The current research contributes to knowledge in the field of technology acceptance research. It demonstrated that ability perceptions, as a multidimensional concept, a plays an important role in the behavioral intention to use IBS. It also demonstrated that the unified model of technology acceptance established in the developed countries can be transferred to developing countries although with varying degrees of explanation power.

المستخلص

تناولت هذه الدراسة قبول العملاء لخدمة الإنترنت المصرفي في السودان باستخدام النظرية الموحدة لقبول واستخدام التكنولوجيا. هدفت الدراسة الى تحديد العوامل المؤثرة على قبول العملاء لخدمة الإنترنت المصرفي في البنوك العاملة في السودان باستخدام النظرية الموحدة لقبول واستخدام التكنولوجيا.

إستخدمت الدراسة أداة الإستبانة لجمع البيانات، ولتحليل البيانات استخدمت الحزمة الاحصائية للعلوم الاجتماعية (SPSS) ونمذجة المعادلات الهيكلية باستخدام برنامج تحليل الهياكل اللحظية (AMOS).

نتائج الدراسة كشفت أن متغير المقدر من أكثر العوامل تأثيرا على نية العملاء لإستخدام خدمة الإنترنت المصرفي في السودان، والأداء المتوقع ثانيا ثم الجهد المتوقع. بينما أظهرت نتائج التحليل أن التأثير الاجتماعي ليست لديه تأثير على نية العملاء لإستخدام الخدمة. علاوة على ذلك أظهرت نتائج التحليل أن كل العوامل الديمغرافية ما عدا النوع تعدل العلاقة بين المتغيرات المستقلة (المقدرة، الأداء المتوقع، الجهد المتوقع، والتأثير الاجتماعي) والمتغير التابع (نية استخدام خدمة الانترنت المصرفي).

هذه الدراسة ساهمت بالمعرفة في مجال قبول التكنولوجيا، حيث أنه أظهرت أن متغير المقدر كمتغير متعدد الأبعاد تلعب دورا مهماً في نية العميل لإستخدام خدمة الإنترنت المصرفي. كما أظهرت أيضا أن النموذج الموحد لقبول واستخدام التكنولوجيا التي أسست في الدول المتطورة يمكن أن تنتقل الى الدول النامية بالرغم من درجات التباین في قوة التفسير.

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Publications Associated with this Thesis

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- Khater, A. H., Almansour, B. A., & Mahmoud, M. H. (2016). the effect of performance expectancy, effort expectancy, social influence, and ability on customers' acceptance of internet banking service in Sudan. *International Journal of Engineering & Management Research*, 6(1). Retrieved from www.ijemr.net

Glossary of Terms

- **Ability:** “Ability is described as group of skills, competences, and characteristics that enable a part to have influence within some specific domain”.
- **Accessibility (AC):** “accessibility is defined as the ease with which individual can locate specific computer system (such as an internet banking services)”.
- **Behavioral Intention (BI):** “Intention is an indication of a person's readiness to perform a given behavior, and it is considered to be the immediate antecedent of behavior”.
- **Effort Expectancy (EE):** “is the degree of easy associated with use of the system”.
- **Facilitating Conditions (FC):** “is the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system”.
- **Internet Banking Awareness (IBA):** “the customers go through a process of knowledge, persuasion, decision and confirmation before they are ready to adopt a product or service”
- **Internet Banking Cost (IBC):** “Aliyu at al. (2012a) stated that the consumers to use new technologies, the technologies must be reasonably priced relative to alternatives”.
- **Internet Connection Quality (ICQ):** “is defined in terms of speed and continuity, can influence user’s perception of the behavioral intention to use IBS”.
- **Performance Expectancy (PE):** “is the degree to which an individual believes that using the system will help him or her to attain gains in job performance”.
- **Social Influence (SI):** “is the degree to which an individual perceives that important others believe he or she should use the new system”.
- **Use Behavior:** “Behavior is the manifest, observable response in a given situation with respect to a given target”.

List of Abbreviations

AC:	Accessibility.
AGFI:	Adjusted Goodness of Fit Indices.
AMOS:	Analysis of Moment Structures.
AVE:	Average Variance Extracted.
BI:	Behavioral Intention.
C.R.:	Critical Ratio.
CBS:	Central Bank of Sudan.
CFA:	Confirmatory Factor Analysis.
CFI:	Comparative Fit Indices.
CMIN:	Minimum Value of the Discrepancy Function Divided by Degree of Freedom.
DIT:	Diffusion Innovation Theory.
DTPB:	Decomposed Theory of Planned Behavior.
EBS:	Electronic Banking Services Company.
ECC:	Electronic Cheque Clearance.
EE:	Effort Expectancy.
EFA:	Exploratory Factor Analysis.
EFT:	Electronic Funds Transfer.
EPOS:	Electronic Point of Sale.
FC:	Facilitating Condition.
GDP:	Growth Domestic Product.
GFI:	Goodness of Fit Indices.
GOF:	Goodness of Fit.
IBA:	Internet Banking Awareness.
IBC:	Internet Banking Cost.
IBS:	Internet Banking Services.

ICQ: Internet Connection Quality.

IFI: Incremental Fit Index.

IS: Information System.

IT: Information Technology.

KMO: Kaiser-Meyer-Olkin.

MACS: Mean and Covariance Structure.

MI: Modification Indices.

MIS: Management Information System.

MM: Motivational Model.

MPCU: Model of Personal Computer Utilization.

NFI: Normed Fit Indices.

PBC: Perceived Behavioral Control.

PC: Personal Computer.

PCA: Principal Component Analysis.

PCLOS: "*p value*" for testing the null hypothesis of close fit.

PE: Performance Expectancy.

PEOU: Perceived Ease of Use.

PU: Perceived Usefulness.

RFI: Relative Fit Index.

RMR: Root Mean square Residual.

RMSEA: Root Mean Square Error of Approximation.

RTGS: Real Time Gross Settlement.

S.E.: Standard Error.

SCT: Social Cognitive Theory.

SEM: Structural Equation Modeling.

SI: Social Influence.

SIC: Squared Inter-construct Correlations.

SMCs: Squared Multiple Correlations.
SPSS: Statistical Package for Social Science.
SRC: Standard Residual Covariance.
SRW: Standard Regression Weight.
TAM: Technology Acceptance Model.
TAM2: Extension Technology Acceptance Model.
TIB: Theory of Interpersonal Behavior.
TLI: Tucker-Lewis Index.
TPB: Theory of Planned Behavior.
TRA: Theory of Reason Action.
UTAUT: Unified Theory of Acceptance and Use of Technology.