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# Forensic Accounting and Fraud Control in Auditing Firms in Kigali, Rwanda

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## Abstract

The primary goal of this study was to determine how forensic accounting contributes to fraud prevention and control within the Auditing Firms in Kigali, Rwanda. More specifically, the stud y sought to examine how internal controls, knowledge of forensic accounting and skills and management tools influence fraud control in Auditing Firms in Kigali, Rwanda. The study was anchored on Fraud Triangle Theory and Fraud Diamond Model. Descriptive research design was adopted to help determine patterns and trends in order to make conclusions from the data collected. The target population for this study was a total of 76 staff members thereby employing a census approach. The researcher was collected by primary data by use of closed-ended questionnaires to the respondents. For these, the study used simple random sampling to select all the respondents. Primary data was collected by use of closed-ended questionnaires to the respondents. Secondary data was collected using data collection sheet. Secondary Data involved the use of financial reports, regulatory documents, and academic literature will be reviewed to gain insights into the prevailing financial fraud trends in Rwanda. Validity and reliability were tested to ensure the sanctity of the research tool and thus facilitate piloting which was done to selected auditing firms Rusumo. Data analysis was conducting using both descriptive (Frequencies, mean, standard deviation) and inferential (regression and correlation) statistical methods using the Statistical Package for Social Sciences (SPSS version24).

**Keywords:** *Forensic Accounting, Fraud Prevention, Auditing Firms, Internal Controls, Kigali, Rwanda*

### 1.0 Introduction

Detecting fraud is difficult, especially frauds involving material financial statement misstatements, which occur only in about 2 percent of all financial statements. Fraud is generally concealed and often occurs through collusion. Normally, the documents supporting omitted transactions are not kept in company files. False documentation is often created or legitimate documents are altered to

support fictitious transactions. While fraud detection techniques will not identify all fraud, the use of sound techniques can increase the likelihood that misstatements or defalcations will be discovered on a timely basis.

Rwanda has experienced significant economic growth in recent years, with a thriving financial sector that includes auditing firms responsible for ensuring financial transparency and accountability. However, this growth has also attracted various forms of financial fraud, which can undermine the stability and reputation of the Rwandan financial sector. Forensic accounting, a specialized field within accounting, focuses on investigating financial irregularities, fraud, and financial disputes.

Forensic accounting is a critical component of financial investigations and fraud control in auditing firms. In an era of increasing financial complexity and regulatory scrutiny, the role of forensic accountants in detecting and preventing fraud has become more essential than ever. This research proposal aims to investigate the current practices and challenges faced by auditing firms in the field of forensic accounting and fraud control, with the ultimate goal of improving the effectiveness of these practices.

Fraudulent activities have affected most aspects of the world economy for which most audit firms are not exceptional. Fraud affects all types of organizations regardless of whether they are developed, under-developed or developing. According to Kumari and Debnath (2017), studies done on the area of fraud control Acknowledged that fraud prevention and detection need to be improved as response and thorough investigation of fraud Economic crimes in private and government agencies worldwide. However, fraud is difficult to detect as most identified frauds may go unreported for fear of bad publicity and loss of political influence.

### 1.1 Problem Statement

It has been realized that effect and causes of fraud and technical errors are made by human. In Rwanda, audit firms play a major role in economic growth and development through provision of services. Rwanda, like many emerging economies, faces challenges related to fraud within auditing firms. These issues can lead to misallocation of resources, capital flight, and undermine investor trust. The research problem is the need to enhance the capabilities of auditing firms in Rwanda to detect, prevent, and mitigate fraud through the implementation of effective forensic accounting measures. Fraud has been the major drawback since it has been rationalized. Both financial and non-financial fraud cases are alarming and uncontrollable in Rwanda. Amidst government efforts to equip accountants with the necessary skills on forensic accounting, many audit firms are not taking steps to seal loopholes on revenue pilferage. Despite the importance of forensic accounting, there is a lack of comprehensive research on its application within Rwandan auditing firms. This research seeks to address this gap and contribute to the development of effective fraud control mechanisms tailored to the Rwandan context. Therefore, this study sought to investigate the influence of forensic accounting on fraud control auditing firm in Rwanda. Specifically,the study seeks to establish whether internal controls, knowledge and management tools of forensic accounting among employees influenced fraud control audit firms in Rwanda.

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### 1.2 Research Objectives

i. To determine how internal controls of forensic accounting influence fraud control auditing firms in Rwanda.
ii. To explore the knowledge of forensic accounting influence on fraud control in auditing firms in Rwanda.
iii. To examine the influence of management tools on fraud control in auditing firms in Rwanda.

### 2.1 Conceptual Framework

Conceptual frameworks are theoretical structures of assumptions, principles, and rules that hold together the ideas that make up a wide view.

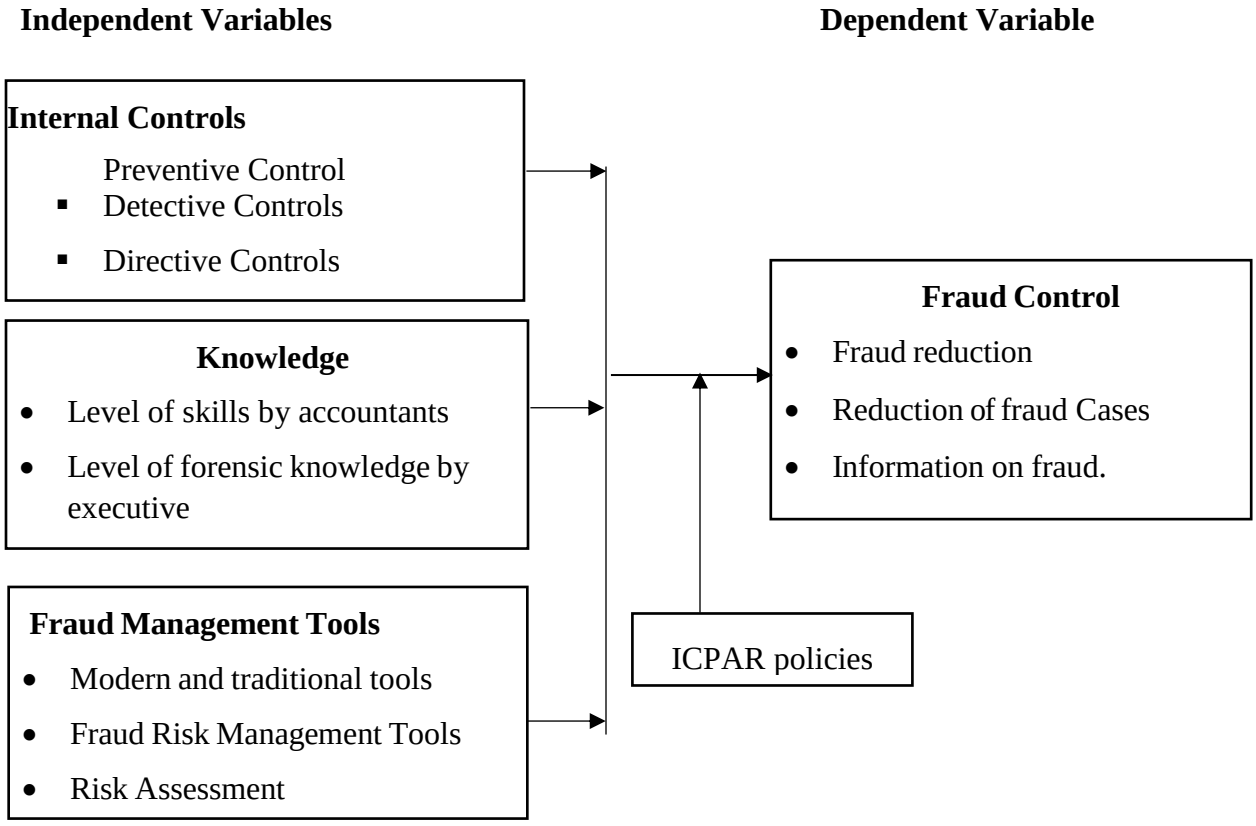


**Figure 1: Conceptual Framework**

### 3.0 Research Materials and Methods

Descriptive research design was adopted in this study with main focus being on determining key aspects in order to identify patterns and trends in a situation in order to make conclusions from the data collected. A total of 76 staff from auditing firms formed the target population as per the information from the human resource department. The study used simple random sampling technique. The data gathering instruments for this study was questionnaires created by the researcher for primary data collection. Pilot study was conducted at 7 auditing firms in Rusumo. The 7 firms represented 10% of the total study population thus was adequate for the study. The researcher issued 8 questionnaires, 7 were fully filled and returned hence 87.5% response rate for

the pilot study. The researcher determined the content validity through the expertise of the supervisor. The researcher analysed the data collected from questionnaires using descriptive and inferential statistics. The analysis was based on the mean, standard deviation and for analysing the with addition of the data of the mode, median, and number of respondents, and a full statement of their answers in detail. The data collected was tabulated, summarized and interpretation done using descriptive measures.

## 4.0 Findings and Discussion

### 4.1 Correlation Analysis

The study sought to establish the relationships that existed between the independent variables and the dependent variable in the study. Pearson product moment correlation coefficient was used to indicate the relationships. The scores for the independent variables were then correlated with composite scores of the dependent variable. The findings for the analysis were as presented in Table 1.

**Table 1: Pearson Correlation Results**

| | | Internal Controls | Knowledge | Management Tools | Fraud Control |
|---|---|---|---|---|---|
| Internal Controls | Pearson Correlation | 1 | .870** | .822** | .816** |
| | Sig. (2-tailed) | | .000 | .000 | .000 |
| | N | 70 | 70 | 70 | 70 |
| Knowledge | Pearson Correlation | .870** | 1 | .879** | .910** |
| | Sig. (2-tailed) | .000 | | .000 | .000 |
| | N | 70 | 70 | 70 | 70 |
| Management Tools | Pearson Correlation | .822** | .879** | 1 | .855** |
| | Sig. (2-tailed) | .000 | .000 | | .000 |
| | N | 70 | 70 | 70 | 70 |
| Fraud Control | Pearson Correlation | .816** | .910** | .855** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | |
| | N | 70 | 70 | 70 | 70 |

**. Correlation is significant at the 0.01 level (2-tailed).

From the correlations, the study indicated that all the dependent variables (Internal Controls, Knowledge and Management Tools) were significantly correlated with the dependent variable (fraud control). To start with, findings indicated that Internal Controls was shown to have a very strong positive significant (r=.816, p=.000) relationship with Fraud Control. Internal Controls was significant at p<.05 level of significance. Results established that Internal Controls had a direct relationship with Fraud Control among auditing firms in Kigali City, Rwanda.

In addition, Knowledge was shown to have positive relationship with Fraud Control among Auditing firms'in Kigali City, Rwanda. Findings established that Knowledge has a very strong positive significant (r=.0910, r=.000) relationship with Fraud Control at p<.05 level of

significance. Hence, Knowledge was important in determining the level of Fraud Control among auditing firms.

Further, findings indicated that Management Tools had a strong positive relationship (r=.855, p=.000) with Fraud Control which was at p<.05 level of significance. This was an indication that Management Tools had a significant influence towards Fraud Control among auditing firms in Kigali City, Rwanda. As such, Management Tools was also a determinant of Fraud Control among auditing firms.

### 4.2 Hypothesis Testing

The study tested the hypothesis of the study in examining the influence of service quality characteristics on Fraud Control among auditing firms in Kigali, Rwanda. If the level of significance is greater than the p-value, the null hypothesis is accepted and when level of significance is less than the p-value the null hypothesis is rejected. The findings from the analysis were as discussed hereafter.

The first hypothesis suggested that Internal Controls has no statistically significant influence on Fraud Control. To ascertain whether the hypothesis is true, the hypothesis was tested using ANOVA and the findings presented in Table 2.

**Table 2: Model Summary of Internal Controls**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .816[a] | .666 | .661 | .58927 |

a. Predictors: (Constant), Internal Controls

From the model summary, an R-squared value of .666 was established. This showed that Internal Controls can significantly account for up to 66.6% of the total variance in Fraud Control among auditing firms service providers. The remaining percentage could be accounted for by factors not included in this model. Therefore, Internal Controls contributed on a large extent on Fraud Control. The ANOVA findings were as shown in Table 3.

**Table 3: ANOVA[a] on Internal Controls**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 47.116 | 1 | 47.116 | 135.688 | .000[b] |
| | Residual | 23.612 | 68 | .347 | | |
| | Total | 70.728 | 69 | | | |

a. Dependent Variable: Fraud Control
b. Predictors: (Constant), Internal Controls

From the table, an F-value ($F_{(1, 68)}$ =135.688, p=.000) was obtained which was found to be significant p<.05 level of significance. This demonstrated that Internal Controls has a significant influence on Fraud Control among auditing firms. As such, the null hypothesis **$H_{01}$** that, Internal Controls has no statistically significant influence on Fraud was rejected. The study established that Internal Controls had a significant influence on Fraud Control.

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The second hypothesis stated that there is no significant influence of Knowledge on Fraud Control. To ascertain the hypothesis ANOVA was done and the findings presented as shown in Table 4.

**Table 4: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .910[a] | .828 | .826 | .42237 |

a. Predictors: (Constant), Knowledge

The R-squared value obtained from the model summary was .828. This showed that Knowledge could account up to 82.8% of the total variance in Fraud Control. This indicated that Internal Controls had a great impact on Fraud Control. Analysis of variance gave the following results shown in Table 5.

**Table 5: ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 58.597 | 1 | 58.597 | 328.469 | .000[b] |
| | Residual | 12.131 | 68 | .178 | | |
| | Total | 70.728 | 69 | | | |

a. Dependent Variable: Fraud Control
b. Predictors: (Constant), Knowledge

The Table gave an F-value of 328.469 for service responsibility which was found to be significant $p<.05$ level of significance. Results indicated that Knowledge had a significant influence on Fraud Control among auditing firms. Therefore, the null hypothesis **$H_{02}$** that, there is no significant influence of Knowledge on Fraud Control was also rejected.

The third hypothesis insinuated that Management Tools has no statistically significant influence on Fraud Control. To ascertain the truth of this hypothesis, analysis of variance yielded the following results.

**Table 6: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .855[a] | .731 | .727 | .52913 |

a. Predictors: (Constant), Management Tools

The model summary gave an R-squared value of .731 indicating that Management Tools accounted for 73.1% of the total variance in Fraud Control. The remaining percentage could be accounted for by factors not included in this model. This was an indication that Management Tools had an impact on Fraud Control. The ANOVA gave the following results.

**Table 7: ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 51.689 | 1 | 51.689 | 184.615 | .000[b] |
| | Residual | 19.039 | 68 | .280 | | |
| | Total | 70.728 | 69 | | | |

a. Dependent Variable: Fraud Control

b. Predictors: (Constant), Management Tools

From the analysis of variance gave an F-value of ($F_{(1, 68)}$ =184.615, p=.000) which was significant p<.05 level of significance. This indicated that Management Tools had a significant influence on Fraud Control. Hence, the null hypothesis **$H_{03}$** that, there is no significant influence of Management Tools on Fraud Control was consequently rejected.

### 4.3 Multiple Regression

Regression analysis was conducted to examine the combined effect of the independent variables and the dependent variable. The models generated were further used to fit a regression equation depicting the interaction between the independent variables and the dependent variable. The findings from the analysis were as presented and discussed hereafter.

**Table 8: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .918[a] | .842 | .835 | .41135 |

a. Predictors: (Constant), Management Tools, Internal Controls, Knowledge

From the table, the R-squared value of .842 was attained showing that when all the independent variables (Internal Controls, Knowledge and Management Tools) are taken together they account for up to 84.2% of the total variance of Fraud Control. Hence the independent variables taken together substantially account for the changes in Fraud Control. The remaining 15.8% of the total variance in Fraud Control was explained by other factors not included in this model. The findings from analysis of variance were presented in Table 9.

**Table 9: ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 59.560 | 3 | 19.853 | 117.329 | .000[b] |
| | Residual | 11.168 | 66 | .169 | | |
| | Total | 70.728 | 69 | | | |

a. Dependent Variable: Fraud Control
b. Predictors: (Constant), Management Tools, Internal Controls, Knowledge

Analysis of variance resulted to an F-value of ($F_{(3, 66)}$ =117.329, p=.000) which was significant at p<.05 level of significance. The findings were indicative that the effect of the independent variables on Fraud Control among Auditing firms were significant on Fraud Control on auditing firms' providers in Kigali, Rwanda. Findings from coefficient model were as indicated hereafter.

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**Table 10: Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .111 | .215 | | .517 | .607 |
| | Internal Controls | .854 | .116 | .048 | .470 | .640 |
| | Knowledge | .695 | .127 | .668 | 5.464 | .000 |
| | Management Tools | .768 | .125 | .228 | 2.155 | .035 |

a. Dependent Variable: Fraud Control

The coefficient table showed that the value of autonomous Y (value of the dependent variable) was .111. The t-value for the autonomous Y was 517 which was greater ($p<.05$) than the level of significance. The study indicated that, the parameter estimate (β) for Internal Controls was .854 with a t-value of .470 which was insignificant at $p<.05$ level of significance. Further, the parameter estimate (β) for Knowledge was .695 with a t-value of 5.464 which was significant at $p<.05$ level of significance. Additionally, the parameter estimate (β) for Management Tools was .768 with a t-value of 2.155 which was significant at $p<.05$ level of significance. This information was presented in a regression equation shown below.

$Y= -0.111+ 0.854X_1+ 0.695X_2+ 0.768X_3$

*Where:*

Y – Fraud control

$X_1$ -Internal Controls

$X_2$– Knowledge

$X_3$– Management Tools

## 5.0 Conclusion

In general, it can be concluded that poor internal control system, presence of unqualified staff, greed on the part of employees inadequate staffing, poor record-keeping practices, and inadequate training and re-training of staff among others were identified as the main causes of fraud in the audit firms. Forensic accounting techniques should be integrated into in financial reporting functions of business organizations. In conclusion, Rwandan Auditing firms should enforce accountability, integrity, and equality, impartiality as a moral duty to eliminate or reduce the altitude of fraud and hence invest in building human capacity to recover the internal auditors' quality.

## 6.0 Recommendations

Forensic accounting being a contemporary field in accounting has an essential role to play in protecting the Rwandan economic and financial fraud. In view of the study findings, it is thus, recommends that the auditing firms should build a consistent internal control system and instigate efficient and effective internal check; public sector should also adopt a good accounting system in valuable and effective practices; should also ensure the best standard, regulations and guidelines are established to ensure service delivery and best practice. The study also recommends an establishment and promotion of an effective whistle-blower program. Providing the ability for

employees to anonymously report questionable practices, which could lead to uncovering frauds before it affects financial reporting systems. Having an effective whistle-blower program in place can deter fraud before it starts. Analyzing Accounts Receivables, more particularly, to unearth any instance of revenue manipulation, a common form of financial fraud, will often affect receivable balances. Investigation of outlier activity in receivables, basis for uncollectible accounts, and receivable statistics in comparison to industry standards could help in identification of potential financial reporting problems.

In regards to future studies on the topic, notably, the research was limited to only three forensic accounting attributes. The impact of the rest of the attributes remains unknown. Additionally, the research was conducted within Kigali City, meaning it is geographically restrictive as far as auditing in Rwanda is concerned. That being so, future researchers in the research field should expand their research area to have a wider picture of how forensic accounting characteristics impact fraud in Rwanda or other parts of the country.

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