MAKERERE UNIVERSITY

MAKERERE UNIVERSITY BUSINESS SCHOOL

ORGANISATIONAL CULTURE, MANAGERIAL ETHICAL BEHAVIOR AND FRAUD MANAGEMENT AMONG BANKING INSTITUTIONS IN MBARARA DISTRICT

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A RESEARCH DISSERTATION SUBMITTED TO THE DIRECTORATE OF GRADUATE TRAINING AND RESEARCH, MAKERERE UNIVERSITY IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A MASTER OF BUSINESS ADMINISTRATION OF MAKERERE UNIVERSITY

PLAN A

AUGUST 2021

DECLARATION

I, ATURINDE EDSON hereby declare that this dissertation is my original work and has not been presented for a degree award in any other institution of higher learning.

Signature .... Date 18th August 2021

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APPROVAL

This dissertation has been submitted for examination with our approval as University Supervisors.

Signed .... Date: 20/ 8/ 2021..................................

Assoc. Prof. Laura Orobia, Ph.D

Signed ....Date: 1st September 2021.................................

Mr. BananukaJuma

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DEDICATION

I dedicate this dissertation to my parents and family most especially my dear Mom **Nyangoma Mebro Agumenaitwe.**

She has been a real mom;

Emotional, yet the rock

Tired, but keeps going

Worried, but full of hope

Impatient, yet patient

Overwhelmed, even in the chaos

A life changer, every single day

Thank you both for giving me strength to reach the stars and chase my dreams

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ABSTRACT

This study examined the relationship between organizational culture, managerial ethical behavior and fraud management among banking institutions in Mbarara district. The study was prompted by reports of an increase in fraudulent activities in banking institutions in the district.

A cross sectional reaearch design was employed whereby data were collected at a specific point in time. Given the nature of research objectives, correlation analysis was performed to test associations between the study variables, while a hierarchical regression analysis was used to test both the individual and combined predictive power of organizational culture, managerial ethical behavior on fraud management. Data was analyzed using SPSS.

The study results show that both organizational culture and managerial ethical behavior have a significant relationship with fraud management which is in line with the previous studies. The results also show that organizational culture and managerial ethical behavior combined explain 51.2% (R^2=.512) of the variation in fraud management.

Banking institutions in Mbarara district should therefore focus on employing ethical managers who will create innovative, bureaucratic and supportive cultures to improve on fraud management. More so, managers of banking institutions should consider establishing fraud management departments and employing fraud management officers who will give special attention and priority to the fraud management practices of the organisation. The study recommends that a longitudinal study across the country be carried out to confirm the findings.

CHAPTER ONE

1.0 Introduction

This chapter presents the back ground of the study, statement of the problem, purpose of the study, objectives of the study, research questions, scope of the study, significance of the study and the conceptual framework

1.1 Background to the study

The increasing rate of fraud has become a big concern to practitioners, academicians and policy makers alike. For instance, in Africa, according to KPMG Barometer 2012, Nigeria, Kenya, Zimbabwe and South Africa make up 74 percent of all fraud cases reported in Africa. In East Africa, Kenya is standing out with 7.75 percent of reported fraud cases, well ahead of Uganda (2.98 percent) and Tanzania (2.78 percent). According to a report by Deloitte (2012), Kenyan banks were victims of more than half the Sh4.1 billion ($48.3 million) fraud that hit East African banks in 2012 as technology made the crime easier. At least Ksh1.5 billion ($17.64 million) was stolen from Kenyan banks in one year, in schemes hatched by technology-savvy bank employees. The situation is not different for Uganda. According to Nyamu (2018), Uganda loses up to nearly $10 million (about Shs24.9b) to fraud every year. More so, Uganda tops the list of fraud cases perpetuated through cheques, with 50 per cent of cheque related fraud reported to be happening in Uganda compared to other east African countries. For instance, DTB Uganda irregularly, unlawfully and fraudulently withdrew approximately shs 100Bn from a customer’s acount (elite reporters, 2020). Turyahabwe (2019) noted that microfinance institutions in Mbarara municipality lose 50 million to 100 million per year in fraud which is way too huge given the amount for any business enterprise.

The increased cases of fraud in developing countries call for more strategies among practitioners to avert the situation. However, the practitioners need more knowledge on fraud management practices which can be provided by the academic community. Whereas literature on fraud management is scant for developing countries, studies such as those of Kabuye, Nkundabanyanga, Opiso and Nakabuye (2017) suggest that internal audit is critical for management of fraud. According to Kabuye et al (2017), the internal audit organizational status and internal audit competence are paramount in managing fraud unlike internal audit activities. This study builds on Kabuye et al (2017) study by investigating the contribution of organizational culture and managerial ethical behavior to fraud management since Kabuye et al (2017) only focused on the contribution of internal audit function to fraud management. Kabuye et al (2017) study indicates that internal audit function predicts only 39% of the variances in fraud management practices in Uganda's financial services firms in Kampala.

Managerial ethical behavior refers to the adherence to ethical principles and codes of conduct in the preparation, review, and communication of financial information to potential users by members of management (Spiceland, Sepe, Nelson & Thomas, 2016). When management adhere to or comply with ethical values and guidelines of an organization, there is likelihood that fraud occurrence will be reduced (Haron et al., 2011; Zandstra, 2002; Irianto et al., 2009; Dikolli, 2012). When ethical values are embraced by a company, employees will naturally give favorable responses with healthy attitudes toward work and beneficial conduct (Baker & Andrews, 2016). People who have established strong ethical values are attributed to exhibit ethical and integrity behavior (Rockness & Rockness, 2005). Furthermore, with ethical values, the action employees encourage critical judgment in decision making (Zahra, 2007). Chen et al. (2013) found that employees lacking in ethical values will tend to conduct bribery and corruption. In addition, executives lacking in ethical values will tend to ignore policies and procedures to pursue their self-interests.

Organizational culture plays a crucial role in shaping and guiding the behavior of organizational members (Kummer, Singh, & Best, 2015). Culture comprises the beliefs and values, attitudes and behaviors that are exhibited within an organization and its operations (Warrick, 2017). It represents what an organization stands for and how it is seen from within and from without (Bouwman, 2013). A strong culture creates an expectation to do what is right, thereby limiting the propensity to rationalize fraudulent actions. Scholten and Ellemers (2016) in their study report that a strong culture supports effective controls and reduces opportunities for fraud; which in turn will increase the likelihood that fraud will be detected quickly and lessen pressure and incentives to commit fraud.

Previous studies have related fraud management to internal controls (Brennan, 2013; Badi & Badi 2009), corporate governance (Davies, 2001), audit quality (Nurcholisah, 2016; Rahmani & Jabari, 2015; Chim & Anca, 2014) and technology adoption (Nichols & Wahlen, 2014), however none of the studies has related fraud management to organisational culture and managerial ethical behavior in one study moreover in the banking sector in developing economies like Uganda. This study therefore sought to establish the relationship between organizational culture, managerial ethical behavior and fraud management practices among banking institutions in Mbarara district.

1.2 Statement of the problem

Fraud is one of the various problems of today's business environment, rampant in almost every organization and sector worldwide but more rampant in banking institutions due to the money and near money instruments used in their operations (Adetiloy et al., 2016; Yusuf et al., 2016; Olatunji et al., 2014). In order to control fraud among the banking institutions, the Uganda bankers association has issued guidelines on fraud protection on their website for regular reference. However, fraud seems to continuously happen in Uganda's banking institutions. A survey, conducted by Deloitte (2018), indicates that banks in Kenya, Rwanda, Uganda, Tanzania and Zambia lose $245 million (about Sh367 billion) annually in fraud. In 2018, Criminal Investigations Directorate (CID) registered 198 cases of electronic fraud resulting into the loss of Shs 610 million. 142 cases are still under inquiry; only sixteen have been taken to court and six secured convictions. In July 2019, three DFCU bank officials appeared at the CID in connection to the theft of customers' deposits (URN, 2019). This is slowly eroding the trust of customers in banking institutions. Related literature indicates that fraud management practices could be related to organizational culture and managerial ethical behavior but little is known about banking institutions in Mbarara District hence the need for a special investigation.

1.3 Purpose of the study

The purpose of the study was to establish the relationship between organizational culture, managerial ethical behavior and fraud management among banking institutions in Mbarara district.

1.4 Objectives of the study

This study was guided by the following objectives:

i. To assess the fraud management practices in banking institutions in Mbarara district
ii. To establish the relationship between organizational culture and fraud management among banking institutions in Mbarara district
iii. To establish the relationship between managerial ethical behavior and fraud management among banking institutions in Mbarara district

1.5 Research questions

This study sought to answer the following questions:

i. What are the fraud management practices in banking institutions in Mbarara district?
ii. What is the relationship between organizational culture and fraud management among banking institutions in Mbarara district?
iii. What is the relationship between managerial ethical behavior and fraud management among banking institutions in Mbarara district?

1.6 Scope of the study

1.6.1 Subject Scope

Studies have attributed fraud management to numerous factors. However in this study, focus was placed on organizational culture and managerial ethical behavior. Organizational culture was examined in terms of bureaucratic culture, supportive culture and innovative culture while managerial ethical behavior was examined in terms of transparency, integrity and loyalty. Fraud management on the other hand was examined in terms of fraud detection, fraud prevention and fraud response

1.6.2 Geographical Scope

The study covered banking institutions in Mbarara District. The choice of Mbarara district is because it was accessible to the researcher and links in very well with the operationalization of the research problem under study. More so, Mbarara district being the largest business centre in western Uganda, most banking institutions have established branches and offices in the area. Therefore there are a number of banking institutions from which information necessary for the study could be obtained.

1.6.3 Time scope

The research was based on a cross sectional research design where data collected from the population is at a specific point in time. Basing on this background, data was collected in September 2020.

1.7 Significance of the study

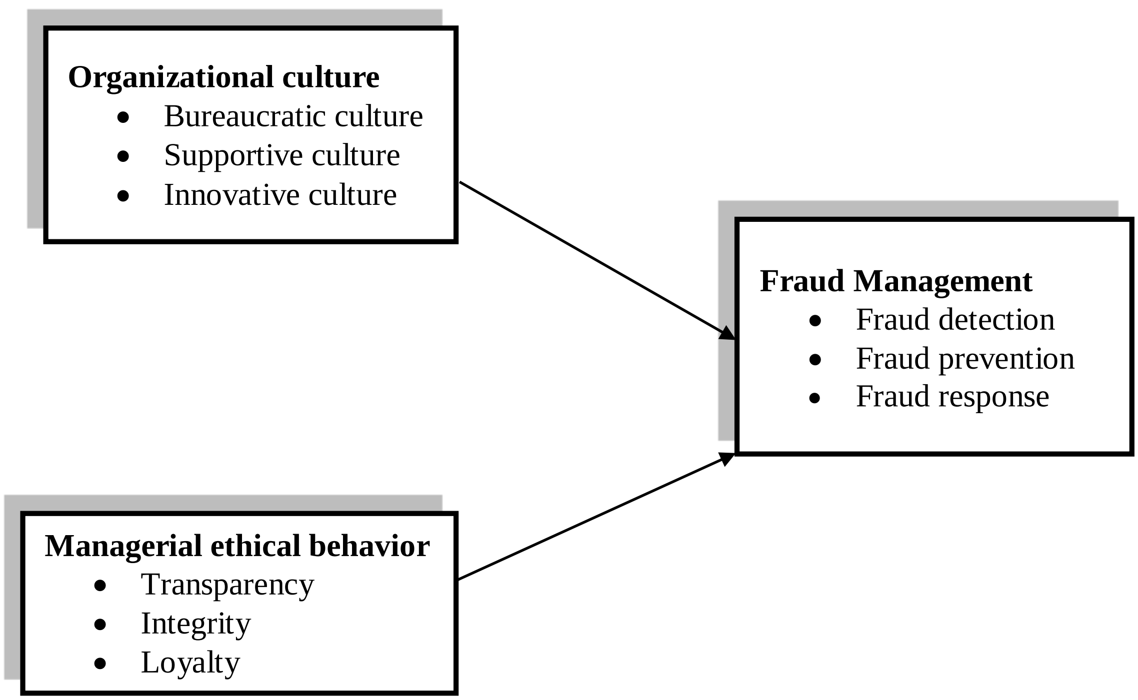
i. The study will add to the extant literature by providing empirical evidence on fraud management practices by banking institutions in Mbarara, an area with sparse information.

ii. The study will be significant to the management of banking institutions, as well as the regulator in closing the knowledge gap in fraud management practices among banks. The discoveries will bring to the fore, the many fraud risks among banking institutions and the extent to which these banks are open to such fraud risks. The regulator through this study, might be able to fashion out pragmatic measures and policies on the effective management of fraud

1.8 Conceptual framework

The model in figure 1 shows the relationship between the variables under investigation. The independent variables are organizational culture and managerial ethical behavior; the dependent variable is fraud management.

Figure 1: Conceptual framework



Source: Developed from review of literature *(Wallach 1983;Bolton et al., 2012; Beekun, 2016; Pacheco, 2012; Tenbrunsel& Smith-Crowe, 2008)*

The conceptual framework shows that organizational culture and managerial ethical behavior are correlated to fraud management of a firm and it is therefore hypothesized that if the two are in existence, they are likely to influence the fraud management among banking institutions. The conceptual framework indicates that an improvement in organizational culture in terms of bureaucratic, supportive and innovative culture (Wallach, 1983; Tenbrunsel& Smith-Crowe, 2008) leads to an improvement in fraud management. Pacheco (2012) contends that organizational culture improves the quality of decision making of individuals since their decisions must match with the common interests of an organisation. Likewise, an improvement in managerial ethical behavior in terms of transparency, integrity and loyalty leads to an improvement in fraud management. Beekun (2016) contends that adherence to high ethical values can go a long way to reduce the perpetration of frauds in organizations as this encourages individuals to act cautiously and ethically. It is therefore conceptualized that other factors notwithstanding, the fraud management practices in banking institutions is dependent on organizational culture and managerial ethical behavior

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents literature review on the overview of banking institutions in Uganda, fraud management practices, organizational culture, managerial ethical behavior and empirical literature.

2.1 Overview of the banking institutions in Uganda

Uganda's banking sector has evolved over time from a period of "financial repression" during the 1970s and 1980s to a period of liberalization that started in the late 1980s. The reforms were initiated with a view to addressing major misalignments in the financial sector that were believed to impede economic growth through inefficient performance of the banking sector (Abuka&Egesa, 2010). Major concerns included inefficient allocation of credit and limited access to financial services by the larger population. While cognizant of these important concerns in the banking sector was critical, equally important was the need, on the part of the central bank, to ensure soundness of banks to guarantee security of depositors' money, among other things (Okumu, 2007).

Uganda's financial system is composed of formal, semiformal and informal institutions. The formal institutions include Banks, Microfinance Deposit-taking institutions, Credit Institutions, Insurance companies, Development Banks, Pension Funds and Capital Markets. The semi-formal institutions include Savings and Credit Cooperative Associations (SACCO) and other Microfinance institutions, whereas the informal ones are mostly village savings and loans associations (MoFED, 2017). Commercial Banks are authorized to hold checking, savings and time deposit accounts for individuals and institutions in local as well as International currencies. Commercial banks are also authorized to buy and sell foreign exchange, issue letters of credit and offer loans to customers (BoU, 2018). Credit institutions are not authorized to establish checking accounts or trade in foreign currency. They are authorized to take in customer deposits and to establish savings accounts. They are also authorized to make collateralized and non -collateralized loans to customers (BoU, 2018). Microfinance Deposit-taking Institutions are allowed to take in deposits from customers in the form of savings accounts. Microfinance Deposit-taking Institutions are not authorized to offer checking accounts or to trade in foreign currency (BoU, 2018).

The Supervision and Regulation of banking activity is vested in Bank of Uganda (BOU). BOU conducts on-site examination of all commercial banks, credit institutions, forex bureau, money remitters and microfinance Deposit-taking Institutions using a risk-based supervision methodology and offsite surveillance of these institutions (MoFED, 2017). Foreign banks in Uganda constitute up to about 87 percent of the banking sector (MoFED, 2017). The entry of foreign banks through acquisitions and takeovers of the domestic banks and/or their branches has contributed towards their expansion into the country side, but the typical rural areas remain under-banked and poorer households still have limited access to financial services from formal banks (Abuka&Egesa, 2010). Owning to competition in the banking sector, both foreign and local banks are providing basic banking services electronically (such as internet banking and ATMs) to save costs. This however, has not restricted access to wealthy and educated clients, but even the less educated use some of these basic banking services (World Bank, 2010).

2.2 Fraud management practices

Fraud can result in huge financial loss, legal costs, and ruined reputations that can ultimately lead to the downfall of an organization. Having the proper plans in place can significantly reduce fraudulent activities from occurring or cut losses if a fraud already occurred. Fraud management refers to any methods planned in developing and identifying actions for the organization to minimize risk arising from the potential and actual corporate fraud cases (Alavi, 2016; KPMG, 2016). Ghosh (2010) defined fraud management as employing advanced analytics, reengineering fraud case management, and improving the customer experience. This management approach needs to protect fraud at the point and time of transaction, accurately detect incidents in transaction, span all the ways customers interact with the institution and provide structured oversight for the fraud management program.

Rosenbaum et al., (2011), defines fraud management as activities that help to reduce perceived pressure/motivation, perceived opportunity and rationalization of fraud. The current study therefore adopted the definition by Furlan and Bajec (2008) who defined fraud management as curative and preventive activities carried out to minimize fraud in an organisation. Curative activities are concerned with detecting fraud once it occurs and include detection, investigation and sanctioning while preventive activities are concerned with stopping fraud from happening which include early detection, investigation, prevention and sanctioning.

Most organisations embed fraud management in their DNA in the form of written policies, defined responsibilities, and on-going procedures that implement an effective program. In order to manage fraud in a banking institution, several practices should be carried out on a continuous basis. These include fraud prevention, detection and response.

Fraud prevention

The activity of fraud prevention is concerned with removing the underlying reasons because of which fraud occurs. The most effective ways to deal with the problem of fraud is to adopt methods that will decrease motive, restrict opportunity and limit the ability for potential fraudsters to rationalize their actions. In the case of deliberate acts of fraud, the aim of preventative controls is to reduce opportunity and remove temptation from potential offenders.

AICPA (2002) constructed fraud triangle, which consists of three conditions that must be present in order for fraud to occur namely; incentive/pressure, opportunity and rationale. Removing the elements from the triangle reduces the probability of fraud (Cendrowski, 2017). The first condition – incentive or pressure for example the need for money is out of the company's control. It is mainly dependent upon fraudster's current personal condition and ultimately upon whole country's wellbeing. The second condition – the opportunity for fraud like ineffective controls can be controlled by the company by putting effort into fraud management and employing an effective and efficient fraud management system. The third condition – attitude, rationalization or justification of the fraud to oneself can be reduced by timely and efficient sanctioning of discovered fraud. The company can influence the second and third condition of the fraud triangle. Therefore two goals of fraud deterrence activity are to reduce the opportunities for committing fraud and minimizing the fraudster's subjective rationale for committing fraud.

In order to prevent fraud from occurring, organisations need to develop a sound ethical culture. Attitudes within an organisation often lay the foundation for a high or low fraud risk environment. Where minor unethical practices may be overlooked (e.g. petty theft, expenses frauds), larger frauds committed by higher levels of management may also be treated in a similar lenient fashion (Cohen, Ding, Lesage &Stolowy, 2011). In this environment there may be a risk of total collapse of the organisation either through a single catastrophic fraud or through the combined weight of many smaller frauds. CIMA (2008) recommends that organisations have a mission statement that refers to quality or, more unusually, to ethics and defines how the organisation wants to be regarded externally, clear policy statements on business ethics and anti-fraud, with explanations about acceptable behavior in risk prone circumstances, a process of reminders about ethical and fraud policies – e.g. annual letter and/or declarations; and management who are seen to be committed through their actions. Organisations which have taken the time to consider where they stand on ethical issues have come to realize that high ethical standards bring long term benefits as customers, suppliers, employees and the community realise that they are dealing with a trustworthy organisation. They have also realized that dubious ethical or fraudulent practices cause serious adverse consequences to the people and organisations concerned when exposed (Kimani, 2011).

Organisations should also carry out periodic assessment of fraud risk to identify the risks of fraud within their organisation. Fraud risks should be identified for all areas and processes of the business and then be assessed in terms of impact and likelihood. An effective fraud risk assessment will highlight risks previously unidentified and strengthen the ability for timely prevention of fraud (Kiprop, 2010). Opportunities for cost savings may also be identified as a result of conducting the fraud risk assessment.

Fraud risk training and awareness is another preventive mechanism to be considered by organisations. Almost every time a major fraud occurs many people who were unwittingly close to it are shocked that they were unaware of what was happening (Njenga, &Osiemo, 2013). Therefore,it is important to raise awareness through a formal education and training program as part of the overall risk management strategy. Particular attention should be paid to those managers and staff operating in high risk areas, such as procurement and bill paying, and to those with a role in the prevention and detection of fraud, for example human resources and staff with investigation responsibility (Opromolla, &Maccarini, 2010; Feng, McVay, & Skaife. 2015).Such training is more likely to decrease rather than increase the number of fraudulent incidents.

Reporting mechanisms and whistleblowing should be considered by an organisation. Establishing effective reporting mechanisms is one of the key elements of a fraud prevention program and can have a positive impact on fraud detection (Kiprop, 2010). Many frauds are known or suspected by people who are not involved. The challenge for management is to encourage these 'innocent' people to speak out – to demonstrate that it is very much in their own interest. Research by the IBE has shown that although one in four employees are aware of misconduct in the workplace, over half of those people stay silent (Kiprop, 2010).The organization's anti-fraud culture and reporting processes can be a major influence on the whistleblower, as it is often fear of the consequence that has the impact.

A strong system of internal controls is considered by the ACFE (2018) to be the most valuable fraud prevention device by a wide margin. An internal control system comprises all those policies and procedures that taken together support an organization's effective and efficient operation. Internal controls typically deal with factors such as approval and authorization processes, access restrictions and transaction controls, account reconciliations, and physical security (Opromolla,

&Maccarini, 2010). These procedures often include the division of responsibilities and checks and balances to reduce risk.

Pre-employment screening also plays a significant role in fraud prevention. Pre-employment screening is the process of verifying the qualifications, suitability and experience of a potential candidate for employment (Bolton et al, 2012). Techniques used include confirmation of educational and professional qualifications, verification of employment background, criminal history searches, and credit checks. For all screening, the organisation must obtain the individual's written permission and all documents must bear the individual's name. Screening applicants should reduce the likelihood of people with a history of dishonest or fraudulent behavior being given a role within the company, and is therefore an important fraud prevention procedure (Bolton et al, 2012).

Detection

Fraud detection is aimed at detecting known types of fraud, abuse and irregularities, as well as anomalies that cannot be directly connected to fraud. There are, however, three important characteristics we must take into account when constructing effective automatic fraud detection methods; data, fraudsters and organization. Data contains a lot of noise, missing information and is of poor quality (Tuyls, 2010). Because of the competitive reasons and a lack of activity in fraud detection, there is a lack of labeled data, which prevents us from using conventional machine learning-based classification techniques. Even with labeled data, there are some specifics that must be taken into account. The data distribution is skewed, that means that a lot more data is legitimate than fraudulent. Usually, only a few percent of data is fraudulent. Professional fraudsters change their tactics over time. They adapt when they discover how a fraud detection system works, trying to avoid being detected (Bolton et al, 2012;Derrig, 2012). Fraudsters also try to make fraud cases hard to distinguish from legitimate cases (Tuyls, 2010). Companies cannot afford to lose good customers, therefore they cannot accuse people of fraud without any sound evidence, but must be able to justify and explain why something is suspicious. The company may sometimes even let a good customer commit a small fraud, because the loss is smaller than the cost of losing that customer. Fraud detection activities aim at employing effective fraud detection techniques adapting to changing environment and explaining the detected irregularity or anomaly (Tuyls, 2010).

Fraud can be detected through tip lines. An anonymous tip line (or website or hotline) is one of the most effective ways to detect fraud in organizations. In fact, tips are by far the most common method of initial fraud detection (40% of cases), according to the Association of Certified Fraud Examiners (2018) Report to the Nations. Moreover, this study found that fraud losses were 50% smaller at organizations with hotlines than those without. In order for tips to be independently investigated, it is desirable they go directly to an organization's internal auditor, inspector general, legal department, or even to outside legal counsel (Opromolla, &Maccarini, 2010). Tip lines should provide a disclosure policy that sets out the types of tips accepted, the rights of the accused and protections for the tipster.

Fraud detection can also be achieved by external auditors. Financial statement auditors conduct their audits in such a way so as to obtain reasonable assurance that financial statements are free from material misstatement, whether caused by fraud or error (Rae &Subramaniam, 2008; Doyle, Ge & Mcvay, 2017). Consequently, in some cases, especially those with large losses, an organization's external auditors may detect fraud. Auditors have a responsibility to detect fraud through assessment of risks of misstatement in light of the organization's existing programs and controls; the likelihood of management override of controls; retrospective reviews of management's judgments related to significant estimates and fraud risk factors (Salah, 2010).

Fraud detection can also be carried out by internal auditors. An organization's internal auditor does a lot of the same type of work as its external auditor, but an internal auditor is concerned with all fraud rather than just the fraud that impacts the financial statements (Wright, 2007). As such, an internal auditor will likely discover some frauds as a routine part of internal auditing work. Further, an internal auditor plays a key role in developing a system of fraud indicators, so that suspicious activities are flagged and investigated (Opromolla, &Maccarini, 2010). Finally, internal auditors may be concerned with violations of the organization's policies and procedures even when they do not involve fraud (Wright, 2007).

Many organizations have departments devoted to information security and fraud detection. For example, a bank may have an internal security department (i.e., loss management department) devoted to customer account fraud. Such departments may operate independently in their functional areas or under the control of a chief information officer, the controller, or the internal auditor (Cohen, Ding, Lesage &Stolowy, 2011).

Fraud detection is sometimes by accident. Passive fraud detection refers to cases in which the organization discovers the fraud by accident, confession, or unsolicited notification by another party. Fraudsters frequently make mistakes by failing to adequately cover their tracks. For this reason, efficient organizations will train their employees to spot and report irregularities. Frauds detected passively tended to last much longer and have larger median losses (ACFE, 2018), so it's important to have active detection methods in place, such as the ones mentioned above, to help identify fraud cases as early as possible.

Fraud response

An organization's approach to dealing with fraud should be clearly described in its fraud policy and fraud response plan. The fraud response plan should reiterate the organization's commitment to high legal, ethical and moral standards in all its activities and its approach to dealing with those who fail to meet those standards (Mustafa &Youssef, 2010). It is important that all those working in the organisation are aware of the risk of fraud and other illegal acts, such as dishonesty or damage to property. Organisations should be clear about the means of enforcing the rules or controls which the organisation has in place to counter such risks and be aware of how to report any suspicions they may have.

When a suspicious transaction has been carried out, the investigators' task is to investigate it and to decide whether it is in fact fraudulent or not (Babcock & McGee, 2014). On that basis, the company can decide for the appropriate following action and gather evidence to generate a sound case against perpetrators. Investigation includes checking all the evidence, which is usually distributed over different data sources and different information systems. Some of the data may even not be available in the electronic form. Investigation further includes obtaining additional information, which is needed to conclude whether the transaction is fraudulent or not (Babcock & McGee, 2014).

When fraud is found, sanctioning is of utmost importance for both seeking redress and for raising public awareness against fraud (Babcock & McGee, 2014). We must differentiate sanction and redress, as successful prosecution may not result in reimbursement of loss (Tuyls, 2010). Experienced company lawyers always escalate redress processes. They usually start with soft approaches including a lot of psychology like face fraudster with all the facts, and try to settle the problem peacefully. Such approaches save a lot of time and money that is otherwise lost in lengthy legal procedures and out-of-court settlements. The goal of the activity is to support the in-house and out-of-the-house processes aimed at sanctioning fraudsters and reimburse the loss.

Management must oversee all the fraud management activities. Having experienced an incident of fraud, the organisation may consider a fundamental review of all of its systems and procedures so as to identify any other potential system failures or areas of weakness (Njenga, &Osiemo, 2013). Changes to systems or policy should be implemented as soon as possible. The insurance company management also must constantly monitor counter-fraud efforts and performance to see if the ultimate objective to reduce losses due to fraud is being followed (Tuyls, 2010). Many organisations take out fidelity insurance to protect themselves against large fraud losses. The timeframe for a report to fidelity insurers, and any additional requirements, should be included in the fraud response plan and is usually laid down in the insurance document. The information must show the effectiveness of fraud prevention and detection, efficiency of investigation and success of redress.

2.3 Relationship between organizational culture and fraud management practices

Organizational culture is the pattern of values, norms, beliefs, attitudes and assumptions that may not have been articulated but shape the ways in which people in organizations behave and things get done (Schein, 1984; Lewis, 1996; Manetje & Martins, 2009; Arogyaswamy & Byles, 2017). Authors have come up with different definitions of organizational culture over the years.

According to Eldridge and Crombie (1974), organizational culture refers to the unique configuration of norms, values, beliefs and ways of behaving that characterize the manner in which groups and individuals combine to get things done. Deal and Kennedy (1982) defined organizational culture is a system of informal rules that spells out how people are to behave most of the time. Schein (1985) looks at organizational culture as a pattern of basic assumptions invented, discovered or developed by a given group as it learns to cope with the problems of external adaptation and internal integration; that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to these problems.

The current study adopted the definition by Wallach (1983). Wallach (1983) defined organizational culture as the shared understanding of an organization's employees and assessed three aspects of organizational culture, namely: bureaucratic; innovative; and supportive. The stronger a company's culture, the more likely it is to affect the way employees think and behave. According to Ogbor (2011), organizational culture unifies the people in the organisation where common values and beliefs meet together, which in turn forms an institution based on those similar interests. Ogbor suggested that there are some positive impacts out of forming this unified and consistent community such as top management sharing enthusiasm with employees, setting the right norms in the organisation and ensuring similar attitudes toward certain problems. However, the same can be said about the negative effects. For instance, managers could shape a corrupt organizational culture by gathering individuals with common values and beliefs, which may result in a unified and tight-knitted corrupt society.

According to Counsell et al., (2014), a supportive culture encourages individuals to work as a team. They identify and analyze problems, define goals and assume joint responsibility for actions and interventions to accomplish the goals. Goals that are developed must be compatible with the priorities and values of each team member (Liedtka& Whitten, 1998). To interact meaningfully with each other, team members must be familiar with the expertise and functions of the others' roles (Falk, 2010). Team members easily realize that a member is practicing fraudulent activities every time they act against the shared goals of an organisation.

Ocansey and Ganu (2017) explored the role of organizational culture in managing occupational fraud. The research which took the form of a literature review contended that organizational culture is critical in mitigating the risks of fraudulent acts. For an organization with creativity and honesty ingrained in the organizational culture and displayed by top leadership, internal scams are minimal. Thus organizational culture should be promoted to integrate an organization's core values and motivate employees to do what is right. It is important that employees be allowed to sound off their suspicions which can be decisive in minimizing frauds.

Davidson, Dey, and Smith (2015) examined how executives' behavior outside the workplace as measured by their ownership of luxury goods and prior legal infractions is related to financial reporting risk. Using a predictive method of data analyses, they predict and find that chief executive officers and chief financial officers (CFOs) with a legal record are more likely not to commit fraud. In contrast, no relation is found between executives' frugality and the tendency to commit fraud. They also find that un frugal CEOs somewhat lose control environment which increases the chances of other insiders to commit fraud and inadvertent reporting of errors during their tenure.

According to Roth and Wittich (2007), bureaucracy, in simple words is defined as “rules by officials”. The scholars argued that bureaucracy would increase fairness that minimizes nepotism and other types of public corruption and is most efficient administrative structure for achieving organizational goals rationally. However (Hope, 2014) admitted that over the years span of state activities has expanded which has resulted in an expanding bureaucracy with increasing discretionary power which is abused for personal benefit contributed to the bureaucratic corruption in developing countries.

Yeganeh (2014) conducted a study on culture and corruption. The study aimed to prove the influence of cultural values on corruption using three different cultural dimensions from Hofstede, Schwartz, and Inglehart. The three cultural models were used because it represented large-scale, reliable, innovative studies that improve upon previous research. The empirical tests were conducted, the theoretical/managerial implications were discussed, and an integrative model proposed. The result confirmed that cultural values have considerable effects on the level of corruption.

Omar, Johari, and Hasnan (2015) also conducted a study on Organizational culture and the Occurrence of Financial Statement Fraud. The purpose of the study is to explore the significant impact of organizational culture on the occurrence of financial statement fraud. It provides a holistic view of the concept of culture and its effect on organizational behavior. The findings of the study provide the suggestion for improvement in organizational culture since the characteristics of companies are influenced by characters of the persons in it

Culture can be an antidote to many organizational problems and can significantly affect how an organization is run (Warrick, 2017). That is, sustainable culture can be achieved through the pursuance of strong organizational culture. According to Chatman and Cha (2003), strong cultures are based on two characteristics, high levels of agreement among employees about what is valued, and high levels of intensity about these values. If both are high, a strong culture exists; and if both are low, the culture is not strong at all. Graham, Harvey, Popadak, and Rajgopal (2015) also revealed that a strong organizational culture influences performance through better execution, reduction in agency cost, empowerment of employee consistent decision making in difficult times and value more than strategic decisions. They added that it also affects creativity, productivity, firm’s value and profitability. Google’s success has been attributed to strong organizational culture (Schmidt & Rosenberg, 2014; Edwards, 2012).

The Association of Certified Fraud Examiners (2011) posits that, if top management does not uphold and prioritize high organizational culture, employees are likely to commit fraud. Employees closely watch the behavior of their leaders and that informs their behavior as well. The Association of Certified Fraud Examiners (2011) further proposes four key steps that top management should follow; communicate expectations to employees, lead by their examples, provide safe mechanisms to report culprits, and reward integrity. That is, a high ethical culture created within an organization through the practices of and values of management can deter unethical behavior of employees. In addition, according to Schein (as cited by Rae & Wong, 2012), "the most powerful mechanisms for embedding and reinforcing culture are what leaders pay attention to, measure and control; leader reactions to critical incidents and organizational crises; deliberate role modeling, teaching and coaching by leaders; criteria for allocation of rewards and status; and criteria for recruitment, selection, promotion, retirement and excommunication". Nevertheless, for these strategies to gain genuineness and touch the 'heart' of employees they must go beyond lip service – words and deeds must correspond. Employees are constantly evaluating management's decisions and behaviors as key indicators of what is practically acceptable and unacceptable in the organization. They watch to see if leaders show commitment to what they profess in their talk and daily behavior. Hence, if top management doesn't set worthy examples, they would have no moral courage to deter corporate fraud.

Jennings (2006) proposed antidotes to curb fear and silence organizational culture. First, employees must be told, reminded, and reassured that it is safe to voice their concerns and be provided with some form of anonymous reporting system such as fraud hotlines. Second, the board and the management team must clearly communicate to employees how they will be protected for reporting misconducts that involves even top leaders. More so, employees who speak up can be rewarded through recognition programs. In addition, management should make employees feel that their thoughts and judgments are valuable. Top management will build credibility if they listen to their employees and show that they have their best interests at heart. Most importantly, the corporate board has a fiduciary responsibility to make organizational members understand and appreciate why it is necessary to safeguard their organization against occupational frauds and other unethical practices. Both managers and employees should understand their personal role and responsibility in the whole process of fraud risk management. So, employees' behavior must be guided by a shared commitment to creating a culture rather than mere obedience to authority. When appropriate culture is in place, it becomes easier to design and implement effective organizational culture. It can therefore be hypothesized that:

H1: Organisational culture and fraud management are positively related

2.4 Managerial ethical behavior and fraud management practices

Ethics is a guide of moral conduct in terms of actions, thoughts and emotions by which an individual is able to distinguish between rights and wrong (Beekun, 2016; Azmi, 2005). According to Brown, Trevino and Harrison (2005), managerial ethical behavior refers to the demonstration of normatively appropriate conduct of management through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement and decision-making. This definition proposes that ethical leaders' conduct serves as role-modeling behavior for followers as their behavior is accepted as appropriate; ethical leaders communicate and justify their actions to followers and consider the ethical consequences of their decisions and above all try to make fair choices (Bass & Steidlmeier, 1999; Minkes et al., 1999).

Wolfe and Hermanson (2014) define managerial ethical behavior as what managers do in their everyday work, in a way that respects ethical principles and norms established by themselves, the organisation and the society of which they are members. This study will adopt the definition by Bass and Stogdill (1990) which describes managerial ethical behavior as exercising integrity, credibility, transparency, loyalty and justice in decision making by people in leadership of an organisation. The leader who is honest with and about himself and with others inspires trust that encourages followers to take responsibility.

Nwanyanwu (2018) examined accountants' ethics and fraud control in Nigeria. Data were drawn from a review of the literature on ethics and fraud. Using content analysis, major ethical considerations, fraud risk factors, control procedures and the effects of internal control system on fraud detection in Banks were identified. Scholars reached a conclusion that ethics illustrated from the accountants' perspective minimizes fraud. The people's behavioural pattern and philosophy anchored on ethical considerations should reflect honesty, integrity and value of knowledge. This will enhance productivity and good corporate governance. In this manner, fraud will be reduced.

Ball (2015) examined the role of ethical behavior of Management in fraud management. The study explored the background of accounting and how company culture, agency theory, and ethical behavior of management relate to fraud within a company. It was concluded that ethical behavior of management reduces the risk of committing fraud in a company. The decisions by management can affect many people; therefore, they need to be held to a high ethical standard to deter anyone from making unethical decisions within a business.

Cohena, Ding, Lesagec and Stolowyc (2010) carried out a study on managers' behavior in corporate fraud. Based on evidence from press articles covering 39 corporate fraud cases that went public during the period 1992-2005, the objective of this paper is to examine the role of managers' behavior in the commitment of the fraud. This study integrates the fraud triangle (FT) and the theory of planned behavior (TPB) to gain a better understanding of fraud cases. The results of the analysis suggest that personality traits appear to be a major fraud risk factor. The analysis was further validated through a quantitative analysis of key words which confirmed that key words associated with the attitudes/rationalizations component of the integrated theory were predominately found in fraud firms as opposed to a sample of control firms. The results of the study suggest that auditors should evaluate the ethics of management through the components of the theory of planned behavior: the assessment of attitude, subjective norms, perceived behavioral control and moral obligation. Therefore, it is potentially important that the professional standards that are related to fraud detection strengthen the emphasis on managers' behavior that may be associated with unethical behavior.

Chaechang and Giseok (2019) examined the relationship between managerial ethics level and financial reporting quality mainly focusing on accounting conservatism. The paper compared both fraud and non-fraud firms in terms of their ethical practice in business. 243 listed fraud firms and compared them with the same number of non-fraud firms. This result suggests that fraud firms are more likely to manipulate their earnings than the non-fraud firms. Also, accruals quality of fraud firms is lower than that of non-fraud firms. The poor quality of reporting in these firms therefore results into more fraud perpetrated by management.

Said, Alam, Ramli, andRafidi (2017) carried out a study on integrating ethical values into fraud triangle theory in assessing employee fraud. Primary data were collected through the survey of 108 questionnaires administered to the employees of the top three largest banks in Malaysia. The findings revealed that ethical values were negatively related to employee fraud, and two elements of fraud triangle theory, namely, opportunity and rationalization, were positively related to employee fraud. This implies that high ethical value is crucial to mitigate employee fraud. To minimize employee fraud, the banking industry should reduce opportunities and employee negative rationalization through strong internal control.

Chen et al. (2013) found that employees lacking in ethical values will tend to conduct bribery and corruption. In addition, executives lacking in ethical values will tend to ignore policies and procedures to pursue their self-interests. Therefore, unethical decisions and fraudulent behavior will be likely to flourish among less ethical employees. Biggerstaff et al. (2015) added that an unethical behavior comes from the top level of leadership (CEOs in particular), highlighting the need for tone from the top that sets strong leadership and an anti-fraud environment. They noted that firms with CEOs who receive bonuses are more likely to engage in fraudulent activities such as financial reporting fraud or overstating firms' profits. It can be hypothesized that:

H2: Managerial ethical behavior and fraud management are positively related

2.5 Control variables

According to Bartov, Gul, and Tsui (2000), failure to control for confounding variables could mistakenly lead to rejection of hypotheses. Therefore this study will control for Internet banking services, auditor type, firm nationality and chairman board nationality. Kabuye et al (2017) found auditor type not significantly associated with fraud management. Since this study aims to build on Kabuye et al (2017), more control variables are introduced. These control variables were not catered for in Kabuye et al (2017) study. Literature that link Internet banking services, firm nationality and chairman board nationality to fraud management is scant.

2.6 Conclusion

From the literature above, it can be concluded that organizational culture and managerial ethical behavior are related to fraud management practices. When an organisation has clear reporting lines and considers the feelings of its members in decision making, it is unlikely that fraud will occur. More so, the action with transparency and integrity helps to avail all the necessary information required for decision making. This openness reduces the probability of engaging in fraud. However from the literature reviewed, it can further be noted that the burden of fraud management lies with management. It is the role of management to create an appropriate culture for their organisations and establish the ethical codes that encourage transparency and integrity. Kaya and Birol (2019) posit that male chief executive officers are more likely to create a good organizational culture than the female ones. According to Mathenge (2013), age of employees has an effect on the acceptance of organizational culture and the level of ethical behavior. The older the individual, the more likely that they will exhibit ethical behavior and not indulge in fraud as these individuals have an image to protect. It should be noted however that studies relating organizational culture, managerial ethical behavior and fraud management have been carried out in countries bearing different characteristics as those of Uganda and the variables have also been studied in isolation. The current study therefore sought to establish the relationship between organizational culture, managerial ethical behavior and fraud management practices among banking institutions in Mbarara district.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This section presents the methodology that was used to collect and analyze data for the study. It covers the research design, study population, sampling design, and sample size, sources of data, data collection instrument, reliability and validity, measurement of variables and data analysis**.**

3.1 Research Design

The study used a combination of descriptive and correlational research designs. The descriptive perspective was used to address research objective one which was *"to examine fraud management practices in banking institutions"* in addition to describing the sample characteristics. While a correlational design was used explain the relationships between organizational culture, managerial ethical behavior and fraud management practices in banking institutions. Overall, this study was cross sectional whereby data was collected and analyzed at one point in time. A cross-sectional design allows collection of large amount of data in a short period of time and it less expensive compared to longitudinal design (Saunders el at, 2009).

3.2 Study Population and Sample Size

The unit of analysis was banking institutions and thus, the study population was composed of 50 banking institutions in Mbarara district licensed by the bank of Uganda and by Uganda Microfinance Regulatory Authority. These are broken down into 21 commercial bank branches, 3 micro deposit taking institutions, and 26 microfinance institutions. A sample size of 44 banking institutions determined using the Krejcie and Morgan (1970) sample size determination table participated in this study. Four (4) staff per banking institution filled the questionnaire namely; the Manager (1), the Chief Finance officer (1), credit manager (1) and an internal auditor and the unit of analysis was the banking institution

Table 1: Population and sample size

Institution	Population	Sample size	Unit of inquiry
Commercial bank branches	21	18	72
Micro-deposit taking institutions	3	3	12
Microfinance institutions	26	23	92
Total	**50**	**44**	**176**

3.3 Data Collection Instrument

Primary data were collected from respondents using a self-administered questionnaire. Questionnaires provide a relatively cheap, quick and efficient way of obtaining large amounts of information from a large sample of people (Mcleod, 2018). More so questionnaires are good for researching sensitive topics as respondents will be more honest when they cannot be identified. The questionnaire was designed using items developed and tested by previous scholars. The responses to the continuous variables (organizational culture, managerial ethical behavior and fraud management practices) were anchored on a five (5) point Likert scale ranging from 1=strongly disagree to 5-strongly agree. The questionnaire was sectionalized as follows: Section A – Demographics information; Section B – Organizational culture; Section C – Managerial ethical Behavior and Section D – Fraud management practices.

3.4 Measurement and operationalization of variables

The independent variables are organizational culture and managerial ethical behavior while the dependent variable is fraud management practices. These variables were measured using item scales developed by previous scholars drawn from existing literature and theories. Organisational culture was measured in terms of bureaucratic culture, supportive culture and innovative culture (Wallach, 1983; O'Reilly, Chatman & Caldwell, 2013). Managerial ethical behaviour was measured in terms of integrity, loyalty and transparency (Hunt and Vitell; 1986; Stevens, Steensma, Harrison & Cochran, 2015). Fraud management practices were measured in terms of fraud detection, fraud prevention and fraud response (Wilhelm, 2004; Phua et al, 2005; Bolton et al., 2012). Table 2 provides the details.

Table 2: **Operationalization and measurement of variables**

Global variable	Construct	Operationalization	Measurement	Sample questionnaire items
	Bureaucratic culture	The extent to which an organisation has clear lines of responsibility and authority (Wallach, 1983; O'Reilly, Chatman & Caldwell, 2013)	Respondents' mean score of items included in the questionnaire on a 5-point scale	*"This organisation is procedural."*
Organizational culture	Supportive culture	The extent to which an organisation is people-oriented (Wallach, 1983; O'Reilly, Chatman & Caldwell, 2013)	Respondents mean score of items included in the questionnaire on a 5-point scale	*"This organisation is collaborative."*
	Innovative culture	The extent to which an organisation is creative (Wallach, 1983; O'Reilly, Chatman & Caldwell, 2013)	Respondents mean score of items included in the questionnaire on a 5-point scale	*"This organisation is risk taking."*
	Integrity	demonstrating respect for key moral principles(Vitell; 1986; Stevens, Steensma, Harrison & Cochran, 2015)	Respondents mean score of items included in the questionnaire on a 5-point scale	*"When a choice has to be made between what is right and what benefits me, I would choose what is right."* .

Managerial ethical behavior	Transparency	The level of openness between managers and employees(Vitell; 1986; Stevens, Steensma, Harrison & Cochran, 2015)	Respondents mean score of items included in the questionnaire on a 5-point scale	*"I do not hide any information that is necessary at my work place."*
	Loyalty	Activities that show allegiance to the organisation (Vitell; 1986; Stevens, Steensma, Harrison & Cochran, 2015)	Respondents mean score of items included in the questionnaire on a 5-point scale	*"We stand by decisions that are in the organization's interest even if they are unpopular."*
Fraud management	Fraud detection	Activities aimed at detecting known types of fraud(Wilhelm, 2004; Phua et al, 2005)	Respondents mean score of items included in the questionnaire on a 5-point scale	*"External audits are regularly carried out."*
	Fraud prevention	Activities aimed at removing the underlying reasons because of which fraud occurs(Wilhelm, 2004; Phua et al, 2005)	Respondents mean score of items included in the questionnaire on a 5-point scale	*"Fraud risk assessment programs are carried out regularly"*
	Fraud response	Activities involved in seeking redress and for raising public awareness against fraud(Wilhelm, 2004; Phua et al, 2005)	Respondents mean score of items included in the questionnaire on a 5-point scale	*"In this organisation, we carry out internal investigation"*

3.5 Data quality control

Validity

Validity is the extent to which research instruments measure what they are intended to measure (Osoand, 2008). Convergent validity was tested using factor analysis. However, before performing the factor analysis, the suitability of the data for factor analysis was assessed based on sample size adequacy, the Keiser – Meyer – Olkin (KMO) and Bartlett tests. Field (2009) explains that KMO values range from 0 to 1. The following criterion is used to assess and describe the sampling adequacy. KMO below 0.5 = unacceptable, 0.5 to 0.7 = Mediocre, 0.7 to 0.8 = Good, 0.8 to 0.9 = Great and above 0.9 = Superb (Field, 2009; Kaiser 1974). The results are presented in table 3

Table 3: KMO and Bartlett test results

Variables	KMO	Barlett test's test of sphericity approx. X^2	Df	Sig.	No. of items	Variance extracted
Organizational culture	.823	3257.468	253	.000	23	79.5
Managerial ethical behavior	.831	2378.912	136	.000	18	76.1
Fraud management	.854	3239.533	276	.000	24	73.9

The results in table 3 show that the KMO values for the study variables are all above 0.7 which is great and acceptable. Specifically, the KMO for the study variables were .823 for organizational culture, .831 for managerial ethical behavior and .854 for fraud management. The Bartlett's test of sphericity in all scales reached statistical significance (significant value was .000 for each scale). This implies that the data was suitable for factor analysis.

Having established the sample adequacy for factor analysis, validity was assessed by running a principal component factor analysis with varimax. Specifically, convergent validity was established by examining the factors extracted, the factor loadings and eigen values. The recommended cut-off for factor loadings .5 and the eigen values extracted should be one and above (Hair *et al.*, 2010). The results in tables 26, 27 and 28 (see appendix 2) revealed as follows.

For organizational culture, 3 factors with item loadings above .5 were extracted. These were labeled innovative culture (variance explained= 27.6%), bureacratic culture (VE= 17.2%) and supportive culture (VE= 34.7%).

For managerial ethical behavior, 3 factors with item loadings above .5 were extracted. These were labeled integrity (VE=27.5%), transparency (VE= 23.1%) and loyalty (VE= 25.6%).

For fraud management practices, 3 factors with item loadings above .5 were extracted. These were labeled fraud prevention (VE= 24.2%), fraud detection (VE= 21.5%) and fraud response (VE= 28.2%).

It can be concluded that convergent validity was confirmed for all the variables.

Reliability tests

Reliability of an instrument refers to the extent to which measurements are repeatable when different people perform the measurement on different occasion, under different condition, supposedly with alternative instruments which measure the construct (Amin, 2005). Reliability in this study was assessed using the Cronbach's Alpha test.Nunnaly (1978) recommends a cut-off point of .7. Results in table 4 show that the Cronbach's alpha coefficient for all the study variables are above 0.7 and thus the instrument used was reliable.

Table 4: Reliability results

Variable	***Number of items***	***Cronbach's alpha***
Organizational culture	25	0.910
Managerial ethical behavior	18	0.872
Fraud management	24	0.899

3.6 Data Processing and analysis.

3.6.1 Data processing

Data collected was edited first to identify and eliminate errors, the information was categorized according to its different nature and then thereafter well coded and responses entered into Statistical Package for Social Scientists (SPSS). The data was cleaned by checking for missing values and outliers. This was followed by testing the assumptions for parametric tests.

Outlier check

An outlier is an observation that appears to deviate markedly from other observations in the sample, that they need not be considered because they tend to distort the results. Following the guidelines prescribed by Field (2009), an outlier check was conducted using minimum and maximum frequency counts, means and scatter plots. Six (06) identified outliers were due to data entry error of typing an out of range figure. These were traced in the dataset and corrected.

Missing value analysis

True and accurate results depend on the completeness of data involved. Field (2009) states that, if the missing values are not handled properly by the researcher, then he/she may end up drawing an inaccurate inference about the data. Missing values may arise at the point of filling in the questionnaire. Probably because the respondent does not respond to certain questions due to stress, fatigue or lack of knowledge or because some questions are sensitive. Missing values may also arise at the point of data entry where certain responses are skipped in error. If not handled, missing values distorts the analysis and results. In this study, a descriptive analysis for the items was performed per variable to identify the missing values. Nine (09) missing data were identified, and it was established that the omissions were at the data entry point. The number was manageable, copies of questionnaire were traced and the data filled to ensure completeness.

3.6.2 Regression assumption tests

Given the conceptualization of this study, it required running correlation and regressions analyses. However, before doing this, there was need to ensure that the assumptions for running regression analysis hold. The general rule/assumption is that data must be normally distributed, linear, homogenous and there shouldn’t be any multicollinearity threat. The assessment can be done statistically and graphically.

Normality test

Data is said to be 'normal' if it does not deviate from the mean. Statistically, normality was assessed by checking the skewness (symmetrical) and kurtosis (peakedness) of each measured variable. The rule of thumb is that skewness and kurtosis statistics should be with in the +2 to -2 range, though for Kurtosis a more lenient +3 to -3 range can also show normality (Field, 2009). The results are presented in table 5.

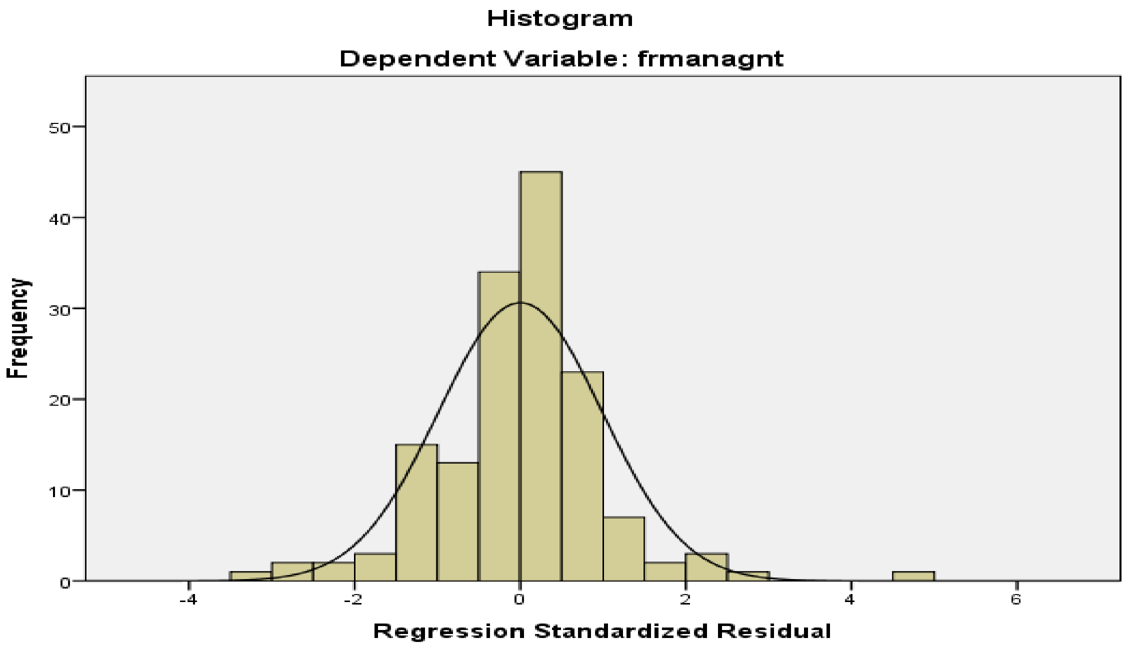
Table 5: Normality test

Details		**Organizational culture**	**Managerial ethical behavior**	**Fraud management**
N	Valid	38	38	38
	Missing	0	0	0
Skewness		-1.50	-0.99	-1.07
Std. Error of Skewness		0.20	0.20	0.20
Kurtosis		2.15	1.75	3.24
Std. Error of Kurtosis		0.39	0.39	0.39

Source: Primary data

Results in table 5 show that the Skewness and Kurtosis statistics lay within the recommended cut off range of the +2 to -2 range for skewness and +3 to -3 for kurtosis. This confirms a normal distribution of the data. Graphically, the normality used in this study was the histogram. The results are presented in figure 2. A normal distribution is a symmetric bell shaped curve defined by mean and variance (Field, 2009).

Figure 2: Histogram

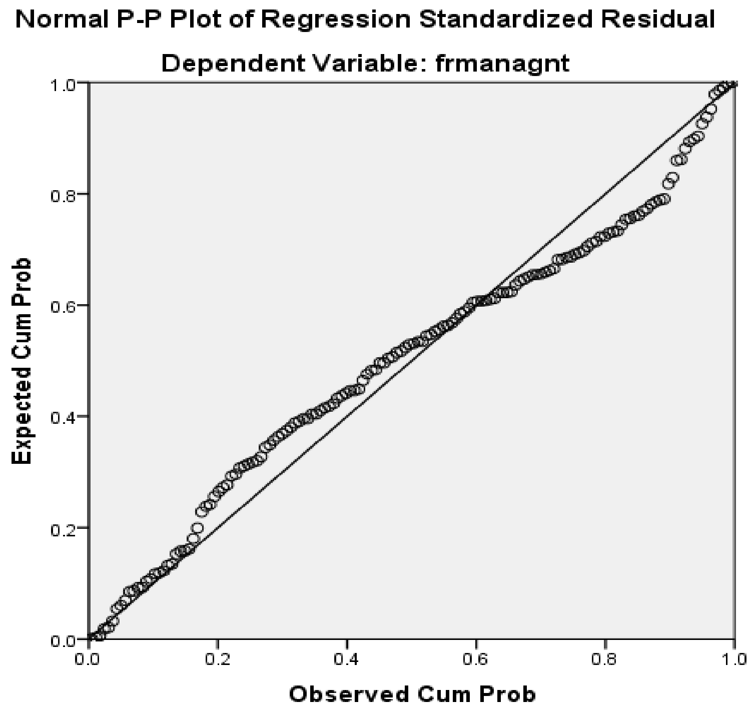


Following the guidelines of Field (2009), the rule of thumb is that the histogram must be bell shaped if the data is normally distributed. Figure 2 clearly shows a bell shaped curve suggesting that the assumption of normality was met.

Linearity test

Linearity means there is a straight line relationship between two variables, as such, data is linear data when the scores are seen to be in a fairly straight line, not a curve. This assumption is important because regression analysis only tests for linear relationship between the IVs and the DVs. In this study, graphically, linearity was tested using a normal probability plot (normal Q-Q plot) where residuals were plotted against the predicted scores. Field (2009) states that if the independent variable and the dependent variable are linearly related, then the plot of residuals against predicted score will be linear. The results are presented in figure 3.

Figure 3: Normal P-P Plot of Regression

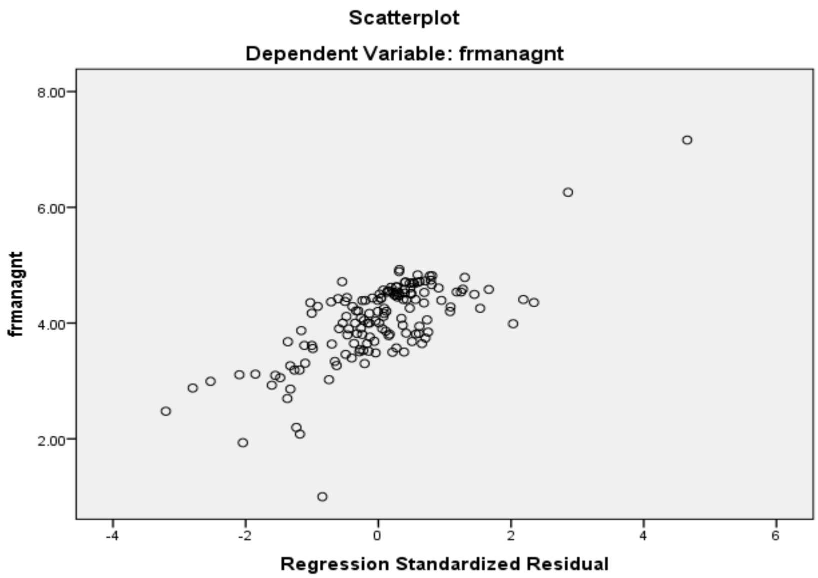


The normal Q-Q plot results in figure 3 shows a fairly straight line indicating the data is linear, thus the assumption of linearity was met. Statistically, linearity was tested by assessing the correlation and regression coefficients. The correlations (see table 7) indicated significant values and this was confirmed by the regression model (see table 7). This shows that organizational culture, managerial ethical behavior are linearly related to fraud management practices.

Homogeinity test

In correlational designs, this assumption means that the variance of one variable should be stable at all levels of the other variables. In other words, the opinions on a variable are fairly the same across other variables. Graphically, data homogeinity was tested using a scatter plot which was drawn by plotting the residuals against the dependent variable. To confirm homogeniety, the graph should look like a random array of dots evenly dispersed around zero (Field, 2009). If the graph funnels out, then the chances are that there is heterogeneity in the data. The results are presented in figure 4.

Figure 4: scatter plot



The scatterplot in figure 4 shows that the points are evenly dispersed around zero. This pattern is an indication of homogeneity as opposed to heterogeneity.

Statistically, Levene's test was used to test for homogeneity of variance because it is the most commonly used test for each group (Field, 2009). The test results are non-significant ($p > .05$) as shown in Table 6 below, thus homogeneity assumption was met.

Table 6: Homogeneity test

Variables		Levene Statistic	df1	df2	Sig.
Organizational structure	Based on Mean	.148	1	150	.701
	Based on Median	.394	1	150	.531
Managerial ethical behavior	Based on Mean	.003	1	150	.956
	Based on Median	.006	1	150	.939

Fraud management practices	Based on Mean	.393	1	150	.531
	Based on Median	.521	1	150	.519

Source: Primary Data

Multi-colinearity test

Multicollinearity exists when there is a strong correlation between two or more predicators in a regression model, which makes it difficult to assess the individual importance of the predictor variables. Following the guidelines by Field (2009), three parameters were used to assess multicollinearity threat – the correlation coefficients of the independent variables with the dependent variable, the tolerance values and the Variance Inflation Factor (VIF). According to Menard (1995), if the tolerance values are below .2, that shows the existence of multicollinearity. While VIF values above 10 indicate serious concern (Myers, 1990; Bowwerman & O'Connell, 1990). The results are presented in table 7.

Table 7: Multicolinerarity test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.141	.324		3.521	.001					
	organizational culture	.703	.078	.593	9.025	.000	.593	.593	.593	1.000	1.000
2	(Constant)	.931	.294		3.162	.002					
	organizational culture	.255	.103	.216	2.482	.004	.593	.199	.147	.466	2.147
	Managerial ethical behavior	.510	.086	.517	5.949	.000	.674	.438	.353	.466	2.147

Results in table 7 reveals tolerance values ranging from .466 and above. This is supported by VIF values below 10, there was no multicollinearity threat among the variables, and thus the assumption was met (tolerance value above .2 and VIF below 10).

3.6.3 Data analysis

Given the nature of the research objectives and hypotheses, correlation and regression analyses were performed.

Correlation analysis -was run to test for the relationships among the variables evaluating their direction and strengths. Pearson correlation was conducted to test the associations,

Hierarchical regression -was performed to test the contribution effect of each variable in explaining fraud management. The model specification for the hierarchical regression analysis was as follows:

Model 1: $FM = b_0 + b_1FAFC + + \varepsilon$

Model 2: $FM = b_0 + b_1FAFC + b_2OC + \varepsilon$

Model 3: $FM = b_0 + b_1FAFC + b_2OC + b_3MEB + \varepsilon$

Where:
FM *= fraud management*
b0 *- is a constant*
b_1FAFC*- is firm age, auditor type, firm nationality, chairman board nationality*
b_2OC*– is the unstandardized B coefficient of organizational culture*
b_2EB *– is the unstandardized B coefficient of managerial ethical behavior*
ε *is the error term*

Given that 4 respondents filled the questionnaire per banking institution, the data was aggregated at firm level using the data entry ID as a break function.

3.7 Ethical considerations

The researcher requested for an introduction letter from the faculty of graduate studies and research of Makerere University Business School to ensure that the researcher's motives of undertaking the study are not confused with any opportunistic tendencies. With the help of an introduction letter, the researcher requested management of the banking institutions for permission to carry out research in their organisations. The respondents were informed of the nature of the study to be carried out, the purpose of the study and reasons for the study to minimize the suspicion that members could have had towards the data collection exercise. More so the respondents were informed that their names are not required for the study and that the information provided would be treated with utmost confidentiality.

CHAPTER FOUR

PRESENTATION AND INTERPRETATION OF RESULTS

4.0 Introduction

This chapter presents the results from descriptive and inferential analyses. The descriptive analysis was performed to describe the relevant aspects of the phenomena under consideration and provide detailed information about each relevant variable. For the inferential analysis, the study used the Pearson correlation to measure the degree of association between variables under consideration and the regression analysis to estimate the contribution of organizational culture and managerial ethical behavior on fraud management practices.

4.1 Response rate

The study population comprised of 50 banking institutions in Mbarara district licensed by the bank of Uganda and by Uganda Microfinance Regulatory Authority. Based on this population, a sample of 44 banking institutions was considered for the study as determined by the Krejcie and Morgan (1970) table for sample size determination. The researcher obtained responses from 38 banking institutions representing 86% percent response rate.

4.2 Demographic characteristics

Respondents were asked to provide information about their demographic characteristics which includes their gender, age, education level, position in the institution and the time they have been in the current position. The results from their responses are presented in the sections below.

Gender

Respondents were asked to provide information about their gender and the results are presented in the table below

Table 8: **Distribution of respondents by gender**

Item	*Frequency*	*Percent*
Male	63	41.4
Female	89	58.6
Total	*152*	*100.0*

Results in table 8 indicate that majority of the respondents were female (58.6%). The male were represented at 41.4%. This indicates that banking institutions in Mbarara district employ more women than men in the positions of chief finance officer, internal auditor, manager and credit manager

Age

Respondents were asked to provide information about their age and the results are presented in the table below

Table 9: **Distribution of respondents by age**

Item	*Frequency*	*Percent*
21 to 30 years	8	5.3
31 to 40 years	83	54.6
41 to 50 years	52	34.2
above 50 years	9	5.9
Total	*152*	*100.0*

Results in table 9 indicate that majority of the respondents were aged between 31 to 40 years (54.6%), followed by those between 41 to 50 years (34.3%) and then those above 50 years(5.9%).

The least group of respondents were aged between 21 to 30 years (5.3%). The banking institutions in Mbarara district are managed by a mature workforce. Individuals in this age bracket are assumed to mind more about their public image than accumulation of assets and so are capable of ensuring that fraud is minimized in the bank.

Education level

Respondents were asked to provide information about their highest level of education and the results are presented in the table below

Table 10: Distribution of respondents by education level

Item	***Frequency***	***Percent***
Diploma	48	31.6
Bachelors' degree	81	53.3
Masters' degree	23	15.1
Total	*152*	*100.0*

Results from table 10 indicate that majority of the respondents had a bachelors' degree (53.3%) followed by those with a diploma (31.6%) and then those with a masters degree (15.1%). This is an indicator that high positions in the banking institutions in Mbarara district are occupied by individuals with the appropriate education qualifications. This implies that the decisions taken in these institutions are from an informed point of view since the educated individuals are assumed to have a lot of information.

Employment Position

Respondents were asked to provide information about their employment position in the organisation and the results are presented in the table below

Table 11: Distribution of respondents by their employment position

Item	*Frequency*	*Percent*
Chief finance officer	26	17.1
Internal auditor	39	25.7
Manager	43	28.3
Credit manager	44	28.9
Total	152	100.0

Results from table 11 indicate that majority of the respondents were credit managers (28.9%), followed by managers (28.3%), then internal auditors (25.7%) and lastly the chief finance officers (17.1%). Top management individuals were engaged in this study according to these results which indicates that data used for this study is from reliable sources.

Time in current position

Respondents were asked to provide information about the time they have spent in the current positions and the results are presented in the table below

Table 12; Distribution of respondents by the time they have been in the current position

Item	*Frequency*	*Percent*
less than 2 years	42	27.6
2 to 4 years	72	47.4
5 to 10 years	31	20.4
above 10 years	7	4.6
Total	*152*	*100.0*

Results from table 12 indicate that majority of the respondents have been in their current positions for a period of 2 to 4 years (47.4%) followed by those who have been in the current positions for less than 2 years (27.6%) and then 5 to 10 years(20.4%). The least group of respondents had been in their current positions fro a period above 10 years (4.6%). These results indicate that individuals do not stay in positions for a long period of time. This minimizes fraud in a sense that individuals don't get to cover up their fraud since they do not stay in these positions for long.

4.3 Banking institution characteristics

Respondents were asked to provide information about the characteristics of their banking institution including its type, if the banking institution provides internet banking services, if it has a fraud management department, years in operation, source of finance, number of women and men on board, external auditors, mother country of the institution, origin of chairman board and if the chairman board is the same as the CEO. The results from their responses are presented in the sections below.

Type of banking institution

Respondents were asked to provide information about the type of banking institution they work with and the results are presented in the table below

Table 13: **Distribution of banking institutions by type**

Item	*Frequency*	*Percent*
Commercial bank	12	31.6
Micro deposit taking institution	3	7.9
Microfinance institution	23	60.5
Total	*38*	*100.0*

Results in table 13 indicate that majority of the banking institutions are microfinance institutions (60.5%), followed by commercial banks (31.6%) and then micro-deposit taking institutions (7.9%). This indicates that Mbarara district is dominated by micro finance institutions compared to other types of banking institutions.

Provision of internet banking

Respondents were asked whether their banking institutions provide internet banking services and the results are presented in the table below

Table 14: **Distribution of banking institutions by provision of internet banking services**

Item	***Frequency***	***Percent***
Yes	17	44.7
No	21	55.3
Total	*38*	*100.0*

Results from table 14 indicate that majority of the banking institutions in Mbarara district do not provide internet banking services (55.3%). Those that provide internet banking services stood at 44.7%. This is an indicator that most banking institutions in Mbarara district have not diversified to utilize technology which could be a loophole in fraud management in this technological era.

Fraud management department or officer

Respondents were asked whether their banking institutions have a fraud management department or officer and the results are presented in the table below

Table 15: **Distribution of banking institutions by fraud management department**

Item	*Frequency*	*Percent*
Yes	16	42.1
No	22	57.9
Total	*38*	*100.0*

Results from table 15 indicate that majority of the banking institution did not have a fraud management department or officer (57.9%). Only 42.1% of the banking institutions had a fraud management officer or department. This indicates that majority of the banking institutions in Mbarara district still take fraud management lightly and have not taken a step to making it priority by assigning a particular officer or department for this purpose.

Years in operation

Respondents were asked to provide information about the number of years the banking institution they work with has been in operation and the results are presented in the table below

Table 16: Distribution of banking institutions by years in operation

Item	*Frequency*	*Percent*
Less than 5 years	1	2.6
5 to 10 years	3	7.9
10 to 15 years	4	10.6
Above 15 years	30	78.9
Total	*38*	*100.0*

Results in table 16 above indicate that majority of the banking institutions in Mbarara district had been in operation for a period above 15 years (78.9%), followed by those which have been operational for a period between 10 to 15 years (10.6%) and then those that have operated for a period between 5 to 10 years (7.9%). Only 2.6% of the banking institutions had operated for a period less than 5 years. This indicates that the banking istitutions investigated have lived enough to build a strong organizational culture, have probably had different managers with differing ethical behavior and have seen the effects of such on their fraud management processes experienced.

Source of finance

Respondents were asked to provide information about the sources of finance of the banking institution. All the 38 banking institutions indicated that the institution was financed by both loans and equity. This indicates that banking institutions prefer to balance equity and debt for capital other than taking risks with loans or even holding back risks by only using equity thus a balanced capital structure.

Number of women on board

Respondents were asked to provide information about the number of women on their board and the results are presented in the table below

Table 17: **Distribution of banking institutions by the number of women on board**

Item	***Frequency***	***Percent***
2 and below	17	44.7
3 to 5	13	34.2
6 to 10	8	21.1
Total	*38*	*100.0*

Results from table 17 indicate that majority of the banking institutions had 2 or less women on the board (44.7%), followed by those with 3 to 5 women on board (34.2%) and then those with 6 to

10 women on board (21.1%). This indicates that the representation of women on board in the banking institutions in Mbarara district is still low.

Number of men on board

Respondents were asked to provide information about the number of men on their board and the results are presented in the table below

Table 18: **Distribution of banking institutions by number of women on board**

Item	***Frequency***	***Percent***
2 and below	1	2.6
3 to 5	8	21.1
6 to 10	24	63.2
above 10	5	13.1
Total	*38*	*100.0*

Results in table 18 above indicate that majority of the banking institutions had 6 to 10 men on their board (632%) followed by those with 3 to 5 men on board (21.1%) and then above 10 men on board (13.1%). Only 2.6% of the banking institutions had 2 or less men on their board. This indicates that banking institutions in Mbarara district prefer to have more men on their board. This could be in relation to the belief in the superiority of men and their ability to take complex decisions.

External auditors

Respondents were asked to provide information about their external auditors and the results are presented in the table below

Table 19: **Distribution of banking institutions by their external auditors**

Item	***Frequency***	***Percent***
The big four	13	34.2
Small and medium audit firms	24	63.2
Auditor general	1	2.6
Total	*38*	*100.0*

Results in table 19 above indicate that majority of the financial institutions in Mbarara are audited by small and medium audit firms (63.2%). These are followed by those audited by the big four audit firms (34.2%) and 2.6% of the banking institutions is audited by the auditor general. This indicates that the banking institutions believe in the capacity of local firms to carry out their audit activities. However this could also have an effect on their fraud management processes as some of the small audit firms carry out these activities inefficiently.

Mother country of the banking institution

Respondents were asked to provide information about the mother country of their banking institution and the results are presented in the table below

Table 20: **Distribution of banking institutions by their mother country**

Item	***Frequency***	***Percent***
Uganda	28	73.8
Mali	2	5.3
south Africa	2	5.3
India	1	2.6
UK	1	2.6
Nigeria	1	2.6
Kenya	1	2.6
Tanzania	1	2.6
Netherlands	1	2.6
Total	*38*	*100.0*

Results from table 20 indicate that majority of the banking institutions had their mother country as Uganda (73.8%), followed by those whose mother country are Mali and South Africa each represented at 5.3%. the rest of the banking institutions were from India, UK, Nigeria, Kenya, Tanzania and Netherlands and each was represented at 2.6%. this is an indicator that ugandas banking sector has grown over time and is no longer relying on foreign banks to serve its population.

Origin of the chairman board

Respondents were asked to provide information about origin of the chairman board of their banking institution and the results are presented in the table below

Table 21: Distribution of banking institutions by origin of the chairman board

Item	*Frequency*	*Percent*
Yes	32	84.2
No	6	15.8
Total	*38*	*100.0*

Results from table 21 indicate that majority of the banking institutions had a chairman board of Ugandan origin (84.2%). 15.8% of the institutions have a chairman board who is not Ugandan. This shows that Ugandans are trusted with the roles of leading boards of the banking institutions and thus there is no need to employ foreigh individuals to occupy such positions.

CEO duality

Respondents were asked whether their board chairman was the same as the CEO of the institution and the results are presented in the table below

Table 22: **Distribution of banking institutions by CEO duality**

Item	Frequency	Percent
Yes	8	21.1
No	30	78.9
Total	*38*	*100.0*

Results from table 22 indicate that in majority of the banking institutions the chairman board is not the same as the CEO of the institution (78.9%) and in 21.1% of the banking institutions, the chairman board is not the same as CEO. This means that in majority of the institutions, there is no

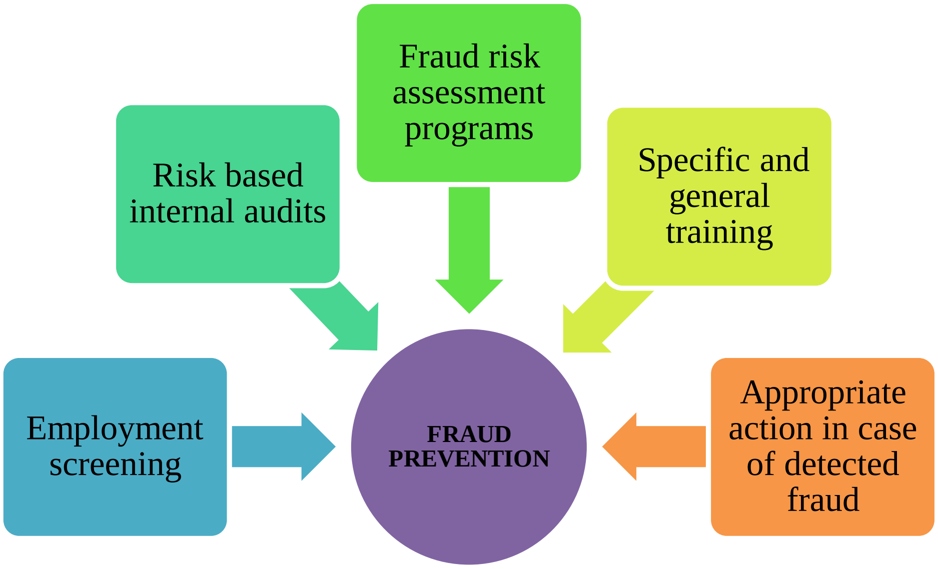
CEO duality. This is good for fraud management as the CEO may not conceal any information from the board for purposes of self- interest and the division of roles also aids in fraud prevention.

4.4 Fraud management practices in banking institutions in Mbarara district

Objective 1 was to assess fraud management practices by banking insitutions in Mbarara district. To do this, mean scores of the questionnaire items were generated through descriptive analysis; after which items with mean scores ≥4. Were extracted and considered for discussion. It is worth noting that the respondents were asked to state their level of agreement with the items that captured the fraud management practices on a 5 point scale ranging from strongly disagree (1) to strongly agree (5). The mean scores are presented in table 25 in appendix 2, while figures 5, 6 and 7 below show the extract of particular activities that the banking institutions carry out for fraud prevention, fraud detection and fraud response respectively, based on items with mean scores ≥4.

Fraud prevention in this study was conceptualized as activities aimed at removing the underlying reasons because of which fraud occurs (Wilhelm, 2004; Phua et al, 2005). Figure 5 presents the particular activities the banking institutions carry out to prevent the occurrence of fraud.

Figure 5: fraud prevention practices

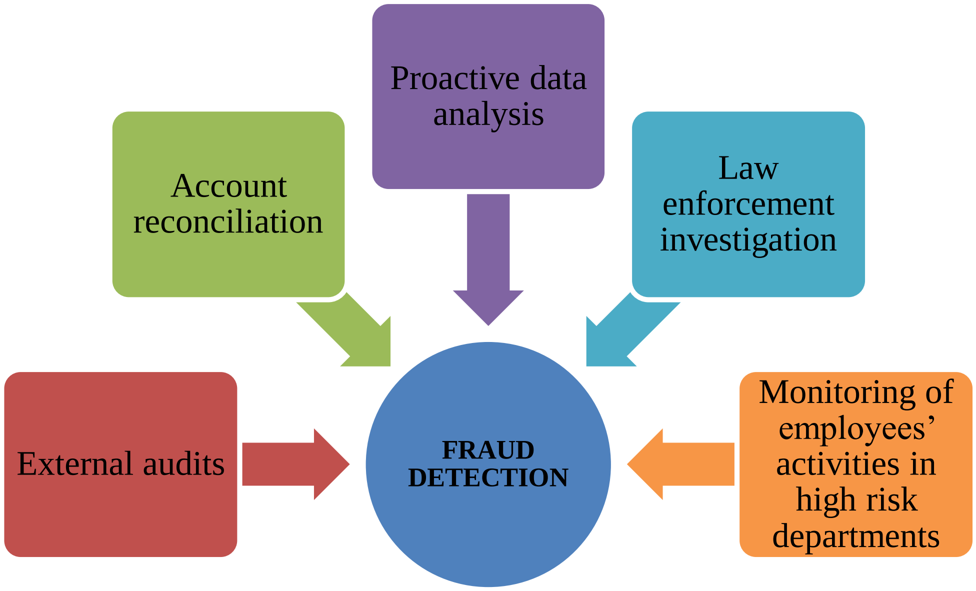


Source: Primary data

Results in figure 5 indicate that the key activities involved in fraud prevention include employment screening, risk based internal audits, fraud risk assessment programs, training and appropriate action in case of detected fraud. These banking institutions under study however do not have established whistle blower mechanisms and technology for fraud prevention. This could be the reason for increased technology based fraud in the banking institutions.

Fraud detection was conceptualized as activities aimed at detecting known types of fraud(Wilhelm, 2004; Phua et al, 2005). Figure 6 presents the particular activities the banking institutions carry out to detect fraud.

Figure 6: fraud detection practices

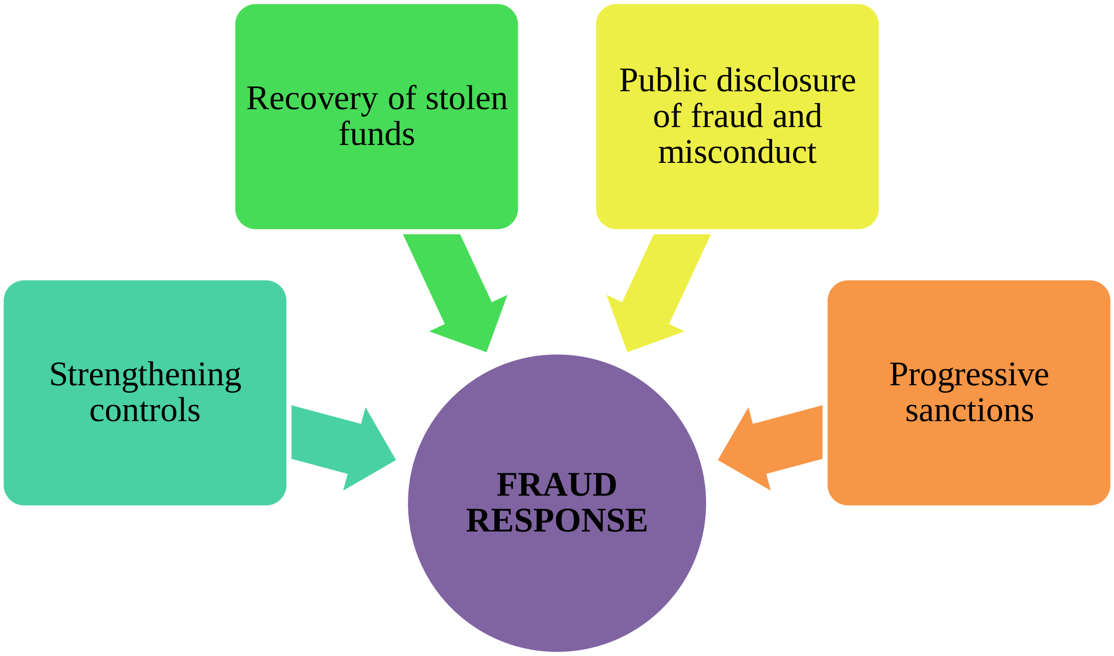


Source: Primary data

Results in figure 6 indicate that key activities under fraud detection that banking institutions in Mbarara district carry out are external audits, account reconciliation, proactive data analysis, law enforcement investigations and monitor employees' activities in high risk departments. The results also show however that most institutions have no company security and do not encourage confession by culprits of fraud. The consistent outsourcing of security encourages fraud as these people do not know what exactly they should be tracing for to ensure detection of fraud.

Fraud response in this study was conceptualized as activities involved in seeking redress and for raising public awareness against fraud (Wilhelm, 2004; Phua et al, 2005). Figure 7 presents the particular activities the banking institutions carry out for fraud response.

Figure 7: fraud response practices



Source: Primary data

In regards to activities under response to fraud, results in figure 7 indicate that the key activities undertaken by banking institutions in Mbarara district are strengthening controls, recovering stolen funds, disclosing fraud publicly and carrying out progressive sanctions. The results also show however that the banking institutions do not have established lines of communication with police for further investigations of detected fraud. This could result in delayed processes to redress the fraud that has occurred

4.5 Correlation analysis

Objective two and three sought to establish the relationship between organizational culture and fraud management; and the relationship between managerial ethical behavior and fraud management respectively. In order to achieve these objectives, correlation analysis was carried out. The rule of Pearson correlation is that a value of 0 indicates that there is no relationship between the two variables. A value below zero indicates a negative association between variables which means that as the value of one variable increases, the other decreases. A value greater than 0 indicates a positive association between variables in that as the value of one variable increases, so does the other variable. Results for associations are presented in table 23 below.

Table 23: Correlation results

16	1	**	Co

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Internet banking services-1	1														
Auditor type-2	.752**	1													
Firm nationality-3	-.518**	-.567**	1												
Chairman board nationality-4	-.435**	-.511**	.353**	1											
Innovative culture -5	-0.03	-0.14	0.086	0.12	1										
Bureaucratic culture -6	0.056	-0.09	0.046	0.03	.444**	1									
Supportive culture -7	0.057	-0.07	0.077	0.1	.503**	.486**	1								
Organisational culture -8	0.037	-0.12	0.083	0.1	.776**	.830**	.811**	1							
Integrity -9	0.03	-0.07	0.034	0.01	.479**	.445**	.501**	.585**	1						
Transparency -10	0.078	-0.12	0.087	0.15	.478**	.496**	.556**	.631**	.639**	1					
Loyalty -11	0.068	-0.09	0.092	0.05	.499**	.498**	.639**	.673**	.572**	.754**	1				
Managerial ethical behavior -12	0.067	-0.11	0.082	0.08	.553**	.547**	.645**	.718**	.836**	.910**	.887**	1			
Fraud prevention -13	-0.11	-.246**	0.069	0.15	.358**	.351**	.396**	.455**	.414**	.412**	.488**	.500**	1		
Fraud detection -14	-0.12	-0.14	0.023	0.04	.378**	.386**	.369**	.468**	.482**	.454**	.524**	.555**	.591**	1	
Fraud response -15	0.011	-0.07	-0	0.01	.321**	.360**	.452**	.468**	.468**	.470**	.476**	.537**	.409**	.458**	1
Fraud management -16	-0.08	-.178*	0.034	0.08	.431**	.451**	.509**	**.573****	.563**	.554**	.609**	**.656****	.795**	.806**	.821**

Results from table 23 indicate that there is a positive and significant relationship organizational culture and fraud management (r=.573**). Among the indicators of organizational culture, supportive culture came out with a stronger relationship with fraud management (r=.509**) followed by bureaucratic culture (r=.451**) and then innovative culture (r=.431**). However, all the indicators were positively and significantly related to fraud management. This means that a positive change in organizational culture in terms of supportive culture, bureaucratic culture and innovative culture lead to a positive change in fraud management among banking institutions

Further, the results indicate that there is a positive and significant relationship managerial ethical behavior and fraud management (r= .656**). All indicators of managerial ethical behavior were positively and significantly related to fraud management. A stronger relationship was exhibited by loyalty (r=.609**), followed by integrity (r=.563**) and then transparency (r=.554**). This implies that a positive change in managerial ethical behavior in terms of integrity, transparency and loyalty lead to a positive change in fraud management among banking institutions in Mbarara district.

4.6 Regression analysis

The researcher also carried out regression analysis to confirm the correlation results and to determine the predictive power of organizational culture and managerial ethical behavior on fraud management. The results are shown in the table below.

Table 24: Regression analysis results

	Model 1			Model 2			Model 3		
	B	S.E	Beta	B	S.E	Beta	B	S.E	Beta
Internet banking services	.165	.167	.122	-.078	.139	-.057	-.187	.125	-.139
Auditor type	-.451	.178	-.338	-.210	.148	-.157	-.161	.131	-.120
Firm nationality	-.027	.032	-.083	-.039	.026	-.121	-.053	.023	-.164
Chairman board nationality	.016	.170	.009	-.056	.139	-.031	-.061	.123	-.034
Organizational culture				.695	.080	.587**	.235	.101	.198**
Managerial ethical behavior							.540	.085	.547**
Mode summary:									
R		.233[a]			.614[b]			.716[c]	
R Square		.054			.376			.512	
R Square Change		.054			.322			.136	
F Change		2.111			75.439			40.440	
Sig. F Change		.082			.000			.000	

Dependent variable: fraud management, **= p=0.00

Model 1 – the control variables (internet banking services, auditor type, firm nationality, chairman board nationality) were regressed on fraud management. Results in model 1 show that the control variables explain 5.4% of variance in fraud management in banking institutions

Model 2 – organizational culture was added in model 2. The results show that the addition of organizational culture to the equation, accounts for an extra 32.2% of the variance explained by the model ($R^2\Delta$= .322; fΔ= 75.439). The results also confirm a positive and significant relationship between organizational culture and fraud management among banking institutions in Mbarara district (β=.587, p=.000).

Model 3 – managerial ethical behavior was added in model 3. The results show that the addition of managerial ethical behavior to the equation, accounts for an extra 13.6% of the variance explained by the model ($R^2\Delta$= .136; fΔ= 40.440). The results further confirm a positive relationship between managerial ethical behavior and fraud management (β=.547, p=.000).

Overall final model explains 51.2% of variance in fraud management. This means that the remaining 48.8% is explained by factors other than internet banking services, auditor type, firm nationality, chairman board nationality, organizational culture and managerial ethical behavior. Based on the final model, organizational culture is the strongest predictor of fraud management in banking institutions in Mbarara district.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses and concludes the findings of the study, recommendations and areas for further research. The study investigated corporate culture, managerial ethical behaviour and fraud management practices in banking institutions in Mbarara district.

5.1 Discussion of findings

This section covers the discussion of findings on the following objectives:

i. To assess the fraud management practices in banking institutions in Mbarara district
ii. To establish the relationship between organizational culture and fraud management among banking institutions in Mbarara district
iii. To establish the relationship between managerial ethical behavior and fraud management among banking institutions in Mbarara district

5.1.1. Fraud management practices in banking institutions in Mbarara district

Objective one sought to assess the fraud management practices in banking institutions in Mbarara district. The activities were grouped into fraud prevention practices, fraud detection practices and fraud response practices.

In regards to fraud prevention, it was established that that banking institutions in Mbarara district carry out employment screening, risk based internal audits, fraud risk assessment programs, training and appropriate action in case of detected fraud. These institutions however do not have established whistle blower mechanisms and technology for fraud prevention. This could be the reason for increased technology based fraud in the banking institutions. Kiprop (2010) argues that reporting mechanisms and whistleblowing should be considered by an organisation since many frauds are known or suspected by people who are not involved. Opromolla and Maccarini (2010) and Feng, McVay, and Skaif (2015) agree that a company needs to carry out employment screening, risk based internal audits, fraud risk assessment programs and training in order to avoid the occurance of fraud in an organization.

Futher, it was established that in order to detect fraud, banking institutions in Mbarara district carry out external audits, account reconciliation, proactive data analysis, law enforcement investigations and monitor employees' activities in high risk departments. It should be noted however that most institutions have no company security and do not encourage confession by culprits of fraud. The consistent outsourcing of security encourages fraud as these people do not know what exactly they should be tracing for to ensure detection of fraud. Cohen, Ding, Lesage and Stolowy (2011) proposed that a bank should have an internal security department devoted to customer account fraud. Such departments may operate independently in their functional areas or under the control of a chief information officer, the controller, or the internal auditor and are effective for fraud detection.

In regards to fraud response, it was established that banking institutions in Mbarara district strengthen controls, recover stolen funds, disclose fraud publicly and carry out progressive sanctions. These organisations however do not have established lines of communication with police for further investigations of detected fraud. This could result in delayed processes to redress the fraud that has occurred. The fraud response plan should reiterate the organization's commitment to high legal, ethical and moral standards in all its activities and its approach to dealing with those who fail to meet those standards (Mustafa &Youssef, 2010). When a suspicious transaction has been carried out, the investigators' task is to investigate it and to decide whether it is in fact fraudulent or not (Babcock & McGee, 2014). On that basis, the company can decide for the appropriate following action and gather evidence to generate a sound case against perpetrators.

5.1.2. The relationship between organizational culture and fraud management practices

Objective two sought to establish the relationship between organizational culture and fraud management practices among banking institutions in Mbarara district. Organizational culture was measured in terms of innovative culture, bureaucratic culture and supportive culture. Results indicated that there is a positive and significant relationship between organisational culture and fraud management among banking institutions in Mbarara district.

When an organisation creates a good organizational culture, people tend to think alike and have similar practices aimed at the same objectives which creates an environment where individuals will do all that is in their powers and support each other to ensure that the organisation is safe from fraud. This is more possible if the firm has been operational for a long time because then the culture is well established and quite strong that it becomes easy for members to abide by it. It is important for organisations to promote collaborations and good relationships among its stake holders which creates a sociable environment. This helps individuals in the organisation to detect any unusual practices by their colleagues and eases the whistle blowing process. More so, when employees feel safe in an organisation and are treated equally, they will avoid practicing things that lead to fraud. These findings are in line with Counsell et al., (2014) who contends that a supportive culture encourages individuals to work as a team. They identify and analyze problems, define goals and assume joint responsibility for actions and interventions to accomplish the goals. Team members easily realize that a member is practicing fraudulent activities every time they act against the shared goals of an organisation.

A banking institution with a strong innovative culture is able to avoid or reduce fraud through introduction of new products like internet banking that aid in easily detecting fraud before it happens. These products enable clients to be able to track their transactions any time and block any suspicious transactions on their accounts. It is therefore important for banking institutions to be enterprising and creative to enable workers to easily identify loopholes that could enable fraud. In result –oriented entities, the employees will tend to be extra careful with the transactions that happen in order to be able to produce fraud free results. These findings are in line with Graham, Harvey, Popadak, and Rajgopal (2015) who revealed that a strong innovative culture influences performance through better execution; reduction in agency cost, empowerment of employee consistent decision making in difficult times and value more than strategic decisions. This makes the fraud management process easy to implement.

An institution with a bureaucratic culture ensures to establish structures and procedure of work. This helps in ensuring that every piece of work is supervised and accountability is taken. More so, having a hierarchy enables an effective whistle blowing process and so fraud can easily be prevented before losses are incurred. An ordered banking institution also encourages management to act exemplary to their employees. This is in agreement with the Association of Certified Fraud Examiners (2011) posits that, if top management does not uphold and prioritize high organizational culture, employees are likely to commit fraud. Employees closely watch the behavior of their leaders and that informs their behavior as well.

5.1.3 The relationship between managerial ethical behavior and fraud management practices

Objective three sought to establish the relationship between managerial ethical behavior and fraud management practices. Managerial ethical behavior was measured in terms of integrity, loyalty and transparency. Results indicate that there is a positive and significant relationship between managerial ethical behavior and fraud management.

Managerial ethical behavior is a key element in upholding the key ethical principles of banking institutions. It is therefore important for these institutions to employ managers with integrity. This is because they always light the way for their employees and help them to make the right decisions, choose right over wrong in whatever situation they are in. integrity of management therefore helps to prevent fraud from happening in the first place. When the ethical principles are standardized, their applicability becomes easier and it tracing the people going against these principles is easy too and thus easing the fraud detection process. These findings are in line with Nwanyanwu (2018) who contends that people's behavioral pattern and philosophy anchored on ethical considerations should reflect honesty, integrity and value of knowledge. This will enhance productivity and good corporate governance. In this manner, fraud will be reduced.

In order to prevent fraud, management ought to be transparent. They must not hide information that is necessary at the work place as this keeps everyone in the light about the events in the institution and so are able to notice any unusual changes in the company's practices. Transparency aids managers not to cover up mistakes of employees and so this becomes a basis to reward good work and punish mistakes so that they are not committed continuously by other employees in hope of being covered up for. More so, managers who are loyal to their institutions will ensure that their subordinates follow the regulations of the company. Following regulations is one way in which fraud can be avoide, prevented or even responded to if it has already occurred. This is in line with Chen et al. (2013) who found that employees lacking in ethical values will tend to conduct bribery and corruption. In addition, executives lacking in ethical values will tend to ignore policies and procedures to pursue their self-interests. Therefore, unethical decisions and fraudulent behavior will be likely to flourish among less ethical employees. Biggerstaff et al. (2015) added that an unethical behavior comes from the top level of leadership (CEOs in particular), highlighting the need for tone from the top that sets strong leadership and an anti-fraud environment.

5.2 Conclusion

From the findings of this study, the following conclusions are made;

Banking institutions have tried to put in place practices for fraud management. However, there is limited technology, whisle blower systems and established security systems to help in proper implementation of these practices

There is a positive and significant relationship between organizational culture and fraud management. Banking institutions in Mbarara district should therefore focus on creating innovative, bureaucratic and supportive culture for their organisations in order to promote a good fraud management system.

There is a positive and significant relationship between managerial ethical behavior and fraud management among banking institutions in Mbarara district. It is important for top management to be recruited on basis of their ability to present transparency, integrity and loyalty to the company.

Internet banking services, auditor type, firm nationality, chairman board nationality, organizational culture and managerial ethical behavior explain 51.2% of variance in fraud management. This means that the remaining 48.8% is explained by factors other than fraud department, organizational culture and managerial ethical behavior.

5.3 Recommendations

Both organizational culture and managerial ethical behavior were found to be positively and significantly related to fraud management. Organisations shoud therefore focus on employing ethical managers who will create innovative, bureaucratic and supportive cultures to improve on fraud management.

There is need to improve technology in the banking institutions in Mbarara district in order to make the fraud management process even smoother.

Managers of banking institutions should consider establishing fraud management departments and employing fraud management officers who will give special attention and priority to the fraud management practices of the organization.

5.4 Limitations of the study

Internet banking services, auditor type, firm nationality, chairman board nationality, organizational culture and managerial ethical behavior explain 51.2% of variance in fraud management. This means that the remaining 48.8% is explained by factors other Internet banking services, auditor type, firm nationality, chairman board nationality, organizational culture and managerial ethical behavior

The current study also adopted a cross sectional research design where data is collected at one point in time which may not indicate the long term effects of organizational culture and managerial ethical behavior on fraud management

The current study concentrated on banking institutions leaving other sectors in the country that may also be facing fraud management challenges.

5.5 Areas for further research

Future research may find out the relationship of other variables like internal controls, corporate governance and audit quality to find out if they explain the remaining percentage fraud management.

A country wide research on organizational culture, managerial ethical behavior and fraud management should be carried out to confirm if the findings of this study are representative of the whole country

A longitudinal research design may also be adopted to determine the long term effects of organizational culture and managerial ethical behavior on fraud management in banking institutions.

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Questionnaire

MAKERERE UNIVERSITY BUSINESS SCHOOL

Dear respondent,

I am a post graduate student, pursuing a Master's Degree in Business administration. I am undertaking a study on ***"Organizational culture, managerial ethical behavior and fraud management practices among banking institutions in Mbarara district"*** as a partial fulfillment for the award. You have been identified as a resourceful person to this study. Please take a few minutes of your precious time to answer the following questions. Whatever response you give is purely for academic purposes and will be kept with utmost confidentiality. Thank you so much in advance.

Bank ID____________________ Data entry date ____________ Date of entry___________

Ai.Bio data

1. Please indicate your gender

(1) Male ☐ (2) Female ☐

2. Indicate your age bracket

(1) 21-30☐ (2) 31-40 ☐ (3) 41-50 ☐ (4) above 50 ☐

3. Select your highest level of education qualification

(1) College certificate ☐ (2) Diploma ☐ (3) Bachelors ☐ (4) others (specify)………………………

4. What is your position in this institution?

(1) Chief Finance officer☐ (2) internal auditor ☐ (3) Manager ☐

(4) Credit manager ☐

5. How long have you served in the current position?

(1) Less than 2 years ☐ (2) 2 to 4years ☐ (3) 5 to 10 years ☐ (4) above 10 years☐

Aii. Banking institution information

4. What is the type of this banking institution?

(1) Commercial bank ☐ (2) micro deposit taking institution ☐ (3) micro finance institution ☐

5. Does this banking institution provide internet banking to the clients?

(1)Yes ☐ (2) No☐

6. Does this banking institution have a fraud management department?

(1) Yes ☐ (2) No ☐

7. Number of years of operation of this firm:

Less than 5 years ☐ 5-10 years ☐ 10-15 years ☐ 15-above ☐

8. This institution is financed by:

Equity capital ☐ Equity& Loans ☐ Loans only ☐
Others, specify………………………………………

9. State the number of women and that of men on your board
   Women ………………………… Men ………….…………
10. State whether the external auditors for this financial institution are the Big 4, Small and Medium Audit Firms or Auditor General
    ……………………………………………………………………………………………………
    …..
11. State the country in which your mother financial institution is found
    ……………………………….
12. Our board chairman is not of Ugandan origin Yes ☐ No ☐

<u>Section B; Organizational culture</u>

Innovative Culture

Please rate the following statements according to what applies to you on the scale - 1-strongly disagree, 2-disagree, 3- not sure 4- agree, 5-strongly agree.

code	*This organisation is;*	Strongly disagree	disagree	Not sure	agree	Strongly agree
ic1	Risk taking	1	2	3	4	5
ic2	Result-oriented.	1	2	3	4	5
ic3	Creative	1	2	3	4	5
ic4	Pressurized	1	2	3	4	5
ic5	Stimulating	1	2	3	4	5
ic6	Challenging	1	2	3	4	5
ic7	Enterprising	1	2	3	4	5
ic8	Driving	1	2	3	4	5

Bureaucratic Culture

Please rate the following statements according to what applies to you on the scale - 1-strongly disagree, 2-disagree, 3- not sure 4- agree, 5-strongly agree.

code	*This organisation is;*	Strongly disagree	disagree	Not sure	agree	Strongly agree
bc1	Procedural	1	2	3	4	5
bc2	Hierarchical	1	2	3	4	5
bc3	Structured	1	2	3	4	5
bc4	Ordered	1	2	3	4	5
bc5	Regulated	1	2	3	4	5
bc6	Established	1	2	3	4	5
bc7	Cautious	1	2	3	4	5
bc8	Power-oriented	1	2	3	4	5

Supportive Culture

Please rate the following statements according to what applies to you on the scale - 1-strongly disagree, 2-disagree, 3- not sure 4- agree, 5-strongly agree.

code	*This organisation is;*	Strongly disagree	Disagree	Not sure	agree	Strongly agree
sc1	Collaborative	1	2	3	4	5
sc2	Relationships-oriented	1	2	3	4	5
sc3	Encouraging	1	2	3	4	5
sc4	Sociable	1	2	3	4	5
sc5	Equitable	1	2	3	4	5
sc6	Safe	1	2	3	4	5
sc7	Trusting	1	2	3	4	5

Section C; Managerial Ethical behavior

Integrity

Please rate the following statements according to what applies to you on the scale - 1-strongly disagree, 2-disagree, 3- not sure 4- agree, 5-strongly agree.

code	*In this bank;*	Strongly disagree	Disagree	Not sure	agree	Strongly agree
i1	I do not normally compromise with my ethical principles.	1	2	3	4	5
i2	When a choice has to be made between what is right and what benefits me, I would choose what is right.	1	2	3	4	5
i3	My ethical action depends on the situation I am in.	1	2	3	4	5
i4	The more I think about a situation, the more ethical my decision will be.	1	2	3	4	5
i5	My definition about what is right or wrong depends entirely on my personal belief	1	2	3	4	5
i6	I should be allowed to form my own ethical standards because ethical consideration varies from one individual to another.	1	2	3	4	5
i7	I will not tell the truth if I know that I will have to pay a price for it	1	2	3	4	5
i8	A code of ethics among organizations cannot be standardized because each individual has different perspective between what is right and wrong	1	2	3	4	5

Transparency

Please rate the following statements according to what applies to you on the scale - 1-strongly disagree, 2-disagree, 3- not sure 4- agree, 5-strongly agree.

code		Strongly disagree	Disagree	Not sure	agree	Strongly agree
t1	I do not hide any information that is necessary at my work place	1	2	3	4	5
t2	I do not cover up for my mistakes	1	2	3	4	5
t3	If a colleague does something which is not permitted, our managers will find out about it	1	2	3	4	5
t4	If a colleague does something which is not permitted, I or another colleague will find out about it	1	2	3	4	5
t5	If our managers do something which is not permitted, someone in this Institution will find out about it	1	2	3	4	5

Loyalty

Please rate the following statements according to what applies to you on the scale - 1-strongly disagree, 2-disagree, 3- not sure 4- agree, 5-strongly agree.

code	Statements	Strongly disagree	Disagree	Not sure	agree	Strongly agree
l1	We stand by decisions that are in the organization's interest even if they are unpopular.	1	2	3	4	5
l2	We understand the rules and regulations pertaining to our profession and organization.	1	2	3	4	5
l3	We know why the rules and regulations are necessary.	1	2	3	4	5
l4	We know what caused the rules and regulations to be enacted.	1	2	3	4	5
l5	We respect the need for the formality of rules and regulations.	1	2	3	4	5
l6	We interpret and apply rules in accordance with their intent.	1	2	3	4	5
l7	We perform our responsibilities effectively and efficiently and still abide by the pertinent rules.	1	2	3	4	5

Section D; Fraud management practices

Fraud prevention

Please rate the following statements according to what applies to you on the scale - 1-strongly disagree, 2-disagree, 3- not sure 4- agree, 5-strongly agree.

code	In this organisation;	Strongly disagree	disagree	Not sure	agree	Strongly agree
fp1	We have technology solutions with trigger mechanisms that flag irregular activities	1	2	3	4	5
fp2	We run well-established whistle-blower mechanisms in this organisation	1	2	3	4	5
fp3	We take appropriate action in case of detected fraud	1	2	3	4	5
fp4	Risk based internal audits are carried out in our organisation	1	2	3	4	5
fp5	Fraud risk assessment programs are carried out regularly	1	2	3	4	5
fp6	We carry out specific and general training	1	2	3	4	5
fp7	Employment screening is carried out before employment	1	2	3	4	5
fp8	We have an antifraud policy	1	2	3	4	5
fp9	We have a fraud department	1	2	3	4	5

Fraud detection

Please rate the following statements according to what applies to you on the scale - 1-strongly disagree, 2-disagree, 3- not sure 4- agree, 5-strongly agree.

code		Strongly disagree	disagree	Not sure	agree	Strongly agree
fd1	We ensure communication of fraud investigation outcomes	1	2	3	4	5
fd2	We have disclosure procedures in place for evidence relating to detected fraud	1	2	3	4	5
fd3	There is ongoing monitoring of employees' activities in high risk departments	1	2	3	4	5
fd4	External audits are regularly carried out	1	2	3	4	5
fd5	There is regular account reconciliation	1	2	3	4	5
fd6	We carry out proactive data analysis	1	2	3	4	5
fd7	Law enforcement investigation is done on a regular basis	1	2	3	4	5
fd8	There is continuous job rotation	1	2	3	4	5
fd9	We have corporate security	1	2	3	4	5
fd10	Confession is encouraged for culprits of fraud	1	2	3	4	5

Fraud response

Please rate the following statements according to what applies to you on the scale - 1-strongly disagree, 2-disagree, 3- not sure 4- agree, 5-strongly agree.

code	In this organisation, we carry out;	Strongly disagree	disagree	Not sure	agree	Strongly agree
fr1	established lines of communication with police for further investigations of detected fraud in our organisation	1	2	3	4	5
fr2	Progressive sanctions	1	2	3	4	5
fr3	Prosecution of the offender	1	2	3	4	5
fr4	Strengthening controls	1	2	3	4	5
fr5	Public disclosure of fraud and misconduct	1	2	3	4	5
fr6	Recovery of stolen funds	1	2	3	4	5

Thank you for your time!

Table 25: **Fraud management practices**

Item	mean	S.D
FRAUD PREVENTION		
Employment screening is carried out before employment	4.11	1.009
Risk based internal audits are carried out in our organisation	4.09	.995
Fraud risk assessment programs are carried out regularly	4.09	.886
We carry out specific and general training	4.07	.931
We take appropriate action in case of detected fraud	4.04	.937
We have an antifraud policy	3.94	1.208
We have a fraud department	3.82	1.266
We have technology solutions with trigger mechanisms that flag irregular activities	3.69	1.174
We run well-established whistle-blower mechanisms in this organisation	3.67	1.154
FRAUD DETECTION		
External audits are regularly carried out	4.11	.927
There is regular account reconciliation	4.07	.914
We carry out proactive data analysis	4.04	.937
Law enforcement investigation is done on a regular basis	4.03	.937
There is ongoing monitoring of employees' activities in high risk departments	4.02	.891
We ensure communication of fraud investigation outcomes	3.98	1.032
There is continuous job rotation	3.97	1.073
We have disclosure procedures in place for evidence relating to detected fraud	3.94	.975
Confession is encouraged for culprits of fraud	3.94	1.169
We have corporate security	3.94	1.134
FRAUD RESPONSE		

Prosecution of the offender	4.15	.921
Strengthening controls	4.15	.981
Recovery of stolen funds	4.14	1.088
Public disclosure of fraud and misconduct	4.08	1.079
Progressive sanctions	4.01	.898
established lines of communication with police for further investigations of detected fraud in our organisation	3.86	1.107

Table for determining sample size from a known population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	256	300	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

APPENDIX 2 - FACTOR ANALYSIS RESULTS

Table 26: Validity results for Organizational culture

Item	*Component*		
	1	2	3
Risk taking	.670		
Result-oriented	.770		
Creative	.788		
Pressurized	.644		
Stimulating	.717		
Challenging	.851		
Enterprising	.873		
Driving	.805		
Procedural		.772	
Hierarchical		.894	
Structured		.734	
Regulated		.681	
Established		.830	
Cautious		.852	
Power-oriented		.774	
Collaborative			.735
Relationships-oriented			.896
Encouraging			.825
Sociable			.756
Equitable			.847
Safe			.910
Trusting			.754
Collaborative			.735
Total variance explained			
Percent	27.676	17.233	34.671
Cum percent	27.676	44.909	79.580
Eigenvalue	6.118	5.537	6.458

KMO= .823, Bartlett's test of sphericity: approx. x^2 = 3257.468, df= 253, sig =.000, eigenvalues = 18.113, variance explained (%) = 79.5%, 1= innovative culture, 2= bureaucratic culture, 3= supportive culture. Extraction method: principal component analysis. Rotation method: varimax;

Source: Primary data

Table 27: Validity results for managerial ethical behavior

Item	*Component*		
	1	2	3
I do not normally compromise with my ethical principles.	.814		
When a choice has to be made between what is right and what benefits me, I would choose what is right	.853		
My ethical action depends on the situation I am in.	.805		
The more I think about a situation, the more ethical my decision will be.	.895		
My definition about what is right or wrong depends entirely on my personal belief	.920		
should be allowed to form my own ethical standards because ethical consideration varies	.813		
I will not tell the truth if I know that I will have to pay a price for it	.947		
A code of ethics among organizations cannot be standardized because each individual has different perspective between what is right and wrong	.948		
If a colleague does something which is not permitted, our managers will find out about it		.689	
If a colleague does something which is not permitted, I or another colleague will find out about it		.724	
If our managers do something which is not permitted, someone in this Institution will find out about it		.612	
We stand by decisions that are in the organization's interest even if they are unpopular			.760
We understand the rules and regulations pertaining to our profession and organization			.853
We know why the rules and regulations are necessary.			.762
We know what caused the rules and regulations to be enacted.			.789
We respect the need for the formality of rules and regulations			.864
We interpret and apply rules in accordance with their intent.			.884
We know why the rules and regulations are necessary.			.762
Total variance explained			

Percent	27.517	23.113	25.602
Cum percent	27.517	50.530	76.132
Eigenvalues	6.19	2.025	5.674

KMO= .831, Bartlett's test of sphericity: approx. x2 = 2378.912, df= 136, sig =.000, eigenvalues = 13.889, variance explained (%) = 76.1%, 1= integrity, 2= transparency, 3= loyalty. Extraction method: principal component analysis. Rotation method: varimax

Source: Primary data

Table 28: Validity results for fraud management practices

Item	Component 1	2	3
We have technology solutions with trigger mechanisms that flag irregular activities	.878		
We run well-established whistle-blower mechanisms in this organisation	.872		
We take appropriate action in case of detected fraud	.719		
Risk based internal audits are carried out in our organisation	.861		
Fraud risk assessment programs are carried out regularly	.824		
We carry out specific and general training	.749		
Employment screening is carried out before employment	.722		
We have an antifraud policy	.886		
We have a fraud department	.813		
We ensure communication of fraud investigation outcomes		.839	
We have disclosure procedures in place for evidence relating to detected fraud		.886	
There is ongoing monitoring of employees' activities in high risk departments		.699	
External audits are regularly carried out		.810	
There is regular account reconciliation		.858	
We carry out proactive data analysis		.797	
Law enforcement investigation is done on a regular basis		.776	
There is continuous job rotation		.830	
We have corporate security		.922	
Confession is encouraged for culprits of fraud		.829	
Progressive sanctions			.621
Prosecution of the offender			.659

Strengthening controls			.785
Public disclosure of fraud and misconduct			.788
Recovery of stolen funds			.765
Total variance explained			
Percent	24.183	21.544	28.195
Cum percent	24.183	45.727	73.922
Eigenvalues	7.324	8.246	3.618

KMO= .854, Bartlett's test of sphericity: approx. x2 = 3239.533, df= 276, sig =.000, eigenvalues = 19.188, variance explained (%) = 73.9%, 1= fraud prevention, 2= fraud detection, 3= fraud response. Extraction method: principal component analysis. Rotation method: varimax

Source: Primary data