International Journal of

Finance

(IJF)

Effect of Internal Controls on Fraud Detection of Manufacturing Firms in Garissa County, Kenya

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Accepted: 21st Dec 2023 Received in Revised Form: 4th Jan 2024 Published: 18th Jan 2024

Abstract

Purpose: This research aims to investigate the impact of internal controls on fraud detection in manufacturing firms in Garissa County, Kenya. The study assesses the influence of Internal Control, Risk Assessment, Control Activities, Information and Communication, and Monitoring on fraud detection in these companies.

Methodology: Utilizing a quantitative cross-sectional survey design, data is collected from 75 manufacturing companies affiliated with the Kenya Association of Manufacturers (KAM) through purposive sampling. Internal Audit Managers (IAM) are key respondents, and primary data is collected using structured questionnaires distributed through drop-and-pick method. The collected data is analysed descriptively using figures and tables, and inferentially using Microsoft Office spreadsheet program (Excel) and SPSS. The research instruments' validity and reliability are established through the test-retest method, and outcomes are presented using charts and tables.

Findings: The study reveals that Internal Control, risk assessment, control activities, information and communication, and monitoring all positively and significantly influence fraud detection in manufacturing firms in Kenya. The study concludes that top management in manufacturing firms should establish clear lines of authority and allocate duties effectively, making each employee accountable for their actions. Additionally, the management should adopt effective fraud detection and prevention methods, motivate employees to report fraudulent activities by offering rewards, and formulate clear duties and responsibilities for all staff members.

Unique Contribution to Theory, Practice and Policy: The study recommends proper communication channels within the organization, regular seminars for creating awareness on fraud detection methods, and punitive measures for employees engaged in fraudulent activities.

Keywords: *Internal Control, Risk Assessment, Control Activities, Information and Communication, Monitoring and Fraud Detection*

INTRODUCTION

Manufacturing in Kenya is gaining a high position in economy growth and development. Nevertheless, this growth and development can be reduced by the growing number of fraud cases in Kenya and more so to manufacturing firms. The effect of fraud cannot be over stressed. It does not only have overwhelming impact on the organizations but at the national economy as well. Certified Management' Accountant (CMA, 2009) states that fraud is a threat that affects the business growth and development. The Certified Fraud Examiners association body - ACFE in its 2018 Report to the Nation named - Occupational Fraud and Abuse, found that majority of organizations lose seven (7) percent of their annual earnings to fraud. The report also noted that manufacturing sector firms had the fourth most recorded fraudulent cases in terms of the frequency or occurrence. The manufacturing firms came second in terms of monetary and financial losses compared to other twenty-two (22) other sectors. The ACFE report cited lack and absence of reliable and strong control framework to be the main factor that leads to fraud. In manufacturing firms, internal controls are fundamental in guaranteeing smooth operations and activities in addition to accomplishment of the firm's objectives that are consistent with the firm's relevant processes, policies, procedures, and laws. Consequently, it is fundamental that manufacturing firms endeavor to ensure that strong control framework is achieved. As per, Mawanda (2008), a good internal control system facilitates the firm to prevent frauds, abuses, errors and reduce wastage. The Committee of Sponsoring Organizations (COSO) in 1992 outlined that internal controls to be a process instituted by an organization's board or management to enable them to achieve their objectives regarding operational effectiveness and efficiency, reliability, and reliance in financial reporting, in addition to ensuring that their compliance with laws, regulations and policies (COSO, 2012). According to COSO, internal control comprises of five interconnected elements, namely, Internal Control, control activities, risk assessment, information and communication and monitoring. Other various researchers have expounded on the topic of internal controls at various levels: globally, regionally, and locally as discussed below.

Statement of the Problem

The prevalence of fraud and misappropriation of resources in Kenya has led to heightened anxiety among investors, affecting confidence and wealth maximization goals (ACFE, 2018). Kenya ranks seventh globally in economic crime severity, with a reported prevalence of 75%, surpassing the East Africa Countries (EAC) average of 64% and the global rate of 49% (PWC, 2018). Weak internal control systems are identified as a contributing factor to increased fraud (ACFE, 2018). Numerous studies point to poor ethical practices, integrity issues, and deficient management policies as catalysts for fraud, emphasizing the importance of robust internal controls (Kirsty, 2008).

Internal controls play a pivotal role in building trust, reducing fraud, and ensuring compliance with laws and regulations (Kirsty, 2008). Notably, Boyle and Desai (1991) found a negative relationship between a firm's longevity and its probability of collapse, underscoring the critical role of effective internal controls in business sustainability. While fraud detection techniques, including internal controls, cannot offer absolute protection, global and local studies, such as those by Abu-Musa (2004), Chunlan (2009), Kakucha (2009), and Nyakundi and Nyamita (2014), highlight the connection between robust internal controls and improved financial performance.However, existing research gaps focus on various industries, leaving manufacturing firms underexplored. This study aims to address this gap by analyzing the impact of internal controls on fraud detection in manufacturing firms in Nairobi, Kenya, responding to the research question: What is the effect of internal controls on fraud detection among manufacturing firms in Kenya?

Research Objectives

i Investigate the impact of Internal Control on fraud detection within manufacturing firms in Garissa County, Kenya.
ii Examine the influence of risk assessment on fraud detection in manufacturing firms in Garissa County, Kenya.
iii Explore the effects of control activities on fraud detection within manufacturing firms in Garissa County, Kenya.
iv Assess the impact of information and communication on fraud detection in manufacturing firms in Garissa County, Kenya.

LITERATURE REVIEW

Theoretical Review

Fraud Triangle Theory (FTT)

Introduced by Donald Cressey in 1950, the Fraud Triangle Theory posits that individuals rationalize fraudulent actions due to pressure, opportunity, and rationalization. Cressey's study, based on 250 fraud-related interviews, revealed that individuals, initially assuming positions of trust with good intentions, may breach trust under certain circumstances. Pressure arises from financial and socio-political factors, opportunity from weak internal structures, and rationalization as individuals justify their actions. Control-related failures, identified by CIMA (2009), increase fraud risk. This study focuses on the impact of internal controls on preventing fraud, acknowledging the intricate interplay of opportunity, pressure, and rationalization within the Fraud Triangle Theory.

The Fraud Diamond Theory (FDT)

The Fraud Diamond Theory (FDT), formulated by Wolfe and Hermanson in 2004, extends the Fraud Triangle by introducing a crucial fourth factor—capability (Wolfe & Hermanson, 2004). In addition to opportunity, pressure, and rationalization, capability plays a pivotal role in an individual's potential to breach trust and commit fraud (Wolfe & Hermanson, 2004). This implies that a perpetrator must possess the requisite qualities and skills to execute the crime, understanding the vulnerabilities in the organization's internal control structure (Wolfe & Hermanson, 2004). FDT identifies six supportive traits within capability: positioning, intelligence, ego, coercion, deceit, and stress management (Hay, 2013). These encompass unique positioning, innovativeness, confidence, persuasion, proficiency in deception, and effective stress coping (Hay, 2013). This study, focuses on assessing the impact of internal controls in preventing fraud, is grounded in the Fraud Diamond Theory, providing valuable insights into the capabilities contributing to fraudulent activities

Social Control Theory

The Social Control Theory, developed in criminology, explains how societal factors shape individual behavior and deter deviance. Individuals, motivated to conform by bonds with family, friends, and institutions, are less likely to engage in deviant behavior when these bonds are strong (Hirschi, 1969). In this study, the Social Control Theory was applied to explore societal influences preventing fraud in manufacturing settings. Internal controls, constituting policies and procedures safeguarding assets, act as societal structures within organizations (Wells, 2005). The literature investigates how positive organizational culture, ethical leadership, and strong interpersonal relationships reduce fraud likelihood (Albrecht et al., 2019). Conversely, weak internal controls, lack of supervision, and a toxic culture increase fraud risk (Wells, 2005). External factors, like regulatory frameworks, also shape internal controls' effectiveness in deterring fraud (Wells, 2005). Aligning internal controls with regulations enhances social control within organizations (Wells, 2005). In summary, the literature review applies the Social Control Theory to reveal how internal controls function as social control mechanisms in manufacturing firms, examining the interplay between organizational structures, societal influences, and fraud prevention in Garissa County, Kenya.

Agency Theory

The Agency Theory, originated by Ross and Barry in 1970 and formalized by Adams in 1994, examines the dynamics between firm owners (principals) and managers (agents). Jensen and Meckling (1976) define the 'agency relationship' as a contractual engagement where principals enlist agents, anticipating self-interest motivations. This theory underpins corporate governance, emphasizing managerial responsibilities and the crucial role of boards in monitoring decisions for shareholder protection. Vance (1983) suggests CEO dominance may compromise board effectiveness. The Agency Theory justifies a fiduciary relationship with a 'duty of care' and 'duty

International Journal of Finance

ISSN 2520-0852 (Online)

Vol. 9, Issue No. 1, pp 20 - 42, 2024 www.carijournals

of loyalty,' portraying firms as structures for internal controls against opportunistic behavior. This aligns with the study on "Effect of Internal Controls on Fraud Detection of Manufacturing Firms in Garissa County, Kenya."

Conceptual Framework

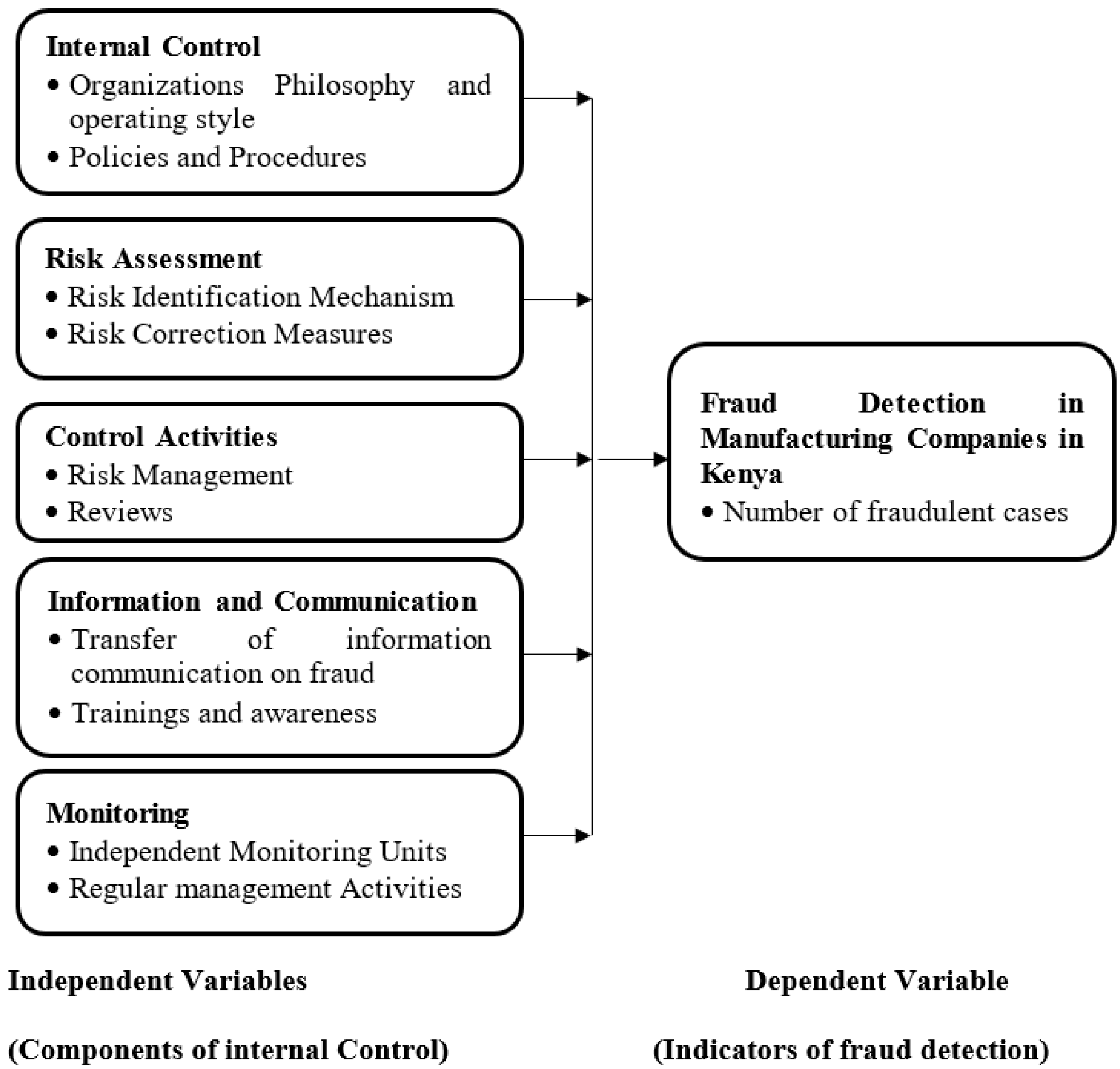

Figure 1: Conceptual Framework

Internal Control

This element lays the foundation at which other COSO framework is laid on. It sets the tone and culture by management. It deals with aspects like ethical issues and integrity, management and philosophical style, commitments to competences, organizational structural, audit and risk committees and policies and procedures. Since the importance of internal controls mechanisms is to reduce fraud and enhance detection, this framework provides discipline and structure COSO. (2013). Study has found that some Internal Control attributes like level of risk, tone-at-the-top, and control knowledge, visibly defined and conveyed are considerably related to the role of the ICS and fraud exposure within an organization (De Beelde & Sarens, 2006). PWC (2012) showed that, the Internal Control includes the management and governance functions. The awareness, attitudes, and actions of those responsible with governance and management regarding the entity's ICS and its significance in the entity. In case an organization pursues clear ethical values and integrity shown in a formal code of conduct, the internal control will take a bigger meaning (Saren & Beelde, 2008)

Risk Assessment

COSO (2013) notes that risk assessment involves identification and analysis of internal and external risks that could restrain achievement of organizations objectives. The method of risk identification and analysis is a continues process and is an essential component of a useful ICS (Ward & Smith, 2002). It is essential for any association to have convincing procedures and frameworks to envision and recognize fraud related activities from happening (‘Bierstaker, Brody’ and ‘Pacini, 2006). Kimani (2011) studied on Fraud Risk Assessment Plan of Barclays Bank of Kenya (BBK). The research intended to offer more understanding on fraud detection, prevention, reporting and resolution processes which the bank could integrate in its fraud detection. The findings revealed that normal organization loses on average of 5 to 7% of its total annual sales to fraud . The findings revealed that theft and misappropriation of assets (for example money and other physical assets) were the most prevalent type of fraud. In addition , the report noted that bulk of the frauds were uncovered via tips and were reported by either whistle blowers, vendors, or employees. The study also found that organizations that utilized fraud awareness training reduced fraud losses by 52%. BBK was not an exemption to this type of heightened fraud. The study proved that in order for BBK to be in a place to prevent and lessen frauds, the fraud risk assessment unit of the Bank should follow a fraud risk assessment plan which proposes recommendations that help to detect, prevent, manage, and determine fraud. Cochran (2000) noted that risk identification is significant for the attainment organization’s objectives because an effective ICS , no matter how well conceived, and managed, can offer only reasonable assurance rather than absolute assurance to management regarding the achievement of an entity’s objectives.

This component try to advocate for proactive rather than passiveness of risk assessment and notes that once fraud has occurred it becomes difficult to recover and might be costly, in other words prevention is better than cure.

Control Activities

Dublin (1999') considers control activities to be actions that offer evidence that a loss has happened. They include financial analysis, reconciliations, and reviews. Control Activities can be grouped into two categories: detection and prevention. Prevention control activities are intended to dissuade the occurrence of an unwanted event. The enhancement of these preventive controls entails predicting possible risks before they occur and taking pro-active measures to avoid or eliminate them. On the other hand, detection activities are intended to identify unwanted events that have occurred and taking reactive measures of alerting management about what has happened. Prevention controls tend to be more expensive than detection controls. Control activities are methods, policies and procedures that make sure management's commands are properly executed (Aikins, 2011). Costs and benefits ought to be assessed before implementation of control activities are implemented and that an excessive use of prevention controls can hinder productivity. Finally, no single control activity provides all the solutions to risk management challenges. In some circumstances, a blend of control activities should be used, and in others, one control activity could exchange for another.

Information and Communication

For any organization to achieve its objectives through proper internal control responsibilities, information is essential. An entity recognizes and relays information to all employees to enable them carry out their responsibilities. Both independent and internal auditors as an independent observer are anticipated to relay their outcomes on their reviews regarding the system of the internal controls to the management for remedial actions ('Tunji, 2013). All employees are obligated to receive a clear communication that control concerns are taken seriously by the organization and are obligated to understand their own responsibilities in the internal control framework and how their actions relate to the happenings of others. The probability of being caught instigates the potential fraudsters not to admit to submitting extortion. In view of this rule, the essential of a comprehensive control system is critical to extortion program. Any practical extortion program involves the fundamental pieces of "capacity of being gotten" and "the nearness of a cautious control system". It is likewise basic to be proactive instead of open. Misrepresentation discovery can go about as an obstacle by spreading a message to potential fraudsters that the association is engaging extortion and that indispensable procedures are put to pick any unlawful activity which could have happened. A potential fraudster would stop from doing the bad behavior if there is a credibility of being caught. Every so often balancing activity control would be complimented by area controls in case they are deficient. In conclusion, it can be summed up that Information is necessary for an organization to carry out internal control activities to support the attainment of its objectives. Badara and Saidin (2013) in their study on impact of effective ICS on internal audit effectiveness, indicated that relevant information must be identified, recorded, and communicated in a form and time frame that enables people to carry out their responsibilities.an open and effective communication culture in an organization, aids in detecting the possibility of fraud in advance (Hayali et al, 2013.). Chen (.2004) said that information systems provide reports containing operational, financial and compliance related information that make it possible to run and control an organization.

Monitoring

Organization activities operations need to be assessed currently and in future and remedial action taken time. By monitoring, internal control activities are constantly kept under scrutiny and their progress are evaluated. This should be a mandate of whole the organization. This will indicate that fraudulent actions shall be detected and discovered and handled on time (Hayali et al, 2013). The Institute of Internal Auditors (1995) views monitoring to include activities such as periodical evaluations, management self-assessments and Internal audits. Monitoring provides guarantee that the results of audits and other reviews are timely determined. (Theofanis et al, 2011).

RESEARCH METHODOLOGY

The study adopted a descriptive survey research design to collect and analyse the data. The population of interest comprised of the three hundred and eight (308) manufacturing firms that are members of Kenya Association of Manufactures (KAM, 2019) and are within Garissa county, Kenya. A census technique will adopted in this study. The population was divided into 12 strata with each subgroup representing the 12 subsectors of manufacturing as classified by KAM. Ritchie and Lewis (2003) state that stratified sampling ensure a high degree of representativeness of all the strata or layers in the population. Within each of the twelve (12) strata simple random sampling was employed to find the entities that would respond to the research questionnaire. The study's sample was based on the Slovin's Formula to give a sample of 174 manufacturing companies. The study employed self-administered both structured and unstructured questionnaires to gather data from the respondents on the basis of 'drop and pick later'. The study utilized both quantitative and qualitative data. Collected data was edited, coded, and entered into the computer using the Statistical Package for Social Scientists (SPSS) and then scored. Quantifiable data was broken down by utilization of regression analysis. Multiple regression analysis was used to establish the extent to which the independent variable (Internal controls) predicted the dependent variable (indicators of fraud detection).The analytical model that utilized is as per the following.

$Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + e$

Y = Fraud detection.

$\beta 0 - \beta 5$:- (Regression co-efficient of independent factors).

X1:- Internal Control

X2:- Risk Assessment.

X3:- Control Activities.

X4:- Information and Communication.

X5:- Monitoring

e:- Error term represents the likely angles that could influence the dependent variable that were not seized in the research.

FINDINGS OF THE STUDY

The sample size of this study was 174 and it comprised of internal audit managers in manufacturing companies. The researcher distributed 174 questionnaires during data collection process and 144 of the respondents managed to completely fill their questionnaires and return them to the researcher. This represented a response rate of 82.6%. Thus, according to the statements of Kothari (2009) a response rate that is above fifty percent is considered as adequate for data analysis and reporting while a response rate that is above 70% is classified as excellent. Hence, the response rate of this study was within the acceptable limits for drawing conclusions and making recommendations.

Descriptive Statistics

Internal Control and Fraud detection

The respondents were requested to indicate their level of agreement on various statements relating to Internal Control and fraud detection in manufacturing firms in Kenya. A 5-point Likert scale was used where by 1 symbolized strongly disagree, 2 symbolized disagree, 3 symbolized not sure, 4 symbolized agree and 5 symbolized strongly agree. The results were depicted in Table 1

International Journal of Finance
ISSN 2520-0852 (Online)
Vol. 9, Issue No. 1, pp 20 - 42, 2024

Table 1: Internal Control and Fraud detection

Statement	Mean	Std. Deviation
Our organization has an audit and risk committee that consults the external auditors in matters concerning fraud suspicions	3.208	0.621
Fraudulent cases among the employee can lead to lose of job	3.896	0.029
In our organization the management demonstrates pledge to integrity and ethical values	2.208	1.096
The board of directors in our organization establishes a suitable tone and genuine expectations on management to implement an anti-fraud philosophy	2.792	0.714
Our organization has formalized policies and procedures for all operations	3.861	0.186
Our organization has designed structures, authorities and responsibilities to ensure smooth functioning	2.417	1.093
Our organization has established clear responsibility and authority lines to guarantee compliance with the policies and procedures	1.993	0.215

The results showed that the respondents were not sure whether their organization has an audit and risk committee that consults the external auditors in matters concerning fraud suspicions. This is shown by a mean of 3.208 (std. dv = 0.621). However, the participants agreed that their organization has formalized policies and procedures for all operations. This is supported by a mean of 3.861 (std. dv = 0.186). As shown by a mean of 3.896 (std. dv = 0.029), the participants agreed that fraudulent cases among the employee can lead to lose of job. De Beelde and Sarens (2016) indicated that audit and risk committee is essential for proper prevention of fraudulent activities in any organization. From the results, the respondents were not sure whether the board of directors in their organization establishes a suitable tone and genuine expectations on management to implement an anti-fraud philosophy. This is shown by a mean of 2.792(std. dv = 0.714). As shown by a mean of 2.417(std. dv = 1.093) the participants were not sure whether the organization has designed structures, authorities and responsibilities to ensure smooth functioning. Saren and Beelde (2008) argued that proper coordination between internal auditors and external auditors facilitates fraud detection in an organization. The respondents disagreed with the statement indicating that the organization has established clear responsibility and authority lines to guarantee compliance with the policies and procedures. This is shown by a mean of 1.993 (std. dv = 0.215). Further the respondents also disagreed with the statement indicating that the organization management demonstrates pledge to integrity and ethical values, as shown by a mean of 2.208(std. dv = 1.096). Olumbe (2012) indicates that fraud detection in an organization calls for adoption of integrity and ethical values in the company.

Risk Assessment and Fraud detection

The respondents were requested to indicate their level of agreement on various statements relating to risk assessment and fraud detection in manufacturing firms in Kenya. The results were depicted in Table 2.

Table 2: Risk Assessment and Fraud detection

Statement	Mean	Std. Deviation
proactive identification and resolving of firm's exposure to fraud (external and internal) significantly influence prevention of fraud	3.583	0.249
The management evaluates the risk appetite and weigh its capability to meet the firms operational and compliance objectives mostly in fraud detection	3.097	0.431
the management has a mechanism of identifying and analysing fraud risks	2.389	0.364
employees report fraud incidence or suspicious and has the management investigated and evaluated previous fraud if any	2.944	1.568
The board of directors monitor the firm's fraud risk management actions hence facilitating fraud detection	2.681	0.976
The audit and risk committee receive regular reports on the position of reported /alleged fraud and take necessary actions to ensure fraud detection	1.903	0.105
The management committee take into considerations the reported fraud incidences and takes the necessary measures	2.833	1.604
Our organization carries out ethical and security awareness for new staff and regular trainings for the existing ones	1.9028	1.231

From the findings, the respondents agreed that proactive identification and resolving of firm's exposure to fraud (external and internal) significantly influence prevention of fraud. This is shown by a mean of 3.583 (std. dv = 0.249). However, as shown by a mean of 3.097 (std. dv = 0.431) the respondents were not sure whether the management evaluates the risk appetite and weigh its capability to meet the firms operational and compliance objectives mostly in fraud detection. As indicated by a mean of 2.944 (std. dv = 1.568) the respondents were also not sure whether employees report fraud incidence or suspicious and has the management investigated and evaluated previous fraud if any. The results are in line with the findings of Kimani (2011) who found that proper risk identification mechanisms in an organization are essential for effective prevention of fraudulent occurrences. The participants were not sure whether the management committee take into considerations the reported fraud incidences and takes the necessary measures.This is shown by a mean of 2.833 (std. dv = 1.604). With a mean of 1.903 (std. dv = 0.105) the participants disagreed with the statement indicating that the audit and risk committee receive regular reports on the position of reported /alleged fraud and take necessary actions to ensure fraud detection. Cochran (2000) argued that risk identification try to advocate for proactive rather than passiveness of risk assessment and notes that once fraud has occurred it becomes difficult to recover and might be costly, in other words prevention is better than cure.As indicated in the findings the respondents differed with the statement implying that the management has a method of identifying and analyzing fraud risks. This is demonstrated by a mean of 2.389 (std. dv = 0.364). Additional they were also not sure if the board of directors observe the firm's fraud risk management actions hence facilitating fraud detection. This is shown by a mean of 2.681(std. dv = 0.976). Nonetheless, the respondents disagreed with the statement showing that the organization carries out ethical and security awareness for new staff and regular trainings for the existing ones. This is shown by a mean of 1.9028 (std. dv = 1.231). Bierstaker, Brody' and 'Pacini, (2006) indicates that a fraud risk assessment plan which offers recommendations that help to detect prevent, manage, and determine fraud.

Control Activities and Fraud detection

The respondents were requested to indicate their level of agreement on various statements relating to control activities and fraud detection in manufacturing firms in Kenya. The results were depicted in Table 3.

Table 3: Control Activities and Fraud detection

Statement	Mean	Std. Deviation
There is appropriate management and supervision of junior employees by the senior ones	3.167	0.147
it is possible for one staff to have access to all treasured and classified information without the permission of senior employee	2.042	0.500
The firm's security system is reliable in identifying and protecting the firm's assets	3.083	1.094
The firm has distinct separation of duties and responsibilities	2.375	0.509
Staff are trained on implementation of accounting and financial resource tools and systems	4.188	0.311
There is thorough checking of transactions and efficiency of risk management for improvements	3.153	1.445
The top management i.e. the boards of directors and senior management request performance and progress reports	3.611	0.247

With a mean of 3.611 (std. dv = 0.247) the respondents agreed that the top management i.e. the boards of directors and senior management request performance and progress reports. As shown by a mean of 4.188 (std. dv = 0.311) the participants also agreed that staff are trained on implementation of accounting and financial resource tools and systems. However, the respondents were not sure whether the firm's security system is reliable in identifying and protecting the firm's assets. This is shown by a mean of 3.083 (std. dv = 1.094). With a mean of 3.153 (std. dv = 1.445) the respondents were also not sure whether there is thorough checking of transactions and efficiency of risk management for improvements. Dublin (2019) considers control activities to be actions that offer evidence that a loss has happened. They include; financial analysis, reconciliations and reviews. In addition, with a mean of 3.167 (std. dv = 0.147) the participants were not sure whether there is appropriate management and supervision of junior employees by the senior ones. With a mean of 2.042 (std. dv = 0.500), the respondents disagreed with the statement indicating that it is possible for one staff to have access to all treasured and classified information without the permission of senior employee. Further the participants disagreed with the statement indicating that the firm has distinct separation of duties and responsibilities. This is shown by a mean of 2.375 (std. dv = 0.509). Aikins (2011) indicates that costs and benefits should be assessed before control activities are implemented. He further argued that management should also remember that an excessive use of prevention controls can impede productivity.

Information and Communication and Fraud detection

The respondents were requested to indicate their level of agreement on various statements relating to information and communication and fraud detection in manufacturing firms in Kenya. The results were depicted in Table 4.

Table 4: Information and Communication and Fraud detection

Statement	Mean	Std. Deviation
There is access to firm's resources and clear lines of communication and propagation of information in a timely way to all stakeholders	2.167	0.456
Our organization ensures effective communication on fraud detection to all the staff and internal parties from time to time	2.458	0.609
There is positive affirmation of high-risk area function which includes periodic reminders on major fraud risk areas facing the firm	2.931	1.055
Training of employees is carried out to recognize and communicate fraud red flags	2.681	0.522
Our organization conducts on-job training to all employees on fraud detection	3.910	0.348
Our organization holds seminars to create awareness on fraud detection to all employees	3.750	1.273

From the findings, the respondents disagreed with the statement indicating that there is access to firm's resources and clear lines of communication and propagation of information in a timely way to all stakeholders. This is shown by a mean of 2.167 (std. dv = 0.456). With a mean of 2.458 (std. dv = 0.609) the respondents also disagreed with the statement indicating that the organization ensures effective communication on fraud detection to all the staff and internal parties from time to time. As shown by a mean of 2.931(std. dv = 1.055) the participants were not sure whether there is positive affirmation of high-risk area function which includes periodic reminders on major fraud risk areas facing the firm. Tunji (2013) argued that all employees are obligated to receive a clear

International Journal of Finance
ISSN 2520-0852 (Online)
Vol. 9, Issue No. 1, pp 20 - 42, 2024

communication that control concerns are taken seriously by the organization and are obligated to understand their own responsibilities in the internal control framework and how their actions relate to the happenings of others. With a mean of 3.910 (std. dv = 0.348) the respondents agreed that the organization conducts on-job training to all employees on fraud detection. In addition, with a mean of 3.750 (std. dv = 1.273) the participants also agreed that the organization holds seminars to create awareness on fraud detection to all employees. The respondents were also not sure whether training of employees is carried out to recognize and communicate fraud red flags. This is shown by a mean of 0.522(std. dv = 0.522). Badara and Saidin (2013) indicates that relevant information must be identified, recorded and communicated in a form and time frame that enables people to carry out their responsibilities. An open and effective communication culture in an organization, aids in detecting the possibility of fraud in advance.

Monitoring and Fraud detection

The participants were requested to indicate their level of agreement on various statements relating to monitoring and fraud detection in manufacturing firms in Kenya. The results were depicted in Table 5.

Table 5: Monitoring and Fraud detection

Statement	**Mean**	**Std. Deviation**
Organizational units support the establishment and performance monitoring mechanisms	3.944	0.583
Monitoring has ensured efficiently development and effective implementation of fraud detection policies	2.500	0.648
Accountability and governance in our organization has improved as a result of monitoring	2.153	1.003
The top management ensures regular adherence to formulated and implemented fraud related policies	2.889	0.764
Financial operations in our organization are properly monitored to minimize chances of fraud	2.410	0.968
Through regular management of operations fraud detection has turned to be an easier task	2.361	1.456

From the findings, the respondents disagreed with the statement indicating that financial operations in the organization are properly managed to minimize chances of fraud. This is shown by a mean of 2.410 (std. dv = 0.968). Hayali et al (2013) argued that by monitoring, internal control activities are constantly kept under scrutiny and their progress are evaluated. He added that this should be a mandate of whole the organization. With a mean of 2.361 (std. dv = 0.764) the respondents also disagreed with the statement indicating that the top management ensures regular management of formulated and implemented fraud related policies. As shown by a mean of 3.944 (std. dv = 0.583) the participants agreed that the organizational units support the establishment and performance monitoring mechanisms. With a mean of 2.681 (std. dv = 1.456) the respondents were not sure whether through regular management of operations fraud detection has turned to be an easier task. In addition, with a mean of 2.500 (std. dv = 0.648) the participants were not sure whether monitoring has ensured efficiently development and effective implementation of fraud detection policies. However, the respondents disagreed with the statement indicating that accountability and governance in the organization has improved as a result of monitoring. This is shown by a mean of 2.153(std. dv = 1.003). Theofanis et al (2011) views monitoring to include activities such as periodical evaluations, management self-assessments and internal audits. He argues that monitoring provides guarantee that the results of audits and other reviews are timely determined.

The respondents were told to state in their own view how monitoring influences fraud detection in manufacturing companies in Kenya. From the findings, the respondents specified that by monitoring, internal control activities are constantly kept under scrutiny and their progress are evaluated. The participants also indicated that a good internal monitoring helps an organization to prevent frauds, abuses, errors and reduce wastage. Further it was argued that monitoring is essential since it aids tracing of fraudulent activities and ensure precautionary measures are taken. These arguments are in line with the findings of Theofanis et al, (2011) who argued that proper monitoring of internal activities in an organization facilitates detection and prevention of fraudulent activities.

Fraud detection

The respondents were asked to indicate their level of agreement on various statements relating to fraud detection in manufacturing firms in Kenya. The results were depicted in Table 6.

Table 6: Fraud detection

Statement	Mean	Std. Deviation
Employees in our organization are afraid of engaging in fraud related activities due to harsh policies implemented	2.847	0.483
Most of the fraudulent activities are committed by top managers	2.583	0.907
Cases of missing financial records in our organization have declined	4.382	0.433
Our organization has sacked several employees for engaging in fraud related activities	3.819	1.216
As a result of fraud prevention measures, the profitability of our organization has improved	2.313	1.069

From the findings, the respondents agreed that the organization has sacked several employees for engaging in fraud related activities. This is shown by a mean of 3.819 (std. dv = 1.216). With a mean of 2.847 (std. dv = 0.483) the respondents were also not sure whether employees in the organization are afraid of engaging in fraud related activities due to harsh policies implemented as shown by a mean of 2.313 (std. dv = 1.069) the participants disagreed with the statement indicating that the profitability of the organization has improved as a result of fraud prevention measures. Davis (2012) indicates that eefforts to reduce the risks of fraud, both internally and externally, make an organization a better investment, business partner, insurance risk, and a supplier.With a mean of 2.583 (std. dv = 0.907) the respondents were not sure whether most of the fraudulent activities are committed by top managers. In addition, with a mean of 2.625 (std. dv = 0.433) the participants were not sure whether cases of missing financial records in our organization have declined. Olumbe (2012) argued that fraud comes in many forms but can be broken down into three categories: asset misappropriation, corruption, and financial statement fraud.

Inferential Statistics

The study established the relationship between independent variables of the study and dependent variable. Consequently, a correlation coefficient matrix to assess relationship between study variables (independent variables) themselves is also indicated. The results are as shown in table 7.The results shows that the Internal Control and fraud detection positively and significantly correlates as shown by a correlation coefficient value of 0.217 and a p-value of 0.007. This implies that enhancing Internal Control positively contributes to increased fraud detection amongst the manufacturing firms. The findings concurs with De Beelde and Sarens (2006) who found that some Internal Control attributes like level of risk, tone-at-the-top, and control knowledge, visibly defined and conveyed are considerably related to the role of the ICS and fraud exposure within an organization. The results also shows that the risk assessment and fraud detection positively and significantly correlates as shown by a correlation coefficient value of 0.346 and a p-value of 0.000. This implies that enhancing risk assessment practices positively contributes to increased fraud detection amongst the manufacturing firms. The findings are in tandem with Cochran (2000) who noted that risk identification is significant for the attainment organization’s objectives because an effective ICS , no matter how well conceived, and managed, can offer only reasonable assurance rather than absolute assurance to management regarding the achievement of an entity’s objectives.The correlation results additionally shows that the control activities and fraud detection positively and significantly correlates as shown by a correlation coefficient value of 0.344 and a p-value of 0.000. This implies that enhancing control activities positively contributes to increased fraud detection amongst the manufacturing firms. The findings concurs with Dublin (1999’) who agrees that prevention control activities are intended to dissuade the occurrence of an unwanted event and that enhancement of these preventive controls entails predicting possible risks before they occur and taking pro-active measures to avoid or eliminate them.The correlation results further shows that the Information and Communication and fraud detection positively and significantly correlates as shown by a correlation coefficient value of 0.267 and a p-value of 0.008.

This implies that enhancing Information and Communication practices positively contributes to increased fraud detection amongst the manufacturing firms. The findings agrees with Badara and Saidin (2013) who established that relevant information must be identified, recorded, and communicated in a form and time frame that enables people to carry out their responsibilities.an open and effective communication culture in an organization, aids in detecting the possibility of fraud in advance.The correlation results finally shows that the monitoring and fraud detection positively and significantly correlates as shown by a correlation coefficient value of 0.197 and a p-value of 0.012. This implies that enhancing monitoring practices positively contributes to increased fraud detection amongst the manufacturing firms. The findings concur with Hayali *et al*, (2013) who established that by monitoring, internal control activities are constantly kept under scrutiny and their progress are evaluated which provides a guarantee that the results of audits and other reviews are timely determined.

Table 7 Correlation Analysis

		Internal Control	**Risk Assessment**	**Control Activities**	**Information and Communication**	**Monitoring**	**Fraud Detection**
Internal Control	Pearson Correlation	1					
	Sig. (2-tailed)						
Risk Assessment	Pearson Correlation	0.041	1				
	Sig. (2-tailed)	0.148					
Control Activities	Pearson Correlation	0.018	0.096	1			
	Sig. (2-tailed)	0.471	0.158				
Information and Communication	Pearson Correlation	-0.126	0.099	.112*	1		
	Sig. (2-tailed)	0.094	0.198	0.071			
Monitoring	Pearson Correlation	0.326	0.109	.121*	.112*	1	
	Sig. (2-tailed)	0.089	0.102	0.017	0.071		
Fraud Detection	Pearson Correlation	.217*	.346**	.384**	.267**	.197*	1
	Sig. (2-tailed)	0.007	0	0	0.008	0.012	
	N	144	144	144	144	144	144

Regression Analysis

Multivariate regression analysis was used in determining the association between the dependent (fraud detection in manufacturing firms in Kenya) and independent variables (Internal Control, risk assessment, control activities, information & communication, and monitoring).

International Journal of Finance
ISSN 2520-0852 (Online)
Vol. 9, Issue No. 1, pp 20 - 42, 2024 www.carijournals

The multivariate regression model was as follows:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$

Where; Y = is the dependent variable (fraud detection in manufacturing firms in Kenya), β_0 = Constant Term; β_1-β_5 = regression coefficients; X_1= Internal Control; X_2= , risk assessment; X_3= control activities, X_4= information & communication, X_5= monitoring and ε = error term.

Table 8: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
.840	.7056	.7045	.18869

The R-squared was used to illustrate the variation in dependent variable (fraud detection in manufacturing firms in Kenya) that could be explained by Internal Control, risk assessment, control activities, information and communication and monitoring (independent variables). The R squared was 0.7056 and this implied that 70.56% of the dependent variable (fraud detection in manufacturing firms in Kenya) could be explained by independent variables (Internal Control, risk assessment, control activities, information & communication, and monitoring).

Table 9: Analysis of Variance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	284.768	5	49.754	6862.620	.000[b]
	Residual	4.913	138	.00725		
	Total	289.682	143			

The ANOVA was used to assess whether the model was a good fit for the data. As depicted in table 10, the F calculated (6862.620) was greater than the F-critical 2.2798 and the p value (0.000) was less than the significance level (0.05). Therefore, the model could be used in explaining the influence of internal controls (Internal Control, risk assessment, control activities, information & communication, and monitoring) on fraud detection in manufacturing firms in Kenya. Hence, the model was a good fit for the data.

International Journal of Finance
ISSN 2520-0852 (Online)
Vol. 9, Issue No. 1, pp 20 - 42, 2024 www.carijournals

Table 10: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.116	.050		2.288	.024
Internal Control	.277	.115	.260	2.403	.018
Risk Assessment	.368	.122	.365	3.020	.003
Control Activities	.171	.131	.154	1.303	.045
Information and Communication	.294	.101	.278	2.910	.004
Monitoring	.249	.111	.245	2.240	.027

The regression equation was.

Fraud Detection =0.116 + 0.368(Risk Assessment) +0.294(Information and Communication) +0.277 (Internal Control) + 0.249(Monitoring) + 0.171(Control Activities)

The results revealed that Internal Control has a positive and significant influence on fraud detection in manufacturing firms in Kenya (β_1=0.277, p value= 0.018). The association was significant because the significant level (0.05) was greater than the p value (0.018). This implies that Internal Control leads to an improvement in fraud detection in manufacturing firms in Kenya. The findings agree with De Beelde and Sarens, (2006) findings that Internal Control has a positive and significant influence on fraud detection. In addition, the results revealed that risk assessment has a positive and significant influence on fraud detection in manufacturing firms in Kenya. (β_2= 0.368, p value= 0.003). The relationship was significant because the p value (0.003) was less than the significant level of 0.05. This implies that risk assessment leads to an improvement in fraud detection in manufacturing firms. The findings are in line with the finding of Cochran (2000) that risk identification has a positive and significant impact on fraud detection. Nevertheless, the results revealed that control activities have a positive and significant influence on fraud detection in manufacturing firms. (β_3=0.171, p value= 0.045). The relationship was significant because the p value (0.045) was below the significant level of 0.05. This implies that control activities have significant influence on fraud detection in manufacturing firms. The findings concurs with those of Dublin (2019) that control activities have a positive and significant influence on fraud detection.

The results revealed that information and communication has a positive and significant influence on fraud detection in manufacturing firms. (β_3=0.294, p value= 0.004). The relationship was significant because the p value (0.004) was less than the significant level of 0.05. This implies that information and communication leads to an improvement in fraud detection in manufacturing firms in Kenya. These results concur with the findings of Tunji (2013) who found that information and communication has a positive and significant influence on fraud detection. Findings revealed that monitoring has a positive and significant influence on fraud detection in manufacturing firms.

($\beta 3=0.249$, p value= 0.027). The relationship was significant because the p value (0.027) was less than the significant level of 0.05. This implies that monitoring leads to an improvement in fraud detection in manufacturing firms in Kenya. The findings are in line with the finding of Hayali et al, (2013) that monitoring has a positive and significant influence on fraud detection. The correlation coefficient results shows that Risk Assessment had the most significant variable of in the study, followed by information and communication, then Internal Control, finally monitoring, and finally control activities.

Conclusion

The study concludes that Internal Control has a positive and significant influence on fraud detection in manufacturing firms in Kenya. The study also found that the management does not always demonstrate pledge to integrity and ethical values. Further, the findings established that the organization has not established clear responsibility and authority lines to guarantee compliance with the policies and procedures. The study also concludes that risk assessment has a positive and significant influence on fraud detection in manufacturing firms in Kenya. The results also revealed that the management evaluates the risk appetite and weigh its capability to meet the firms operational and compliance objectives mostly in fraud detection. However, it was found that the management has no proper mechanisms for identifying and analyzing fraud risks. The study further concludes that control activities have a positive and significant influence on fraud detection in manufacturing firms. From the findings it was established that the organization staff are trained on implementation of accounting and financial resource tools and systems. In addition, the study established that it is not possible for an employee to have access to all treasured and classified information without the permission of senior employee. However, the study found that the firm has no distinct separation of duties and responsibilities. The study concludes that information and communication has a positive and significant influence on fraud detection in manufacturing firms. From the findings it was found that though not regularly the organization holds seminars to create awareness on fraud detection to all employees. However, the study revealed that there are no clear lines of communication and propagation of information in a timely way to all stakeholders. The study also concludes that monitoring has a positive and significant influence on fraud detection in manufacturing firms. From the study it was found that top management ensures regular management of formulated and implemented fraud related policies. However, the study established that Accountability and governance in manufacturing firms has not improved.

Recommendations

This study recommends that the top management in the manufacturing firms should put into place proper lines of authority as well as proper duty allocation hence making each employee responsible of their own actions. In addition, the study recommends that the top management should ensure they adopt proper ways of detecting and preventing fraud occurrence. Further the management should also motivate employees by rewarding those who report fraudulent activities. The Findings established that manufacturing firms have no distinct separation of duties and responsibilities. This study therefore recommends that the top management should formulate proper duties and responsibilities for each and every staff in the organization hence facilitating easy detection of fraud and holding employees responsible for their actions. Further, it was recommended that the top management of the manufacturing firms should ensure proper communication channels within all the organization departments. Manufacturing firms should also ensure that employees engaging in fraudulent activities are punished.

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