

**THE DETERMINANT OF INFORMATION SECURITY  
PRACTICES TOWARDS ORGANIZATIONAL PERFORMANCE  
IN THE BANKING SECTOR: EVIDENCE FROM NIGERIA**

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**DOCTOR OF PHILOSOPHY  
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**THE DETERMINANT OF INFORMATION SECURITY PRACTICES  
TOWARDS ORGANIZATIONAL PERFORMANCE IN THE BANKING  
SECTOR: EVIDENCE FROM NIGERIA**

**By**

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**Kolej Perniagaan**  
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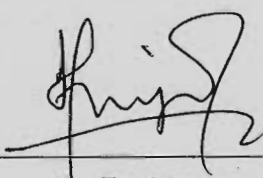
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## ABSTRACT

This study examines the determinant factors of information security practices towards organizational performance among Nigerian banks. To achieve this, a framework that consists of technological, organizational, and environmental (TOE) factors is proposed using information security culture as a mediator of TOE factors. The framework identifies the factors influencing information security practices among Nigerian bankers. Findings using TOE will eventually lead to the improvement of organizational performance through the establishment of information security culture among Nigerian banks. Thus, the use of information security practices will assist in reducing human factors such as errors, failures, internal incidents and social engineering attacks. A questionnaire survey was designed to obtain data on information security culture, organizational performance, organizational, environmental and technological factors. Multiple regression was used to test for the relationship between organizational performance, information security culture, TOE factors and the reliability and validity of the data. The findings indicated that perceived technology advancement, information security policy and procedure, international security standard, information security awareness, perceived training programs, motivation of employee and perceived job roles and responsibilities significantly influence the organizational performance. The remaining variables have no statistically significant influence on organizational performance. Also, this study found that information security culture significantly mediates the relationship between organizational performance and TOE factors. Thus, the result of this study shows that the objectives of this study were achieved.

**Key words:** organizational performance, information security practices, TOE factors, information security culture

## ABSTRAK

Kajian ini mengkaji penentu amalan sekuriti maklumat terhadap prestasi organisasi di kalangan bank-bank di Nigeria. Untuk mencapai matlamat ini, satu rangka kerja yang terdiri daripada faktor-faktor teknologi, organisasi, dan alam sekitar (TOE) dicadangkan menggunakan budaya sekuriti maklumat sebagai faktor pengantara TOE . Rangka kerja ini mengenal pasti faktor-faktor yang mempengaruhi amalan sekuriti maklumat di kalangan bank-bank di Nigeria. Ini boleh membawa kepada peningkatan prestasi organisasi melalui pembentukan budaya sekuriti maklumat antara bank-bank di Nigeria. Dengan ini, ia membantu mengurangkan faktor-faktor kemanusiaan seperti kesilapan manusia, kejadian dalaman dan serangan kejuruteraan sosial. Satu soal selidik telah digunakan untuk mendapatkan data mengenai budaya sekuriti maklumat, prestasi organisasi, faktor-faktor teknologi, organisasi dan alam sekitar. Regresi berganda telah digunakan untuk menguji hubungan antara prestasi organisasi, budaya sekuriti maklumat, faktor-faktor TOE dan kebolehpercayaan dan kesahihan data. Dapatan kajian menunjukkan bahawa kemajuan teknologi, dasar sekuriti maklumat dan prosedur, tahap sekuriti antarabangsa, kesedaran orang ramai terhadap sekuriti maklumat , program-program latihan, motivasi pekerja dan peranan kerja dan tanggungjawab dengan nyata dapat mempengaruhi prestasi organisasi. Pembolehubah berikutnya tidak mempunyai pengaruh yang besar ke atas statistik prestasi organisasi. Selain itu, kajian ini mendapati bahawa budaya sekuriti maklumat mengurangkan dengan ketara hubungan di antara prestasi organisasi dan faktor-faktor TOE. Oleh itu, dapatan daripada kajian ini menunjukan objektif kajian ini telah tercapai.

**Kata kunci:** prestasi organisasi, amalan sekuriti maklumat, faktor-faktor TOE, budaya sekuriti maklumat

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## **LIST OF ABBREVIATION**

NDIC	Nigeria Deposit Insurance Corporation
OP	Organizational Performance
ISC	Information Security Culture
ISM	Information Security Management
IS	Information System
ISS	International Security Standard
CBN	Central Bank of Nigeria
NSE	Nigeria Stock Exchange
ISMS	Information Security Management System
IT	Information Technology
ICT	Information Communication Technology
CPA	Certified Public Accountant
ISO	International Organization for Standardization
EDPD	European Data Privacy Directive
GLBA	Gramm-Leach-Bliley Act
SOX	Sarbanes-Oxley-Act
BSI	British Standard Institute
IMF	International Monetary Fund
SEC	Security Exchange Commission
FFIEC	Federal Financial Institute Examinations Council
NSTISS	National security Telecommunication and Information System

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Research Background**

The global era of technology advancement brought about changes in the operational perspectives of the organization in order to improve the performance of business activities (Wang & Zhao, 2011; Parsons, McCormac, Butavicious & Feguson, 2010). This increases the volume of sales on one hand and the profit growth on the other. These changes affect performance within an organization either positively or negatively. Information and communication technology (ICT) through the use of the internet reduces the world to the global village. The effective use of ICT has been the concern of organizations on sharing information through the internet (Wang & Zhao, 2011; Parsons et al., 2010). It is postulated by Parsons et al. (2010) that organizations are on the verge of losing information to social engineering attack, knowing for sure that human is the greatest target of social engineering attack.

The attack on information defeats the objectives of confidentiality, integrity and availability (Akinsuyi, 2009; Qingxiong, Schmidt, Herberger, & Parsons, 2009). Many organizations consider the information to be the basis of knowledge because it is the business “actionable” and any organization that loose information, lack competitive advantage and cannot survive because of performance deterioration (Brotby, 2009; Drucker, 1993). Thus, it calls for information security culture that provide a platform for

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