

The effect of the internal control system (ICS) on fraud prevention and the financial performance of selected retail supermarkets in Ibadan

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Abstract

In recent times, an increase in fraudulent practices leading to poor financial performance among firms has raised concerns about putting in place a system within an organization capable of preventing fraud. Therefore, the study investigates the effect of the internal control system (ICS) on fraud prevention and the financial performance of selected retail supermarkets in Ibadan. Adopting a descriptive research design, 30 retail supermarkets in Ibadan were selected for the study using convenience sampling techniques. Furthermore, 5 employees were drawn from each selected supermarket through a purposive sampling technique, resulting in a sample size of 150 respondents. The data for the study was sourced using a self-structured questionnaire. Of the 150 copies of the questionnaire administered, 148 copies were returned, out of which 8 copies were discarded due to some irregularities found, leaving the total number of questionnaires used for analysis at 140. Using multiple regression analysis, the two hypotheses formulated for the study were tested. The results of the regression analysis showed that ICS has a significant effect on fraud prevention ($F = 31.467, p < 0.05$) and on the financial performance ($F = 22.671, p < 0.05$) of the selected retail supermarket. Considering the results of the analysis, the study concluded that ICS significantly prevents fraud and enhances the financial performance of selected retail supermarkets.

Keywords: Internal control system; control environment, risk assessment; control activities; information & communication; fraud prevention; financial performance

1. Introduction

The new way of doing business, most especially in the retail industry, called "self-service," creates a platform for shoppers to manage their selection and pay for goods by themselves. Shoplifters take advantage of this to conceal items in clothing or bags without paying. Apart from shoplifters, reports and statistics establish that employees frequently steal from the retail establishments they work for (Korgaonkar, Becerra, Mangleburg, & Bilgihan, 2021). The combination of these vices and others poses a significant threat to the survival and financial stability of retail stores across the globe. For example, the retail crime survey carried out in 2019 reported that United Kingdom retailers lost over £1 billion in 2018 because of retail shoplifting. Also, Korgaonkar, Gironde, Petrescu, Krishen, and Mangleburg (2020) reported that merchandise worth billions of dollars were shoplifted annually by individuals from United States retail establishments.

As a way out, most retail stores in the world have started embracing the implementation of internal control system (ICS) to mitigate shoplifting, employee theft, and other fraudulent acts that can lead to their inefficiency and low financial performance. ICS is a check mechanism against wastage, theft, and mismanagement of organisational assets (Ibrahim, Diibuzie, & Abubakari, 2017). According to Masadeh, Obeidat, Al-Dmour, and Tarhini (2015), an ICS reflects the sustainability and viability of a company, particularly in an environment where business practices are changing rapidly. Implementation of an ICS is meaningless if such a system is weak and ineffective. Theft, income loss, and fraud conspiracy are the outcomes of weak and ineffective ICS (Zhou, Chen, & Cheng, 2016; Muhunyo & Jagongo, 2018; Hoai, Hung, & Nguyen, 2022). Therefore, no matter the size of a business concern, the adoption and implementation of an effective control system must be ensured, as its contribution cannot be undermined (Adedeji & Olubodun, 2018).

Studies have established the significant importance of implementing effective ICS. This includes averting corporate failure, improving the achievement of a firm's objectives, and enhancing organisational financial performance (Soudani, 2013); propelling efficiency and effectiveness of operations (Mary, Albert, & Byaruhanga, 2014); reducing risk to an acceptable level (Abdulkadir, 2014); preventing financial crimes (Eniola & Akinselure, 2016); providing reliable financial information; and safeguarding organisational assets and other important organisational resources from theft and misuse (Francis & Imiete, 2018; Attah-Botchwey, 2018; Hoai, Hung, & Nguyen, 2022).

Like their counterparts in other nations of the world, the Nigerian retail industry is not left behind in the adoption and implementation of an effective ICS, but an empirical study on its effect on fraud prevention and the financial performance of the industry, most especially supermarkets, is unnoticed. Most of the available empirical studies focused on the banking sector and other financial-related establishments in Nigeria (Akinyomi, 2010; Adetiloye, Olokoyo, & Taiwo, 2016; Umar & Dikko, 2018; Helen, Adegbe, & Banmore, 2020; Afolabi, Ogunleye, & Olukoya, 2020; Wokeh, 2020; Eniola, Tonade, & Adeniji, 2021), with little or no attention paid to other sectors such as the retail sector, hospitality sector, and educational sector, to mention a few. Considering this obvious gap, the current study investigates the effect of ICS on fraud prevention and the financial performance of selected retail supermarkets in Ibadan.

2. Literature Review

This section is divided into three subsections. These subsections were discussed as follows.

2.1 Theoretical Review

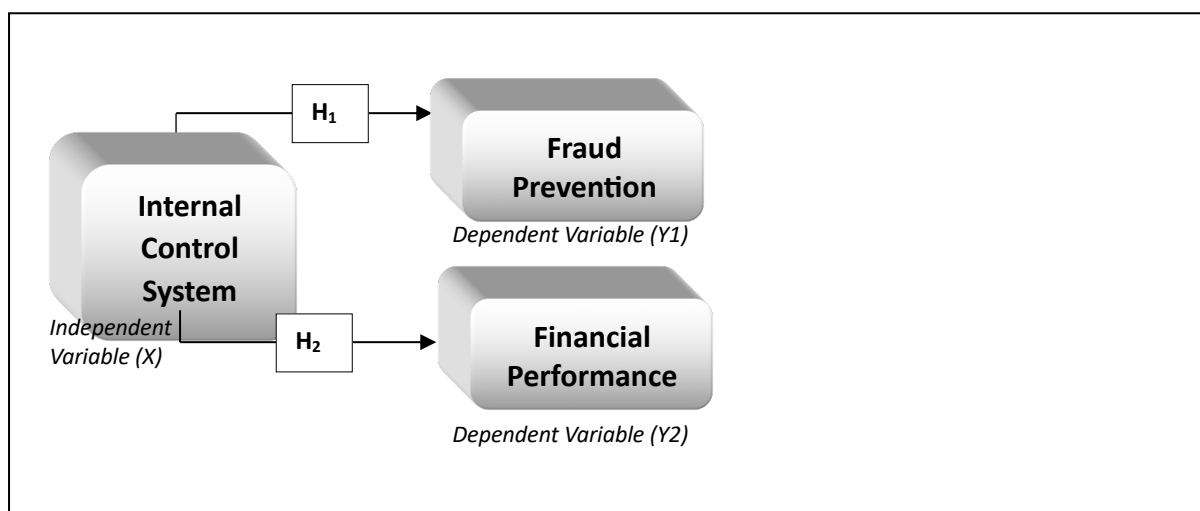
There are many supporting theories of ICS in literature. This includes system theory, agency theory, contingency theory, institutional theory, reliability theory, and stakeholder theory, to mention but a few. However, this study was anchored on agency theory based on its relevancy. In 1976, Jensen and Meckling propounded agency theory. The theory assumes that principals and agents behave rationally. There are two issues that agency theory attempts to resolve: those that come up when the objectives or aspirations of the principal and agent clash, and the difficulties that occur when the principal and agent have divergent views on risk due to the principal's inability to confirm what the agent is truly doing (Uwineza, Maringa, & Mbanzamahoro, 2022). Following these two issues, a strong internal mechanism that will align the interests of the principals and agents must be developed as this will reduce the possibility of information asymmetry and opportunistic behavior, thereby enhancing firm performance (El-Mahdy & Park, 2013).

The adoption of this theory is justified as shareholders, who are the owners of the supermarkets, have assigned duties to their agents (managers) in the running of the day-to-day activities of the supermarket. Managers must ensure that the supermarket's ICS is effective and well-secured to prevent shoplifting, employee theft, and other fraudulent acts capable of reducing their financial performance.

2.2 Conceptual Framework

The proposed linkage between ICS, fraud prevention, and financial performance is conceptually and diagrammatically presented in Figure 1.

Figure 1: Framework of the study



Source: Researcher's initiative (2023)

2.2.1 Internal Control System (ICS)

Internal control is a structure that ensures that an organisation's transactions are processed correctly to guard against wastage, theft, and misuse of available resources (Mire, 2016). Organisations monitor the direction of their set-up goals through an established ICS (Adetula, Balogun, Uwajeh & Owolabi, 2016). The system therefore protects resources against loss by ensuring compliance with the laws, regulations, contracts, and management directives (Mahadeen, Al-Dmour, Obeidat & Tarhini, 2016).

In line with the above definitions and views, this study defines an ICS as a set of rules, regulations, policies, and activities designed within a system to detect and control irregularities in operation. These irregularities include direct and indirect stealing, fraud, improper record keeping, and misappropriation of organisational funds. An ICS is comprised of some related dimensions elements. Most of the reviewed related literature (Millichamp & Tailor, 2008; COSO, 2013; Njoki, 2015; Eke, 2015; Ibrahim, Diibuzie & Abubakari, 2017; Umar & Dikko, 2018; Tuan, 2020) identified control environment, control activities, monitoring, information and communication, and risk assessment, as dimensions of the ICS. These dimensions are expected to be integrated into management processes to enhance the actualization of overall organisational objectives.

2.2.2 Control Environment

Control environment is a key element of the ICS. It is the structure upon which other components have their feet. Eke (2018) defined the control environment as the atmosphere created by management that shapes how things are done and how organisational members conduct themselves to achieve the organisation's goals. As control environments have the greatest impact on business effectiveness, particularly in the process of achieving organisational goals (Gloria, 2018), organisations are expected to not only develop but also maintain a functioning ICS that promotes discipline, personnel integrity, and ethical value of those entrusted with organisational financial resources (Afolabi et al., 2020).

2.2.3 Risk Assessment

The nature of today's business environment exposes businesses to a range of internal and external risks. Risk is the likelihood of the occurrence of an event and that the event will unfavorably affect the achievement of objectives (Ajao & Oluwadamilola, 2020). Risk assessment as a component of an ICS involves identifying and analyzing the likelihood, frequency, and impact of disruption the risks will have on stated objectives. Afolabi et al. (2020) defined risk assessment as the process of identifying risks capable of affecting the profit maximization objective of an organisation. Risk assessment helps to ascertain the probability of occurrence of a risk as well as the degree of impact of the risk (low or high) on firm performance (Simba, Niemann, Kotze & Agigi, 2017).

2.2.4 Control Activities

Overall compliance with regard to risk mitigation and the actualization of organisational goals and objectives requires putting in place effective policies, procedures, and

mechanisms. Mendoza (2012) described control activities as management efforts to gear organisational operations towards meeting the set organisational goals and objectives. Control activities are measures, preventive or detective in nature, capable of channeling every action taken or to be taken within a system towards the realization of an entity's objectives. As identified by Lagat, Okelo, and Terer (2016), such activities include approvals, authorizations, verifications, reconciliations, performance reviews, safety of assets, and segregation of duties. As a matter of importance, various levels of management and units within a system are expected to put in place appropriate control measures to achieve the overall corporate objectives. (Ishaku, Kakanda & Danladi, 2020).

2.2.5 Information and Communication

Information and communication as elements of an ICS focus on identifying, capturing, and communicating pertinent information to assist people in carrying out their duties and responsibilities (Shafawaty, Ram & Azizi, 2016). This element plays a noteworthy role in enhancing the working relationships at all levels within an organisation. Information and communication, through the accuracy of information and integrity reduces fraudulent concealment (Umar & Dikko, 2018) and helps to detect the possibility of fraud in advance (Hayali, Dinc, Sarıl, Dizman, & Gundogdu, 2013). The component ensures that relevant information essential to control is passed to the employees to conduct themselves toward the actualization of organisational objectives (Ishaku et al., 2020).

2.2.6 Monitoring

As a component of an ICS, monitoring evaluates the efficacy and caliber of the internal control framework that an organisation has established over time. The component seeks to ascertain if the control system is properly designed, executed, and effective. According to Ofori (2011), the existence and appropriate operation of all other internal control components as designed justifies that the system is adequately designed and properly executed. Monitoring could be continuous, separate, or combined. It is continuous when it occurs within the operation process, while it is separate when it is specially performed by an independent auditor.

2.2.7 Fraud Prevention

The Association of Certified Fraud Examiners (2007) defines fraud as any deliberate action to deprive someone else of money or property by dishonesty or any other unfair method. Joseph, Albert, and Byaruhanga (2015) viewed fraud as any illegal activity that involves dishonesty, concealment, or breach of trust. According to Olatunji and Adekola (2017), fraud is any unfair practice (tricks, cunning, or deception) by which another person is duped. It is a deliberate act to deceive a person or an organisation to benefit the deceiver financially (Nyakarimi, Kariuki & Kariuki, 2020).

The frequency of fraud and the negative effects it has are reasons why businesses should devote more time and resources to combating it (Dzomira, 2015). Fraud prevention according to Association of Certified Fraud Examiners (2020) is the proactive steps that an organisation takes to prevent or halt fraud. It is an act of disallowing unfair practices from occurring by removing every opportunity capable of giving rise to such an unlawful deed. Furthermore,

fraud prevention is all about making sure that all available resources are combined to minimize opportunities for fraud (Nyakarimi et al., 2020). However, effective fraud prevention depends on the organisation's ability to uphold moral standards, preserve an honest culture within the company, evaluate potential threats, mitigate them, cut down on fraudulent activity, and put internal control measures in place (Kabue & Aduda, 2017).

Relaying the economic importance of fraud prevention, Adelana and Toba (2018) opined that it is more economical to prevent fraud than to allow it to occur. Preventing fraud and losses can be profitable and aid in maintaining stability and business continuity (Dzomira, 2015). Therefore, responsibility is placed on the management to do everything to avert fraud from occurring by putting into place an effective and reliable ICS capable of guarding against fraud.

2.2.8 Financial Performance

Performance is a concept that reflects how well an organisation achieves its objectives. It quantifies the efficiency and effectiveness of actions taken and indicates a firm's growth or failure over a period. It is the outcome of measuring a given task against predetermined standards of fact, completeness, cost, and velocity (Amanj & Akram, 2018; Iman, Novita, & Tarmiri, 2017). Relating these definitions to a business concern, performance can be defined as the extent to which a business achieves its pre-selected goals.

Generally, business performance can be measured financially and non-financially. Financial performance is the degree to which a business achieves its financial goals. It is the business's ability to generate revenues through its assets (Buluma, Kung'u, & Mungai, 2017). According to Eke (2018), financial performance reveals how healthy an organisation is in monetary terms over a given period. It is all about assessing the level to which businesses have benefited financially from the resources committed to the business over time.

Related literature revealed that there are several measures to assess the financial performance of an enterprise. Olaniyan, Akinde, Adegbola, Aladesoun, and Ayoade (2020) identified profit, return on investment, sales growth, business performance, and organisational effectiveness as some of the metrics used to assess financial goals. This study measured financial performance using profitability. Adegbite and Ajagbe (2023) defined profitability as the revenue that businesses generate from effectively and efficiently employing all the resources under their control. Profitability arises when total revenue in a reporting period exceeds total expenses.

2.3 Empirical Review

When ranges of related past studies are reviewed, a strong foundation is built for a study. Considering this, this study reviewed related studies linking ICS, fraud prevention, and financial performance.

2.3.1 Effect of ICS on Fraud Prevention

Joseph, Albert and Byaruhang (2015) examined the effect of internal control on fraud detection and prevention in the district treasuries of Kakamega County. The study adopted a descriptive survey design. Purposively, Treasury staff were selected while heads of departments were selected using simple random sampling methods to be respondents to the study. A sample size

of 31 was drawn from the population size of 122 using Kerlinger's method of determining sample size. Data for the study was gathered through a questionnaire using the drop and pick method, and regression analysis was conducted. The study found that a significant positive relationship exists between ICS and fraud detection and prevention in sub-county treasuries in Kakamega County.

Haladu (2018) conducted a study on fraud detection and internal control measures within Nigerian Stock Exchange (NSE)-listed deposit money banks (DMBs). Employing both survey and ex-post factor research designs, the study encompassed all 15 banks listed by the NSE as of the 2017 financial year. Adopting a filter sampling technique based on specific criteria, the total population remained the sample size for the study. The study employed a combination of primary and secondary data. For primary data collection, 800 copies of questionnaires were administered, 765 copies were returned, and 750 copies were used for the analysis. The financial statements of each bank provide the secondary data needed for the study. The regression analysis revealed a negative influence of internal control on fraud detection and prevention within DMBs.

Nyakarimi, Kariuki, and Kariuki (2020) investigate the application of ICS in fraud prevention in the banking sector in Kenya. Of 42 registered banks in Kenya, 39 banks were considered for the study, of which only 33 banks participated in it. Data for the study were gathered via a questionnaire, and the degree of the relationship between ICS and fraud prevention was assessed using structural equation modeling and moderated multiple regression. The study found that the control environment and control activities have no significant effect on fraud prevention, but risk assessment, activity monitoring, and information communication have a significant effect on fraud prevention.

Oni, Ishola, and Oyedepo (2021) examined the effect of the ICS on fraud prevention among deposit money banks in Kwara State, Nigeria. A cross-sectional survey research design was used in the study and all deposit money banks in Kwara state constitute the population of the study. The study's sample frame was composed of senior, middle-level managers, and employees of the internal control unit of the selected banks. Through a well-structured questionnaire, relevant data was gathered and analysed using both descriptive and inferential statistical techniques. Ordered logit regression was utilized for inferential statistical analysis, while percentages and frequencies were used for descriptive statistical analysis. The study found that the ICS and fraud prevention of deposit money banks in Nigeria were significantly related.

Yahya and Venusita (2022) examined the effect of internal control on fraud prevention based on the cause factors. The study adopted a non-probability sampling method, and all 57 employees of the company were drawn as a sample size for the study. A structural equation modeling was used. The study found that control environment, risk assessment, and monitoring activities affect fraud prevention positively and significantly while control and information & communication exhibit no effect on effect on fraud prevention.

Considering the above, the study hypothesized that:

H₁: The ICS has a significant effect on fraud prevention in selected retail supermarkets in Ibadan.

2.3.2 Effect of ICS on Financial Performance

Kinyua (2016) studied the effect of ICS on the financial performance of companies quoted on the Nairobi securities exchange. The study adopted a survey research design with a population of 372 senior managers from the 62 quoted companies on the Nairobi Securities Exchange. The data for the study were gathered using a questionnaire comprised of structured and unstructured questions, and both stratified and purposive sampling techniques were used. The regression analysis revealed that the ICS is a positive, significant predictor of financial performance.

Kabuye, Kato, Akugizibwe and Bugambiro (2019) studied ICS, working capital management, and financial performance of supermarkets in Uganda. A sample size of 113 supermarkets was drawn from 160 supermarkets in Kampala, Mukono, and Wakiso through a simple random sampling technique. Only 110 supermarkets participated in the study. Managers or accountants were purposefully selected to be respondents to the study based on the virtue of their position and knowledge. Data for the study was gathered using a questionnaire, while data analysis was done using both correlation and regression analysis. The analysis's findings showed that ICS and financial performance have a significant positive relationship, but ICS do not significantly predict financial performance.

Nwokorie and Balogun (2020) investigated the relevance of ICS to the financial performance of selected hotels in Abeokuta. Using a survey research design, 100 employees of standard 20 hotels in Abeokuta, Ogun state, Nigeria were selected. Purposively, managers, accountants, and administrative officers/receptionists of the hotels were chosen as respondents to the study. Data was gathered through the administration of a semi-structured questionnaire, while statistical relationships between variables were examined using multiple regression analysis. The study found that both the control environment and risk assessment have a positive significant influence on total turnover, whereas monitoring has a negative influence.

Uwineza, Maringa, and Mbanzamahoro (2022) examined effects of ICS on profitability of SMEs in Rwanda. The study adopted a descriptive research design, and a sample size of 82 employees was drawn from the population of 445 employees CETRAF Ltd. using purposive sampling technique. The study adopted both primary and secondary sources of data collection. Primary data were obtained through the administration of questionnaires and interviews, while secondary data were obtained through available organisational records. The study employed descriptive statistics for data analysis. The results of the study established and concluded that a positive relationship exists between ICS and the profitability of CETRAF Ltd.

Ademola (2022) investigated the effect of the ICS on Nigerian microfinance banks' (MFBs') financial performance. The study considered three dimensions of the ICS (control environment, risk assessment, and information and communication), while financial performance was measured using return on equity. Purposively, ten MFBs were selected for the study, while data were sourced using a structured questionnaire and the financial reports of the selected bank. The study employed both correlation and regression analysis techniques. The results of the analysis showed that information and communication, risk assessment, and the control environment all significantly improved the financial performance of MFB. Therefore, improving the financial performance of MFB in Nigeria requires an efficient ICS.

Otoo, Kaur, and Rather's (2023) study investigated the impact of ICS on banking sector effectiveness. Thirty-five banks (twenty rural and fifteen commercial) were selected for the study using stratified sampling technique. Also, a sample of 985 respondents, comprised of both senior and junior staff, was drawn up for the study. Data for the study was sourced using a structured questionnaire, while structural equation modeling was utilized to test the conceptual model and hypothesis. The findings demonstrate that three dimensions of ICS (risk assessment, control environments, and control activities) had a significant impact on organisational effectiveness. However, neither the information and communication dimension nor monitoring significantly affected the effectiveness of the organisation.

Based on the above the study hypothesized that:

H₂: The ICS has a significant effect on the financial performance of the selected retail supermarkets in Ibadan.

3. Methodology

This study adopted a descriptive research design via the survey method. The adoption of this design is justified as it allows descriptive information regarding the variables under study to be gathered directly from the concerned. Ibadan, the capital of Oyo State, was the study area, and all the retail supermarkets in the city constitute the population of the study. The study conveniently selected 30 retail supermarkets in Ibadan. Purposively, five employees, comprised of accountants, stock controllers, cashiers, checkout operators, and managers, were drawn from each selected supermarket, leading to a total number of 150 respondents.

A structured questionnaire was the research instrument used in data collection. The instrument has four Sections (Sections A–D). Section A focused on the respondents' demographic characteristics, while Section B contains questions related to the ICS measured by the control environment (CE), risk assessment (RA), control activities (CA), information and communication (I&C), and monitoring (MO). Sections C and D contain questions related to fraud prevention and financial performance, respectively. The response structure for sections B and C is based on Rensis Likert's summated rating scale of 1 to 6 points (1 = Strongly Disagree; 2 = Disagree; 3 = Disagree to some extent; 4 = Agree to some extent; 5 = Agree; 6 = Strongly Agree), while the response structure for Section D was based on a summated rating scale of 1 to 6 points (1 = Very Low; 2 = Low; 3 = Fairly Low; 4 = Fairly High; 5 = High; 6 = Very High). The rating system was adopted to lessen the extreme skewness of the statistical issues.

Before the administration of the questionnaire, the reliability and validity of the research instrument were ascertained. For the reliability of the instrument, a pilot study using the test-retest method was done. Over the course of two weeks, the instrument was administered twice to 25 staff of five retail supermarkets in Osogbo, the capital of Osun State, and an aggregate correlated value of 0.822 was recorded. The value reveals that the instrument is highly reliable. For the validity of the instrument, both face and content forms of validity were adopted. For face validity, researchers considered some criteria suggested by Oluwatayo (2012), including appropriate grammar, items' clarity and unambiguity, word spelling, sentence structure, appropriate font size, and well-thought-out format. For content validity, a draft copy of the questionnaire was sent to experts in academic settings to judge the appropriateness of each item

therein. Corrections made by the experts on the structure of the questions were effected accordingly.

3.1 Model Specification and Estimation Techniques

The two multiple regression models developed in accordance with the specific objectives of the study are presented below.

Model 1:

$$FrP = f(ICS) \dots\dots\dots (1)$$

$$FrP = f(CE, RA, CA, I\&C, MO) \dots\dots\dots (2)$$

$$FrP = \beta_0 + \beta_1CE + \beta_2RA + \beta_3CA + \beta_4I\&C + \beta_5MO + \varepsilon \dots\dots\dots (3)$$

Model 2:

$$FiP = f(ICS) \dots\dots\dots (4)$$

$$FiP = f(CE, RA, CA, I\&C, MO) \dots\dots\dots (5)$$

$$FiP = \beta_0 + \beta_1CE + \beta_2RA + \beta_3CA + \beta_4I\&C + \beta_5MO + \varepsilon \dots\dots\dots (6)$$

Where:

ICS = *Internal Control System*; FrP=*Fraud Prevention*; CE=*Control Environment*; RA=*Risk Assessment*; CA=*Control Activities*; I&C=*Information & Communication*; MO= *Monitoring*; FiP=*Financial Performance*; *f* =*Functional Notation*; β_0 =*Constant (intercept)*; $\beta_1, \beta_2, \beta_3, \beta_4$ = *Coefficients of independent variable*; ε = *Error term*.

4. Presentation and Analysis of Data

4.1 Demographic Characteristics of Respondents

This section presented the descriptive and inferential analysis of the study. A total of 150 questionnaires were distributed, 148 were successfully retrieved, indicating a return rate exceeding 98%. However, 8 questionnaires were discarded due to identified irregularities leaving the total number of questionnaires available for analysis at 140. Table 1 presents the demographic characteristics of respondents.

Table 1: Demographic characteristics of respondents

Demographic variable	Category	Freq.	%
Gender	Male	41	29.3%
	Female	99	70.7%
	Total	140	100%
Age	18-24yrs	25	17.9%
	25-31yrs	77	55%
	32-38yrs	31	22.1%
	39and above	7	5%

	Total	140	100%
Highest Educational Status	O' level	34	24.3%
	NCE/ND	58	41.4%
	HND/ B.Sc.	42	30%
	MBA/M.Sc.	6	4.3%
	Total	140	100%
Present Position	Manager	30	21.4%
	Accountant	29	20.7%
	Stock Controller	24	17.1%
	Cashier	29	20.7%
	Checkout operator	28	20%
	Total	140	100%

Source: Field Survey, 2023

Above table shows that 41 respondents are male, while 99 respondents are female, representing 29.3% and 70.7% of the total percentage, respectively. Furthermore, out of the total sample drawn, 25 (17.9%) respondents are between the ages of 18 and 24, 77(55%) respondents are between the ages of 25 and 31, 31 (22.1%) respondents are between the ages of 32 and 38, while 7 (5%) respondents are between the ages of 39 and above. Regarding the highest educational status of the respondents, 34 (24.3%) respondents had an O'Level, 58 (41.1%) respondents had an NCE/ND, 42 (30%) respondents had an HND/B.Sc., while 6 (4.3%) respondents had an MBA/M.Sc. Also, 30 (21.4%) respondents were managers, 29 (20.7%) respondents were accountants, 24 (17.1%) respondents were stock controllers, 29 (20.7%) respondents were cashiers, and 28 (20%) respondents were checkout operators.

4.2 Effect of ICS on Fraud Prevention

A multiple regression analysis was carried out to examine the effect of the ICS on fraud prevention in selected retail supermarkets. The detail of the analysis is presented in Table 2.

Table 2: Multiple regression analysis of the effect of the ICS on fraud prevention in selected retail supermarkets in Ibadan

(a) Model Summary					
Model 1	R	R²	Adj. R²	Std. Error	
	.735a	.540	.523	1.09446	
(b) ANOVA^a					
Model 1	SS	Df	MS	F	Sig.
Regression	188.461	5	37.692	31.467	.000 ^b
Residual	160.511	134	1.198		
Total	348.971	139			

(c)	Coefficients ^a				
	Unstandardized Coeff.		Standardized Coeff.	T	Sig.
	B	Std. Error	Beta		
(Constant)	5.850	1.071		5.464	.000
CE	.216	.066	.276	3.272	.001
RA	.111	.054	.168	2.047	.043
CA	.143	.051	.199	2.806	.006
I&C	.185	.082	.215	2.248	.026
MO	.167	.054	.182	3.071	.003

Dependent Variable: FrP

Source: Data Analysis (2023), SPSS version 20.

The first model, as presented in Table 2, revealed an adjusted coefficient of determination (Adj. R) of 0.523, indicating that the combination of ICS variables explains 52.3% of the variation in fraud prevention. The remaining 47.7% is attributed to other variables not included in the model.

The ANOVA results indicate that the overall effect of the ICS on the fraud prevention of selected retail supermarkets is significant. The F-value of 31.467 was obtained, with a corresponding p-value of 0.000, which is less than 0.05. This indicates that the overall effect of the ICS on fraud prevention is significant.

In addition, the relative contributions of each variable of the ICS to fraud prevention and their level of significance were revealed. Control environment ($\beta=0.216$; $t=3.272$; $p=0.001<0.05$), risk assessment ($\beta=0.111$; $t=2.047$; $p=0.043<0.05$), control activities ($\beta=0.143$; $t=2.806$; $p=0.006<0.05$), information & communication ($\beta=0.185$; $t=2.248$; $p=0.026<0.05$), and monitoring ($\beta=0.167$; $t=3.071$; $p=0.003<0.05$) demonstrated significant and positive impacts on fraud prevention in the selected retail supermarkets.

Based on the findings, the regression equation for model 1 is thus expressed as:

$$FrP = 5.850 + \beta_1 0.216 + \beta_2 0.111 + \beta_3 0.143 + \beta_4 0.185 + \beta_5 0.167 + \epsilon \dots \dots \dots (7)$$

4.3 Effect of ICS on Financial Performance

A multiple regression analysis was carried out to examine the effect of the ICS on financial performance in selected retail supermarkets. The detail of the analysis is presented in Table 3.

Table 3: Multiple regression analysis of the effect of ICS on the financial performance of selected retail supermarkets in Ibadan

(a) Model Summary					
Model 2	R	R ²	Adj.	Std. Error	

			R ²		
	.677a	.458	.438		1.35029
(b) ANOVA^a					
Model 2	SS	Df	MS	F	Sig.
Regression	206.674	5	41.335	22.671	.000 ^b
Residual	244.319	134	1.823		
Total	450.993	139			
(c) Coefficients^a					
Model 2	Unstandardized Coeff.		Standardized Coeff.	T	Sig.
	B	Std. Error	Beta		
(Constant)	4.635	1.321		3.509	.000
CE	.196	.081	.220	2.404	.018
RA	.057	.067	.076	0.848	.398
CA	.186	.063	.227	2.952	.004
I&C	.242	.102	.247	2.380	.019
MO	.219	.067	.209	3.252	.001

Dependent Variable: FiP

Source: Data Analysis (2023), SPSS version 20.

The multiple regression analysis conducted on the effect of the Internal Control System (ICS) on the financial performance of selected retail supermarkets in Ibadan yielded several important findings. The Adj. R value of 0.438 arrived at indicates that approximately 43.8% of the variation in financial performance can be explained by the combination of ICS variables included in the model. This suggests that other factors outside the scope of the study contribute to the remaining 57.2% of the changes in financial performance of the selected supermarkets. The ANOVA results indicate that the overall effect of the ICS on the financial performance of selected retail supermarkets is significant, with an F statistic value of 22.671 at a p-value of 0.000<0.05. This suggests that the ICS has a notable impact on financial performance.

The relative contributions of each variable of the ICS to financial performance and their level of significance were also ascertained. Control environment ($\beta=0.196$; $t=2.404$; $p=0.018<0.05$), control activities ($\beta=0.186$; $t=2.952$; $p=0.004<0.05$), information & communication ($\beta=0.242$; $t=2.380$; $p=0.019<0.05$), and monitoring ($\beta=0.219$; $t=3.252$; $p=0.001<0.05$) were found to have positive and significant effect on financial performance of selected retail supermarket in Ibadan while only risk assessment ($\beta=0.057$; $t=0.848$; $p=0.398>0.05$) was found to be positive but not statistically significant.

Based on the findings, the regression equation for model 1 is thus expressed as:

$$FiP=4.635 + \beta_1 0.196 + \beta_2 0.057 + \beta_3 0.186 + \beta_4 0.242 + \beta_5 0.219 + \varepsilon \dots \dots \dots (8)$$

4.4 Discussion of Findings for Model 1

Based on the results of the analyses, all identified elements of the ICS (control environment, risk assessment, control activities, information and communication, and monitoring) had a positive coefficient. This implies that the elements were directly proportional to the prevention of fraud in selected retail supermarkets in Ibadan. The combined effect of these elements on fraud prevention was also found to be significantly positive. The findings stand to support the findings of Olatunji (2009), Tunji (2013), Bayyouud and Sayyad (2015), Asiligwa (2017), and Oni, Ishola and Oyedepo (2021).

4.5 Discussion of Findings for Model 2

Considering the second objective of the study, control environment, control activities, information and communication, and monitoring were found to have a significant and positive impact on the financial performance of the selected retail supermarkets in Ibadan, whereas risk assessment had no significant impact on financial performance. The overall effect of the ICS on financial performance was found to be significant. This finding corroborates the findings of Kabuye, et al., (2019), Afolabi, Ogunleye, and Olukoya (2020), Olayode (2020), Ademola (2022), Otoo, et al., (2023) to mention a few.

5. Conclusion and Recommendations

In line with the findings of the study, it is concluded that the ICS has a positive and significant effect on fraud prevention in selected retail supermarkets in Ibadan. The ICS designed by the management of the selected supermarkets ensures that the organization's transactions are processed correctly, guides against waste, misuse of available resources, theft, and other fraudulent practices. Also, the study concluded that ICS has a significant positive effect on the financial performance of retail supermarkets in Ibadan. That is, the implementation and enforcement of an effective ICS enhanced the financial position of the selected retail supermarkets.

Considering the above findings and conclusion, the study recommended that retail supermarkets, big or small, should design, implement, and maintain an effective ICS. Prevention of fraud is guaranteed when there is an established, working ICS guiding firms' operations from time to time. The functionality of the system should be ascertained and ensured to protect against fraudulent practices and improve financial performance.

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